



White Paper 2020-04

How To Implement Licensing Requirements During Project Execution Phase

Following on from our previous [White Paper 2020-03 'How To Manage Licensing Requirements in Project Definition and Execution'](#), another challenge is to implement licensing and regulatory requirements during project execution. Some projects derail because of non-compliances which, once identified, strongly impair the start-up and operability of the project deliverable. In this White Paper we examine how to transfer licensing requirements into project execution to ensure conformity.

The issue of accounting for licensing conditions

Licensing conditions will arise from the interactions between the Owner and the licensing body during the licensing case instruction and will be formalised in the formal license terms. Main licensing conditions are ideally formalised just prior the Final Investment Decision for large projects, or shortly thereafter for smaller projects.

However, some additional licenses might be required during the course of the project e.g. building permits, operating permits that will also contain a set of conditions and terms. Ongoing surveillance by the licensing authority of the construction works will also create another list of demands and requirements.

All those license conditions will apply both to the project phase (execution plan) and to the design of the facility. We observe that projects often have difficulties in including those conditions and requirements in their design and project execution. The main issues comprise:

- License conditions generally arise quite late during the project definition process, possibly during the last part of detailed design or even later during project execution.
- The license conditions are inadequately broken down to individual actions to be taken by the contributors on the project to ensure compliance
- Many license conditions are actually commitments taken within the licensing case by the Owner which may not be sufficiently well formalised as requirements or realistic for implementation
- There is sometimes a disconnect between the future operator who is often in charge of the licensing issue and the project execution team.

All those issues demonstrate that a comprehensive regulatory requirement management process must be put in place that include full identification of those requirements (including from Owner formal commitments) and proper tracking and verification.

Properly accounting for the changes created by the licensing conditions

Licensing conditions and observations from the licensing bodies must be considered as requirements. Any change or update from those requirements assumed at the start of

design should thus systematically trigger a Management of Change process to assess their impact on the project in all possible dimensions from engineering to procurement, construction, commissioning and testing, start-up etc. Then, appropriate actions have to be defined and disseminated throughout the project execution team.

A compliance assurance plan should be put in place under the responsibility of a licensing compliance manager role to ensure that implementation of each requirement is verified (in the sense of requirements verification) and that proofs of the verification are gathered, thus providing the content of the final compliance report.

On large projects subject to heavy regulatory scrutiny, thousands of licensing requirements may need to be

identified, followed up and documented for compliance and this will require specific data management tools.

Ensuring proper flow down of the license conditions on the project

The license conditions must flow down to the workers on the project site, with a focus where those requirements impose practices that differ from normal best practice for the trade. Typical examples include compliance to dimensional tolerances on reinforced concrete steel mesh for nuclear projects, welding defect acceptance criteria and reinforced surveillance requirements, agreed heavy vehicle access routes, etc. Quality control and inspectors provide an additional line of defence, but the main compliance work should still be done by the workers themselves.

This requires the licensing basis and conditions to be analysed and broken down into practical criteria to be fulfilled by the basic workers of each trade. This detailed work is indispensable but too rarely done in a comprehensive manner. A proper requirement management system able to manage those requirements at different levels is indispensable.

Managing intrinsic requirements embedded in the licensing case

In order to build the licensing case, a number of assumptions are being taken by the design team that are not always formalised and verbalised. However, the licensing body will also require compliance with those assumptions underlying the licensing case. It is essential to formalise those requirements during the production of the safety case to ensure they are properly accounted for

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during the project definition phase. Because those requirements are actually defined very early this should be less disruptive to projects, but experience shows that the lack of formalisation leads to issues and changes late in project execution.

Licensing conditions can be explicit or implicit, or stem from commitments and assumptions from the Owner. They all need to be identified as such.

charge of licensing compliance must be fully integrated in the project team and report to the project manager. The associated workload should not be underestimated. Proper resources and tools should be devoted to this aspect because of its potential to derail the project.

Managing the organisational interfaces

Licensing is very often managed by the future operator, because of its geographical proximity to the site. In brownfield projects it is managed by the current operator of the facility. The operator needs to be integrated into the project team, but it also has other issues and objectives to tackle. Also, specifically in brownfield projects, the operator may underestimate the effort related to licensing by taking as a baseline the activity during normal operation: the licensing effort during a project is substantially higher and also requires much higher availability to deal with all the relevant stakeholders.

The project should be clearly in charge of delivering compliance to the licensing conditions, even if the resources are provided by the operator. The person in

Summary

Implementing licensing conditions in a project is a critical aspect and is not always performed properly. The recommended approach is to deal with those conditions as requirements and run a full cycle of application and verification to build a compliance dossier, including formal Management of Change in case of any update or new licensing conditions.

The associated organisation needs to be considered carefully. Substantial resources may be required in highly regulated industries, and the interface with the operator must be carefully designed.



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