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**WORKSHOP**

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**AGREEMENT**

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## **Innovation, Coordination and Collaboration in Service Driven Manufacturing Supply Chains - Reference Model for Industrial Services**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

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## Foreword

CWA 15847:2008 has been drawn up from the key results of the project InCoCo-S "Innovation, Coordination, Collaboration in Service Driven Manufacturing Supply Chains", co-financed by the European Commission in the Sixth Framework Programme (FP6 NMP 017192).

The production of this CWA was formally accepted at the Workshop's kick-off meeting on 2007-12-10 in Brussels.

The final review/endorsement round for this CWA was successfully closed on 2008-02-12. The final text of this CWA was submitted to CEN for publication on 2008-03-20.

This CWA has been jointly drafted by a consortium consisting of Academic Partners, Industrial Service Providers and Consulting Companies.

- *Forschungsinstitut für Rationalisierung e.V. (Germany)*
- *Swiss Federal Institute of Technology ETH Zurich (Switzerland)*
- *Institute for Technology Management (Switzerland)*
- *Politecnico di Milano (Italy)*
- *H2O Organisationsoptimierung GmbH (Germany)*
- *Interessenverband Chemnitzer Maschinenbau e.V. (Germany)*
- *SKF (Germany)*
- *Technology Industries of Finland (Finland)*

Further information on the project results and the consortium is available at [www.incoco.net](http://www.incoco.net).

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

A list of company experts who have supported the document's contents may be obtained from the CEN Management Centre.

## Introduction

Manufacturing companies in supply chains are increasingly outsourcing industrial services such as maintenance, retrofit or modernization, logistics and quality control services to specialists to leverage the cost-benefit ratio and to focus on their core competence. Driven by the outsourcing phenomenon, services have become the most significant contributor to the overall worldwide economy. This growth in the outsourcing of industrial services has created strong interdependencies between supply chains and service providers as service providers are integrated into every stage of the value chain in manufacturing companies.

Despite the strong interdependence between Business Related Services and the manufacturing supply chain, manufacturers and their service suppliers are facing tremendous problems in terms of synchronizing and coordinating their business processes and facilitating collaboration. The existing management concepts and reference models such as CPFR, VRM or SCOR primarily address the requirements of managing supply chains without taking into consideration the needs to coordinate and integrate service providers. To address this gap, this document presents a process based reference model for BRS providers which support both supply chain owners as well as service providers in integrating their operations. This Industrial Service Reference Model (IRM) incorporating a repository of processes, information flow, best practices and performance indicators to support the integration of industrial service providers offering diverse services such as maintenance, modernization and packaging with traditional supply chains.

IRM is a role-based process reference model based on widely used enterprise architectural standards. It integrates AS-IS process mapping and TO-BE process design capabilities with operational performance setting and measurements to enable service providers and their business partners to achieve best-in-class results, built on proven industry practices and supported by solutions and tools. IRM is an integrated reference model which can be used by any service provider offering the industrial services as identified above. IRM supports the service provider in all aspects of business processes starting from first customer contact to continuous service operations thus following a service lifecycle approach. IRM serves to facilitate different goals for a service provider ranging from strategic alignment of business goals to integration of processes at an operational level.

IRM thus offers users a standardized reference framework for service providers in collaboration with manufacturers in service driven supply chains. The scope for this model reaches from a detailed analysis and optimization of existing business processes to a standardization of these business processes due to benchmarking them and aligning them with IT systems. IRM helps service providers and their customers to jointly develop service interaction processes and to define common performance indicators to assess performance. IRM in addition can be used for developing standardized in-house processes for both service provider and supply chain members, for benchmarking service performance, integrating IT systems based on business processes and finally for in-house training and knowledge management. The model covers process flows describing important service clusters like maintenance, modernization (retrofit) and packaging services on an adequate level to be adapted to all service providers in the area of Business Related Services.

## 1 Scope

The Industry Reference Model (IRM) is an integrated process model to be used by a service provider offering technical services such as maintenance, retrofit and packaging to supply chains and manufacturing organizations. Customers of service providers use the model to first align service operations, and to secondly benchmark service performance against different service vendors by using the standardized process description and the service scorecard described in the CWA. In summary, the focus of IRM implementation ranges from strategic alignment of business goals to integration of processes at a very operational level.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15341, *Maintenance – Maintenance Key Performance Indicators*.

## 3 Terms and definitions

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

### 3.1

#### **Best Practice**

The most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for a large number of cases. Best Practice consists of a technique, method, process, activity, incentive or reward that is more effective at delivering a desired outcome with fewer problems and unforeseen complications.

### 3.2

#### **Input**

Required in a process to produce an output

### 3.3

#### **Output**

Function of the input where

$$output = f(input)$$

where

$f$  relationship to the process specific transformation

### 3.4

#### **Performance Indicator**

Measure for the quality, effectiveness, or the efficiency of a process

### 3.5

#### **Scorecard**

Set of associated, consistent and complementary indicators providing synthetic and global information (EN 15341:2007)

**NOTE** It is a tool for the development and implementation of a strategy and for monitoring progress towards the goals outlined in the strategy.

### 3.6

#### **Service Clusters**

Key industrial services relevant for supply chains and included within this CWA