



White Paper 2024-02

Why it is Important to Rationalise Procurement Documentation in Large Complex Industrial Projects

On large projects, the documentation provided to support procurement can often be extensive. The large number of documents produced by different originators can sometimes result in contradictory requirements, are often not rationalised, and may become unmanageable by smaller suppliers. This is often a blind spot of client organisations that rely on different subject matter experts to provide their requirements. In this White Paper we investigate closer this issue and what can be done to address it.

Procurement documentation: general description of the classical situation in large industrial projects

Documentation sent to prospective and chosen suppliers will generally include a set of general requirements and specifications, and a set of specific requirements and specifications for the product or service being acquired.

Sets of general requirements and specifications can sometimes be extremely extensive, covering many areas starting with safety, quality, general technical specifications, logistics and delivery, etc. The owners of those specifications are internal technical authorities on the various subjects. This set of documents can easily represent thousands of pages, in particular if the client has significant project experience in many different situations. Being general requirements not everything is applicable to the particular case, nevertheless it is often easier for the client organisation to just send over the full body of general documentation. In certain cases, as various sections will have been written by different departments of the client organisation, internal consistency is not assured even within the general specifications.

Specific requirements and specifications will be based on the specific engineering performed by the project. It may complement or even contradict the general specifications. However, for expediency purpose, it will often simply be sent on top of the general documentation, with a statement that in case of contradiction, the specific (or the most stringent) takes precedence. The rationalisation of requirements is left to the supplier, which may not have the resources or capability to do so.

The supplier will therefore receive thousands of pages of general specifications, most of which are not really applicable, and hundreds of pages of specific requirements, some of which may be contradictory and with no clear process for deciding what is really applicable.

A real blind spot

The description of this situation is not theoretical: we have been involved in a few reviews where the situation was outright unbearable by the supplier who just decided to

leave that particular industry or not care about the entire set of specifications, just proceeding as per its usual way of working. We have also been involved in reviewing client specifications only to find out that they were intrinsically inconsistent and therefore, inapplicable if anyone really tried to comply with them. However, we have also found that this issue is often a blind spot for clients who don't really understand how it impacts effective project delivery.

Significant effort has to be taken at organisational and industrial branch level to rationalise procurement requirements and ensure that they are transferred and understood by suppliers.

In addition, refer to our White Paper ['2015-06 'How to Overcome the Curse of Excessively Detailed Specifications Leading to Uneconomic Infrastructure Projects'](#).

Effects of this classical situation

In particular for smaller suppliers in projects producing one-off items or only very small series over a short period (unlike manufacturing supply chains where there is often more time for setup), this situation is unmanageable (or too onerous), which leads to misunderstandings and mutual disappointments. The inherent uncertainty on which requirements are really applicable can be a particularly difficult issue, in particular as the production and delivery cycle will involve several representatives of the client originating from various departments, that may have a different understanding of applicable requirements.

In the classical way of doing things, the best solution is for the supplier to write a requirement document compiling its understanding of what is applicable and feasible, and to have it approved by the client organisation prior to the start of production. It is also a good way for the supplier to protect itself contractually. However, this is clearly a quite inefficient way to proceed, generating significant work for both the client and the supplier. On the client side, approval of deviations by the technical authorities can be particularly difficult to obtain after a contract is signed (why give up something we have paid for?). We have found that this approach of the supplier writing down its understanding and getting it approved often explains unplanned delays in starting manufacturing (and therefore, delays to the project).

Even when applying this approach, uncertainty remains for the project and the supplier during manufacturing and delivery as client representatives such as quality control personnel or logistics personnel, may not have been involved in the discussions around what is actually applicable in the specific case, creating confusion, aggravations and delays. When supply is starting on the wrong foot, this often leads the client to actually increase the number of check and hold points, further delaying production in a vicious circle.

Improvement approaches

We have observed two possible approaches, both requiring a substantial investment from the client. They can be complementary.

Simplify and standardise the client standard requirements, and align all client contributors

Client standard requirements will often have grown over time based on experience, as events will have been transformed in additional requirements to prevent them. Over time, they may even have grown to be significantly different between client companies in the same industry, leaving suppliers to grapple with wildly different expectations from various clients for the same equipment.

It is difficult to simplify current general requirements, because there is always a good reason why each requirement has been recorded, and there will be significant resistance from the technical authorities for which general specifications are their reason of being. In addition, getting to agree between departments on inconsistent specifications may also be a difficulty. This requires a lot of drive, effort and dedication and takes time.

A more promising approach in our view is to proceed through the lens of standardisation and codification across the industry. Not only will it create standards that will make production easier and cheaper thanks to larger series, but confronting the requirements across a wider set of expertise and viewpoints, including suppliers, will also trim out excessive expectations and will make it easier to come back to a minimum required standard.

We have found situations where certain client requirements had grown to become obviously much

beyond what was considered good standard industry practice, leading to very expensive procurement, therefore, the review and rationalisation effort can be funded by the lower prices obtained by requiring more standard specifications.

Requirements management approaches

Another approach is to use the systems engineering approach of requirements management: actual requirements are extracted from more conventionally written documentation, expressed as requirements, listed and eventually rationalised. This however also implies a very significant effort to be carried out across all aspects of general specifications. Our experience is that

there is often a transition period during which this approach has only been carried out partially and therefore still creates consistency issues with the rest of the specifications, in particular because the rationalisation effort has not been performed.

Summary

Lack of rationalisation of requirements and specifications, combined with their natural inflation over time, is a major impediment to productivity in a world where the number of requirements tends to grow significantly due to regulatory evolution and search for more complicated functionalities. Significant effort has to be taken at organisational and industrial branch level to rationalise them and ensure that they are transferred and understood by suppliers. This is still often a blind spot for many organisations that must be identified and addressed.

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Read the Industrial Projects Practical Owner Guide

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