



## White Paper 2017-17

### How to Implement Package Management for Supply Chain Post Award Management on Projects

*Supply-Chain post-award management is an essential element of project success. For engineered equipment and subcontracts, proper management of the supplier/subcontractor and close coordination of all post-award activities is a must and it is recommended to use a package lead in charge of the internal/external coordination and follow-up. This function is generally covered by the Project Manager for small projects and not always well understood and implemented. In this White Paper we detail what are the key success factors for the implementation of the Package Management approach for large projects.*

#### What the post-award management steps are

There are basically four steps in the post-award phase:

- The kick-off phase,
- The expediting phase,
- The delivery phase,
- The close-out phase.

At each phase, contributions from most project departments are required which must be coordinated:

- Engineering for design input, technical review of supplier documentation, management of design changes and technical inquiries,
- Supply Chain for the management of the contractual and commercial aspects,
- Quality Control for the review and approval of inspection and test plans, on-site inspections and review and approval of final documentation,
- Construction and commissioning as the final recipient of the equipment or service,
- Future Operations in terms of ergonomics and maintenance, definition of adequate spares.

**Post-Award Package Management is an essential role for the success of Large, Complex Projects.**

#### Kick-off Phase

After the award of a contract for an engineered equipment or for the provision of services, a number of steps must happen. It starts with a proper kick-off meeting with all relevant stakeholders and participants, including the project Owner if required.

##### **Kick-off meeting**

The objectives of this meeting include:

- The setup of the necessary project control and reporting processes, including bank guarantees and invoicing processes requirements, so as to have continuously the actual status of the commitment and the forecast schedule and cost,
- Review the Supplier Document Register and in particular the provision of all required documentation by the vendor or subcontractor to allow the start of the work, which has to be reviewed and approved by the project prior to the actual start of manufacturing or physical works,
- In some instances, the preparation of technical qualification elements for some aspects of the work

and the involvement of third party certification bodies,

- Review the schedule to identify key events to be monitored to ensure good control of the schedule and associated planned dates,
- Identify the list of mandatory documents in front of each key events,
- Review the date of first issue for all documents in accordance with manufacturing schedule,
- Prepare an Inspection Test plan,
- Review of the content of the Weekly and Monthly reports.

##### **Setup and documentation approval stage**

The duration of the first step kick-off, setup and documentation approval stage is too often underestimated; in particular, the approval of all the required documentation prior to the start of manufacturing or of the works sometimes lasts too long and impacts the actual project schedule. The situation is quite often complicated by the fact

that some design elements of the project are not fully detailed yet, therefore all inputs to the vendor or subcontractor might not be fully available. Compensatory measures must then be implemented.

##### **Pre-Production Meeting**

This meeting with the Supplier and the Client aims to give the green light to the Supplier to start manufacturing. All necessary documentation must have been produced and approved. All parties must review and agree on:

- the procedures, raw materials certificates, operators certificates...
- the inspection points on Inspection and Test Plan and agree on notification system.

##### **Expediting phase**

During the expediting phase, the equipment is being manufactured or the service is prepared and qualified. Proper controls need to be in place to monitor the actual progress and to ensure delivery of the expected quality (inspections, physical progress and milestone checks). A strong link with Quality Control needs to be in place. Engineering deviations (Supplier Technical Queries) or changes need to be managed and expedited along with all

the required documentation, liaising with construction, commissioning and future operations as relevant.

The quality of the regular reporting including schedule update is critical to project control and future success. It needs to be confirmed by regular contacts with the vendor and subcontractor, often in the format of weekly/ monthly meetings and calls backed up by appropriate written reports. The frequency and content will be mostly dictated by the dynamics of the particular contract and the number of interfaces with the rest of the project. In cases where construction site activities are required, a particularly tight interface needs to be maintained with the Construction Manager in terms of mobilization and interfaces with the rest of the activities.

