



White Paper 2012-04

Convergence Management: the Key to Large, Complex Projects Success

Complex projects often fail because of a missed convergence due to unforeseen variation in the delivery of preceding activities that are required. Convergence planning is a key tool for the project leader of a complex project. This paper gives detailed instructions at how to implement it practically in a complex project. This paper is a follow-up from the paper 2012-03 "The fallacies of conventional scheduling, and how to overcome them".

Convergence management in a nutshell

In complex projects, failed convergences really need to be avoided, because they can have dramatic consequences on the project outcome, in terms of delays and cost overrun. The project leader and her team needs to be aware of this effect and focus on avoiding it.

To achieve this, the following logical steps need to be followed:

- Identify the critical convergence points of the project;
- Identify what deliverables are required at these convergence points and review their plan;
- Monitor regularly the effective convergence of all those deliverables;
- Take actual action in case of deviation that might become critical.

It looks simple but is not so easy. In the following paragraphs we detail some practical recommendations to ensure the success of this process.

Step 1: Identify the critical convergence points of the project

Ideally this exercise should be done at the tender / planning stage before approval to proceed so as to minimize the number of critical convergence points required for the project.

Notwithstanding such early optimization, it is important that at the project kick-off, the project core teams spends time together to identify and discuss those main convergence points. This will foster an excellent shared understanding of the drivers of the project.

Some key recommendations for this identification process include:

- Limit the number of critical convergence points that will be tracked throughout the project execution to ensure a real focus;
- Critical convergence point means: many of the project activities converge at that particular point, and/or missing this convergence point will have huge impact on the project delivery;
- Critical convergence points should be identified regularly throughout the project; there should even be more in the early stages (there should be some at engineering stage and at procurement award stage because they are drivers for the project final delivery).

At this stage the critical convergence points should not yet be put on a timeline.

Step 2: Identify what deliverables are required at these convergence points and review their plan

For each critical convergence point, the required deliverables should be identified. The key here is completeness; still, there should not be more than 5-10 main deliverables for each critical convergence point. If they are more, regroup them under a single set of deliverables. The keyword here is deliverables: what needs to be identified at the convergence points is the physical products or documents that need to be available.

Until now we have only discussed about activity logic, not scheduling. At this stage we need to start looking into scheduling. Start with the deliverables: the important part is to protect the convergence point against natural variation in the production of the different deliverables required. In other words, we want to avoid that one deliverable takes hostage all the others and impede project progress. The best way to do that is to impose a "buffer" between the deliverable availability and the actual convergence point. It is up to the project team to impose a relevant buffer based on their experience of variation in the production of this particular deliverable.

Once all these deliverables are identified, as well as their duration and buffer, input all this information into a conventional schedule, building it from the project final delivery backwards. Time the activities as you would do normally.

The critical convergence points can then be put on a timeline, along with the associated deliverables.

Your convergence plan is now ready to be used as a key reference document for the entire project team. Produce some versions and hang them on the wall.

Step 3: Monitor regularly the effective convergence of all those deliverables

At this stage, two keywords are important: discipline, and buffer monitoring.

Discipline

Contrary to a conventional schedule, the dates for the critical convergence points are set. They do not change with the actual progress. They can only change if there is such a significant modification of the execution strategy that it calls for a full rebaselining of the schedule basis of the project. That might astonish newcomers to this method; still it is the only way to ensure that everybody takes these convergence points seriously.

Discipline needs also to be applied in reviewing the convergence plan progress regularly at the top project leadership level, and take action if needed.

Finally, discipline means that if a deliverable is 95% complete... it is not entirely complete and considered as such; only when a deliverable is really and demonstrably 100% complete can it be considered as done. This is because the last 5% progress are often long to achieve.

Buffer monitoring

The key to convergence planning as an anticipation tool lies in buffer or float monitoring. Monitoring how the float on an activity compared to a fixed point (the convergence point) changes in time gives a great indication of whether the project is effectively converging. An activity which float diminishes by one month every month is not converging!

This historical analysis of the float is not commonly practiced in conventional scheduling, and very rarely against a fixed date. In Project Value Delivery's experience, it is a key practice that allows to ensure a reliable early warning system for key deliverables that might not be completed when required.

It is also important at this stage to ensure a good quality of the buffer monitoring data: delivery forecasts should be reviewed and challenged to avoid responsible team members to report wishes rather than reality.

Step 4: Take actual action in case of deviation

Should the project identify during the regular reviews that the buffer monitoring system shows that a deliverable is not converging appropriately, alarm should be raised and action taken early. Furthermore, if a critical convergence point is not going to be met, it should be an

organization-wide wake-up call that goes all the way to the top of the organization.

It is then important to make sure the organization commits the right level of resources to rectify the situation and bring the project back on track. It can mean a significant temporary commitment of resources. The extra cost will be more than compensated by the avoidance of a missed convergence point and the ensuing standby of most of the project.

The discipline of respecting the critical convergence points is critical even for the early convergence points. This may appear very unusual or even counter-intuitive for project practitioners. What is the importance of a 2-week delay in the first convergence point, 3 month into a 2 year project? Well, it is really important and should be treated as such; and it should be remediated immediately to put the project back on track and avoid complacency. Simply, successful organizations that lead complex projects do that.

Let's not be kidding ourselves – 80% of the effectiveness of the convergence method lies in effective, proportionate and timely action when a non-convergence is identified. The three first steps just provide the framework and the early warning system. The fourth step – action – will decide on whether the project will be successful.

Conclusion: the discipline of convergence management is the key

When you are leading a complex project where many different interdependent contributors need to deliver in a coordinated manner, focus on the convergence and be disciplined about it. Identify early problems early by monitoring your buffers for convergence deliverables. Be relentless in ensuring that resources get thrown in early if needed.

Failure and delays in a project are rarely a fate that can't be avoided. Instead of hitting only 20% success rate for complex projects we can easily get 80% right using this simple method with discipline and rigor. Why can't we just do it?



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Executing Large, Complex projects.

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