

TRAP #2

THE LOST OPPORTUNITY TRAP

HOW DELAYS IN DESIGN/BID/BUILD CONSTRUCTION LEAD TO DOWNTIME AND LOST OPPORTUNITIES FOR PROCESS MANUFACTURERS

The Design/Bid/Build (D/B/B) process, widely used for conventional buildings such as offices, retail, schools, and other non-manufacturing-related building projects, poses production risks and lost market opportunity for process manufacturing companies who need to expand.

The inherent delays built into the D/B/B approach lead to longer schedules in the final construction of process manufacturing plants. These delays translate to loss of valuable manufacturing production time during both the design and construction phases of the project, greatly increasing the risk of lost revenue, customers, and market opportunities.



Four ways the D/B/B construction approach causes lost production and missed market opportunities:

- 1 **Start-up construction delays due to inherent flaws in the D/B/B design phase**
- 2 **Higher risk of delays during construction, due to the contractor lacking both process and construction experience**
- 3 **Higher potential for plant shutdowns and longer-than-needed shutdown periods**
- 4 **Production delays can occur due to mistakes in the original building design, requiring additional rework and modifications during the project**

D/B/B NEGATIVE IMPACT #1:

PROCESS START- UP IS DELAYED, CAUSING DELAY IN PROJECT COMPLETION

- The traditional D/B/B construction process takes months to get started, due to time needed for building design, construction drawings and specifications, and collecting contractor bids. One phase cannot take place without the others being completed.
- This long initial delay has severe business ramifications for process manufacturers who must bring new production online to achieve aggressive revenue goals, meet new customer supply requirements, and result in a higher budget or cost overages.
- **Delays in new plant production can be a make-or-break proposition for process manufacturers, resulting in loss of a major customer, or even forcing abandonment of the plant expansion due to the missed completion date, or inaccurate project budget, turning the project into a total loss for the company.**

D/B/B NEGATIVE IMPACT #2:

ONGOING CONSTRUCTION IS DELAYED, DUE TO LACK OF A CONTRACTING PARTNER WITH BOTH PROCESS AND GENERAL CONSTRUCTION EXPERIENCE

- With the D/B/B approach, each part of the project—foundations, concrete, steel, mechanical, electrical, etc.—is bid out to each specialty contractor for these trades.
- This traditional approach lacks the critical role of a contractor which has both experience working on process-oriented building projects, and expertise in on-site construction project management.
- An experienced process and general construction manager must be qualified to:
 - carefully examine the requirements of the owner's manufacturing process
 - identify potential faults in the assumptions made in the initial design
 - evaluate and adapt specifications made by the project construction team
 - provide accurate scheduling and project pricing
 - manage the design to comply with all local, state, national codes and standards.

D/B/B NEGATIVE IMPACT #3:

HIGHER POTENTIAL FOR SHUTDOWNS IN CURRENT PLANT OPERATIONS CAUSING PRODUCTION DOWNTIME LOSSES

- Often overlooked during the design phase of a traditional D/B/B project are important opportunities to eliminate or minimize production downtime during construction.
- In order to design, plan, and manage the project to minimize or eliminate production downtime, deep knowledge of process-related building projects, and the construction expertise required to manage complex projects, is required.
- **Excess downtime in current plant production is a significant cost to plant owners, on top of the costs required to expand production. Construction-related downtime is often a direct result of a lack of process-related expertise associated with the traditional D/B/B construction approach.**

D/B/B NEGATIVE IMPACT #4:

PRODUCTION IS DELAYED DURING CONSTRUCTION DUE TO FAULTY CONSTRUCTION DESIGN

- Because of the special nature of process manufacturing construction projects, the traditional D/B/B construction approach often cannot take into account the unique design requirements needed for a successful and timely project.
- With the D/B/B approach, there is a high risk of hidden design flaws in construction drawings for process-oriented projects, and these flaws are often discovered only during the construction phase, creating significant construction delays and cost overages.
- **Delays due to design flaws are twice as costly, as the new production capability is delayed, and the re-work costs during construction increase the overall project costs.**

INTRODUCING AN ALTERNATIVE TO D/B/B FOR PROCESS CONSTRUCTION PROJECTS



The Guided Process Solutions (GPS) approach eliminates the cost, construction, and production risks for process manufacturers found in the traditional design-bid-build method:

- +** The GPS approach can take months off your construction schedule by accelerating the design, budget, and initial construction stages, therefore getting your new plant into production—and profitability—sooner.
- +** As a single point of contact for the entire project (including design, estimating, budgeting, and construction phases), the GPS team maximizes cost savings and efficient scheduling opportunities to get your new plant in production, without cost overages or costly construction delays.
- +** With GPS, you get a guaranteed, firm price for your project early in the design process, so you can determine the affordability of your project immediately, without production-killing delays.
- +** The GPS team designs and builds the best and most cost-effective solution for your process, production, future expansion, and business needs by optimizing your building project around your process.
- +** Guided Process Solutions process-driven design/build system uses an in-house team of architects, professional engineers, and construction staff who work directly with owners to optimize the design of the new facility around the specific industrial process.

HOW GUIDED PROCESS SOLUTIONS HELPS YOU MEET YOUR BUDGET AND SCHEDULE, AND MINIMIZE DOWNTIME ON NEW PLANT EXPANSION OPPORTUNITIES

TRADITIONAL D/B/B

— INITIAL DESIGN DELAY ADDS MONTHS TO FINAL PROJECT COMPLETION DATE:
Designs must be fully completed before being sent out for bid to determine final project cost, resulting in months of lost production potential for plant owners

— PLANT COMPLETION DELAYS DUE TO FAULTY PLANT DESIGN:
On-site construction delays from flaws in original plant design due to lack of insight into customer's process and knowledge of building constructability

— PLANT COMPLETION DELAYS DUE TO LACK OF PROJECT OVERSIGHT:
High chance of delays during project, due to lack of single project manager having deep process and construction expertise

— DOWNTIME DUE TO CURRENT PLANT SHUTDOWNS:
Without deep process and construction know-how, current plant operations are often disrupted during construction, resulting in expensive production downtime

GUIDED PROCESS SOLUTIONS

+ FASTER CONSTRUCTION BRINGS PLANT PRODUCTION ONLINE SOONER:
Construction begins much earlier, before the design phase is complete, getting production—and revenue—online months earlier

+ PLANT DESIGN PROBLEMS ELIMINATED EARLY IN DESIGN PROCESS:
The GPS team applies its knowledge of process construction and project constructability to your process, to identify and eliminate building design flaws that cause expensive project delays and on-site re-work

+ THE GPS TEAM IS THE SINGLE POINT OF CONTACT ON YOUR PLANT CONSTRUCTION PROJECT:
Applying GPS on-site project management and construction experience minimizes or eliminates delays in plant operations during construction stage

+ CURRENT PRODUCTION DOWNTIME MINIMIZED OR AVOIDED:
GPS process knowledge and experience identifies best approaches to minimize or eliminate delays to current plant operations during early design and construction scheduling stages

To learn more about Guided Process Solutions, visit: RLGbuilds.com or contact Brandon Gartee, Business Development Manager at Brandon.Gartee@RLGBuilds.com or 419.720.2677.