In addition during this phase a team work needs to be implemented within the supply-chain organization so as to:

- stay within the project management team man hours budget
- keep a float compared to the Required On Site (ROS) dates that are moving during project execution and limit the risk
- give some flexibility/opportunities to the project that could directly improve project financial results

### Delivery phase

For engineered equipment, the delivery phase is when the final assembly and testing of the equipment occurs and it is packed and cleared for delivery and

shipment. It requires extensive Factory Acceptance Testing, witnessed by the project. These tests can be completed by Site Integration Testing if required, including thorough metrology, physical tests of interfaces with ancillary installation equipment and ergonomics of access. Installation aids and temporary transportation and preservation protections need to be particularly monitored.

For service contracts, this phase is often the delivery of the services on the construction site or to support construction.

Different competencies may be required to check, witness and direct activities during this phase involving engineers, quality controllers and HSE advisors.

### Close-out phase

The close-out phase is distinct from the delivery phase because of the time required to close-out all the relevant as-built documentation including all the quality data books and all the material traceability dossiers. The approval of the final documentation usually triggers the final payment. In addition, some time might be needed to settle any commercial variations, claims or disputes to establish the final account.

It is important that the close-out be formalized in a close-out certificate where both parties confirm that there is no

outstanding payment or claim, subject to any surviving warranty obligations or the like.

### Supplier assessment

Supplier performance must be assessed at the end of the PO/Subcontract (It is highly recommended to perform intermediate assessments for long lead items to share the information sooner with other projects).

### Lessons learnt with Supplier

A Lessons Learnt exercise must be done for all key Suppliers.

Both parties must capture Lessons Learnt separately. Then they can be shared and combined in a common table.

A meeting is then organised to review them, select the most important ones and agree on recommendation/action plans for future projects.

### What the requirements for Package Management are

Package Management is the active management of all four post-award phases. Because numerous disciplines and stakeholders must interact with the vendor or contractor, it is good practice to nominate a Single Point of Contact on the project side.

However, this Single Point of Contact should not be just an administrative postman, but someone in charge of managing the contract in all its dimensions.

This is the concept of Package

Lead. When fully deployed, it makes each Package Lead a mini-project manager on the limited scope of the contract with a transverse coordination task.

Package Lead is a role in the project. In principle, there is no specific restriction as to the discipline of origin of the Package Lead: it could be a technical engineer, a supply chain engineer or a construction or commissioning engineer. This can be adapted to the particular challenge of the package and to the particular experience of the person, in particular regarding commercial issues.

### How to organize properly Package Management in a project

While the concept might sound simple, proper Package Management is not often properly implemented on a project, because of the following inadequate practices:

- It adds another layer (of complexity) in the organization of the project
- It requires some delegation of authority to the Package Lead
- The role may be limited exclusively either to Engineering personnel or to Supply Chain Management personnel when none have the full capability to provide all the necessary resources/skills
- Package Leads do not always have the necessary experience to apprehend fully the role, or there are

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not enough people in the project team with a relevant experience.

From our experience in implementing the concept and from our observations from numerous project reviews, we give some guidelines to ensure a successful implementation:

- Limit the list of packages that require a Package Lead to be assigned to the most significant and critical engineered equipment and services (and do not assign Package Leads to the purchase of off-the-shelf equipment: a desk expeditor will do)
- Depending on the size and complexity of the package or packages, a Package Lead role can be in addition to other roles a team member may have on the project or a Package Lead could have one or more packages to manage
- Be open to a varied profile and background of potential Package Leads – look beyond Supply Chain Management and beyond their current role in their detailed prior work experience - and use the role as a development opportunity for bright professionals with a few years' experience on their way to take more senior roles in projects

- Delegate and effectively empower the Package Leads to drive the contract and the vendor/subcontractor, giving them some authority and recognizing the value of their recommendations on major subjects
- The Project Manager or his delegates should spend enough time with the Package Leads who has a decisive role in the future success of the project.

## Conclusion

Package Management is an essential role for the success of Large, Complex Projects. Proper supply of engineered equipment and services will often be the key to timely and cost-effective delivery, because it will avoid the dreaded bottleneck effect where the entire project might be waiting on a critical delivery, leading to delays, costly mitigation actions and substantial disturbances.

Package Management is not often properly implemented on projects. This White Paper explains the scope and give some recommendations for successful implementation. This implementation must be consistent and happen early in the project.



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