



## White Paper 2023-12

### How to Pivot during the Execution Phase of a Large Complex Industrial Project

*While this situation should be avoided by a proper project definition phase, it is sometimes necessary to substantially pivot and change course during the execution of a project. This implies significantly changing the project objectives and/or execution strategy. This situation necessarily creates substantial disruption. Based on our experience this White Paper describes good practices should this situation happen.*

#### Situations where a substantial pivoting is required during project execution

For owners, this can happen due to a number of events:

- significant regulatory changes (or more generally, changes to stakeholder requirements),
- changes in the facility product fit to the market, requiring a change to the product,
- unexpected changes to the main feedstock,
- unexpected difficulties in an innovative section of the facility,
- default of major contributor or contractor that is difficult to substitute.

For contractors, most such issues will be managed through a renegotiation of the contract with the owners. However, in some cases, EPC contractors can experience a need to pivot when the project execution strategy envisaged is not possible, e.g. due to the lack of availability of a difficult-to-substitute construction resource, requiring a substantial change of strategy.

Because those situations necessarily create significant disruption, additional costs and duration, they should be avoided as much as possible by a thorough and in-depth project development and preparation phase. Those situations are however more likely to happen on innovative projects, or very long projects (spanning more than a couple of years) due to project environment changes.

#### Consequence of a significant project pivot

The consequences will generally be a requirement to modify some part of the facility specifications and hence, configuration.

Engineering changes will then flow into procurement, construction and commissioning activities. Depending on the actual progress of the project, this may require substantial rework and modification of already manufactured or erected structures, or of the overall project execution strategy. Ongoing activities will have to

be reviewed for their relevance, and those not needed any more interrupted.

#### How to address the need to pivot

If ongoing project activities remain worthwhile for project completion it is essential to maintain disturbance to a minimum so as to protect the project schedule and budget on those parts of the project which will not be affected. This may be easier for certain projects which are seasonal for construction, as an inter-season period can be used for pivoting. For some projects that are not schedule-driven it may be acceptable to stop the project outright during the re-definition phase but that is generally not entirely practical nor desirable.

#### Setup a discrete definition task-force

We first recommend to take time to clearly define the revised project. This requires the mobilisation a small task force to go through a scoping and feasibility phase before being able to commit to the pivoted project. This re-definition phase of the pivoted project will also allow to understand fully the direct and indirect consequences of the pivot.

To minimise disruption to ongoing activities, this task force should remain discrete and not communicate its work to the rest of the project. This will avoid disruption and also avoid that the project team starts to work prematurely on options which have not been fully worked out. If contractual aspects are at stake, this task force should even be entirely confidential and may need to work from premises outside the project office.

Moving from scoping to feasibility study of the pivoted project, the task force size may need to increase and involve more project personnel, but this should still remain a limited number of full-time persons. As required, external contributors can be brought in to contribute in a confidential manner.

When needed, the task force should liaise with regulatory authorities and stakeholders to ensure that the pivoted project definition is acceptable and adequate. This should be done in ad-hoc meetings without disturbing normal project rituals. The same applies to interfaces with project governance.

**Failure to maintain confidentiality, to achieve a sufficient level of maturity for the pivoted project or to address change management properly, will have strong negative impacts on the project.**

One of the essential outcomes of the task force should be an updated project execution plan, including a change management plan to take as much advantage as possible of existing project achievements while minimising work on scope that will no longer be required.

**Assess a sufficient maturity of the pivoted project before implementation**

One of the risks is that under time pressure, the change of course of the project is decided prematurely on the basis of an insufficiently defined new project configuration and execution plan. As for initial project launch, a proper definition of the final facility is required to enable successful project delivery. For the same reason, it is essential that the change to the project is defined to a sufficient level of maturity (to be confirmed through an independent review or other similar mechanism) before the new configuration of the facility and the updated project execution plans (including new contracting requirements) are implemented and communicated. Temporarily, this will necessarily create an uneasy situation where some activities may continue which are already known to require future rework, and some optimisation must be sought in that respect. We believe it is preferable to bear this uncomfortable situation longer if that can contribute to a better definition level of the pivoted facility.

At some stage the new direction of the project will be unveiled, and all project contributors expected to contribute to the finalisation of the finer details of the new execution plan. This transition needs to be carefully planned through an explicit change management plan which will include inclusion of all contributors, actions to be taken to terminate some activities and contract for new activities.

**Impact of improper pivoting approaches**

Failure to maintain discretion or confidentiality on the pivoting task force, or involving a too large number of personnel, will inevitably grind the entire project to a stop (or at least diminish greatly overall productivity). Unless that is really what is intended, it is generally not desirable since many parts of the project can continue to proceed in a useful manner even for the pivoted configuration.

Maintaining this strong separation between the pivot task force and the rest of the project team is really an essential success prerequisite.

Not developing a sufficiently detailed transition and change management plan will also create substantial disruption, much above what is expected. This requires a sufficient maturity to be reached in terms of updated execution plan so as to avoid the risk of inefficient iterations involving a large number of people. All contributors must be clear from the onset of the pivot implementation and about their renewed roles and objectives.

**Significantly pivoting an industrial project during its execution must be avoided, but when it happens, specific measures must be taken to address the situation.**

**Summary**

Significantly pivoting an industrial project during its execution must be avoided, but when it happens, specific measures must be taken to address the situation. The objective is to develop a sufficiently mature definition of the new project and its execution plan while not disturbing the rest of the project. This requires a separate taskforce to be setup and managed, producing a sufficient level of definition, and a clear transition and change plan for the moment where the pivoted project will be revealed to all contributors. Failure to maintain confidentiality, to achieve a sufficient level of maturity for the pivoted project or to address change management properly, will have strong negative impacts on the project.

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