
Project Execution at Light Speed: Techniques for a 7-month Greenfield

Clarify WHY the need for speed:

Moving fast is risky. It raises capital costs. It risks startup delays, which could impact order fulfillment. It forces debugging during production. So the project charter should explain why the project must move fast:

- A must-ship order with no other way to produce the volume
- A significant ROI that is jeopardized if a normal schedule is followed
- A tax implication
- An M+A driver
- A regulatory issue
- A competitive opportunity to gain significant market share in the sector
- The plant just exploded
- A fabulous new product that Sales swears will hit \$1 Billion in sales the first year.....

Scope Definition and Project Initiation:

Confirm the economics of speed, such as:

- Each month is \$3 million in import duties
- Each month is \$1 million in fines
- Each month is \$3 million in lost sales

Using a cap rate of 6x, this allows the project leaders to justify \$24, \$6 or \$18 million in acceleration premium. Basically, if you cannot agree on the financial situation, stop talking.

First publish a schedule

Find and excellent best scheduler to develop a cost-loaded logically-linked project schedule. Assume that for a fast moving project, this resource is one FTE, if not more.

Staff the PM team sufficiently:

The PM should be 100% dedicated, the project executive should anticipate at least 20% commitment. Under-resourcing the leadership team, a fatal flaw on a normal project, is amplified for a fast-track project.

Expect to waste money....

Moving fast requires rapid payments, quick decisions, more T+M, less time to get the best price, more negotiated work without three bidders—all anathema to procurement departments in normal times. But this is part of the acceleration premium. Sr. Leadership has to get behind this process.

Carry sufficient contingency

It will not be possible to complete a thorough FEL and have street-validated pricing before board approval. Carry 20 – 30% contingency, but carefully manage contingency spend.

Implementation Methodology:**Design/Build GMAX**

There are many reasons why this method allows rapid design and execution, but quick decision making, quick analysis of alternatives and quick translation to the job site are probably the most important.

Vendors who can provide systems and meet performance specs are key. But verify:

- They have the capacity
- They have strong PM staff who can manage the systems integration
- They have control systems that are flexible enough to fit into the overall plant controls architecture
- They can install with their own forces, or have millwright/electrical teams they frequently work with
- They can provide extra resources during startup

Incentives and Penalty Clauses

They work!

Techniques:

Pre-Engineered buildings are always faster, but if they are not sanitary enough, or you have too many suspended or superimposed loads, design the simplest building possible:

- Robust roof design basis—add 35 psf for unknowns
- Robust floor slab—not the normal 7” w/mesh
- Two-pitch roof
- Robust clear to steel height
- Support from the floor to avoid those suspended loads

Stack Trades

An interstitial space allows MEP work to proceed above the walk-on ceiling while process installation work occurs below. Look for many opportunities like this.

Defy Mother Nature!

- You can erect a building at 10 below
- You can pour concrete under an inflatable dome in winter...
- But you can't proceed if the asphalt plants are shut down
- Keep dewatering pumps on-hand for heavy rain
- Spread many truckloads of gravel to keep the site productive even in rain
- Preplan where the snow pile will be
- Dry-in the building ASAP and complete under-slab utilities and the floor afterward

Test prior to ship

Don't debug anything on-site that you could have debugged at the manufacturer. Leave enough time in the schedule to test prior to ship, with sufficient product.

Construct around the clock

24-hour construction is common in many sectors, but less so in CPG. Hire firms that are used to it and have the supervisory staff to manage it.

Hire the plant staff early

Your plant manager, maintenance manager, plant engineer and others can work on tasks critical for startup, leaving the project PM team available to get the project built.

Risks:

Imports and foreign suppliers

- You realize you can't force Germans to ship before they are ready, don't you?
- And the Italians never meet ship dates. (with apologies to my German and Italian friends...)
- Know what work is done off shore and what is completed in-country
- Understand freight forwarders and customs expeditors
- Show up at off-shore factories, unannounced, to validate progress
- Prepare to air ship, if at all possible

Access to site

If there is any problem with title or land closing, easements, existing utilities that need to be relocated by others, environmental cleanup not yet complete—Watch out!!

Massive Cultural or Procedural Change concurrent with Project Startup

Implementing SAP? Installing serial number #1? Completely changing the supply chain in a way new to your sector? All new employees with no training at your existing plants? Just give up now. Read no further.

Public Notice Periods

Zoning approvals that require an open meeting or public notice—Watch out!!

Third Party Scope

- Is the city building a new waste water treatment plant that must be on-line before your startup?
- Is the state building a new interchange?
- Is the utility company running a new gas line using easements they don't yet control?
- Is the power company providing service from a new substation?

Don't trust anything you are told or any agreement you have signed. Make contingency plans!

Safety

When you are in a hurry, accidents happen. Stress the culture of safety. Hire HSE manager to ensure proper procedures are in place.

Focus on People

Burnout occurs on a fast, high-pressure projects. Watch out for stress, help support families. Support key people with admins and clerks so they can delegate. Keep a good HR professional involved to help the capital team with these challenges. Celebrate often. Buy KC Strips for everybody!