

prostep ivip/VDA



## ReqIF Benchmark 2021/2022

### Long Report

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## **Abstract**

Requirements Management (RM) has been established to ensure seamless specifications along the product creation process. To manage complex specification processes and requirements dependencies companies introduced requirements management systems. The generic „Requirement Interchange Format (RIF)“ was created to enable the exchange of information across different requirements management systems.

In summer 2008 the prostep ivip association initiated the project group IntRIF to increase the acceptance and application of RIF by transferring the recommendation into an international standard. With the successful standardization in April 2011 OMG ReqIF 1.0.1 has been published as the official successor of RIF.

Two project groups are currently working on the enhancement of the format and its application. In 2011 the ReqIF Implementor Forum was established for realizing a strong technological basis. In 2016 the community of user representatives then consequently made the next step: Specifying relevant use cases for ReqIF application in industry.

To evaluate the feasibility of requirement data exchange with ReqIF, benchmarks are conducted, the very first in 2018. The benchmarks were well received by the users and implementers, as they provided valuable information for the usage and further development of requirement management tools. In this fourth benchmark, the tested scenario is a customer/supplier data exchange with comments on supplier and updates on customer side. With 6 participating software providers, there were a total of 9 participating RM-systems and connectors that were tested in 72 different tool combinations. The benchmark was run at prostep ivip site with support of the participating software providers. The criteria and test data were defined by the ReqIF Workflow Forum.

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## 1 Introduction

Requirements Management has been established to ensure seamless specifications along the product creation process. To manage complex specification processes and requirements dependencies companies introduced requirements management systems (RM-systems).

To support a proper requirements exchange between partners using different tools, the project group "Simulation and Tools" of the HIS (Hersteller Initiative Software) specified the generic „Requirement Interchange Format (RIF)".

In summer 2008 the prostep ivip association initiated the project group IntRIF to increase the acceptance and application of RIF by transferring the recommendation into an international standard. With the successful standardization in April 2011 OMG ReqIF 1.0.1 has been published as the official successor of RIF.

prostep ivip established two project groups to further drive the ReqIF format:

The goal of the ReqIF Implementor Forum (ReqIF-IF) is to ensure interoperability between different ReqIF-based implementations. Therefore, the ReqIF-IF works very tight together with the newly established ReqIF Workflow Forum (ReqIF-WF).

In 2016, the community of relevant user representatives consequently made the next step: Specifying relevant use cases for ReqIF application in industry.

Thus, the major aim of the prostep ivip / VDA ReqIF-WF is to specify use cases as well as reference processes (customer-customer, customer-supplier etc.) and, related to this, deriving process requirements and test cases. The work is performed in close collaboration with the ReqIF Implementor Forum.

To evaluate the feasibility of requirement data exchange with ReqIF, benchmarks are conducted, the very first in 2018. The benchmarks were well received by the users and implementers, as they provided valuable information for the usage and further development of requirement management tools.

In this fourth benchmark, the tested scenario is a customer/supplier data exchange with comments on supplier and updates on customer side. With 6 participating software providers, there were a total of 9 participating RM-systems and connectors that were tested in 72 different tool combinations. The benchmark was run at prostep ivip site with support of the participating software providers. The criteria and test data were defined by the ReqIF Workflow Forum.

Goal of the benchmarks is a neutral evaluation of the current capabilities in requirement data exchange with ReqIF. Additionally, issues that require further development of either the format itself or of the tested software tools will be identified and addressed.

## 2 Approach

The following sections describe the basic conditions for the benchmark.

### 2.1 Four Steps

Based on lessons learned from previous benchmarks, the ReqIF Workflow and ReqIF Implementor Forum agreed on the following four-step approach:

1. The ReqIF Workflow Forum clarified the target intent for the benchmark and provided details on the expected outcome.
2. The software providers made proposals for the ReqIF file scope, configuration settings and evaluation approach which in their eyes would best fit the requirements.