



Day & Zimmermann
We do what we say.®

CASE STUDY - D&Z BAYER CROP SCIENCE \$43MM TIC SPECIALTY CHEMICAL PROJECT

The Capfx® Effect:

Getting Production Up and Running to Meet Growing Demand

BACKGROUND

Bayer Crop Science was facing a supply and demand issue.

The company had discovered a specialty chemical which represented a unique solution for managing crop diseases. This innovation had the potential to protect the livelihood of farmers on a global scale. Demand for the product was strong and the company needed to significantly expand production to accommodate future sales.

Bayer Crop Science needed to execute a capital project that would enable production of the specialty chemical in the company's Kansas City, Missouri site – and they needed it fast. It was a sizeable job that required reutilizing idle equipment of discontinued products and installing new equipment capable of production 11 months per year.

Bayer Crop Science required a partner deeply rooted in the chemical processing industry that could make sure this two-year, essential capital project was executed on time and under budget; so they called on Day & Zimmermann (D&Z) to manage the project. D&Z's Capfx® approach was the perfect solution to meet the demands of this project.

CHALLENGES

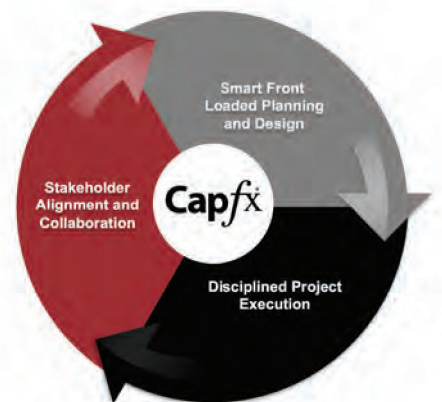
- Facing a high demand for the product and short supply, time to market was key driver of this schedule-driven project.
- Bayer Crop Science was facing an underdeveloped FEL2 scope.
- Bayer Crop Science needed to improve overall project efficiency.

SOLUTION

D&Z quickly rolled out its Capfx® approach, a project delivery process focused on driving capital effectiveness and predictable cost savings. D&Z implemented interactive planning, engineering, and design working sessions that were critical to a successful project. The company also assured owner and contractor alignment by facilitating an open dialog on project issues, an often overlooked yet critical element of project success.

D&Z experts leveraged the Capfx® approach in the following ways:

- Executive steering team alignment
- Resource scalability and commitment
- pEPC - Early Procurement Engagement
- Implementing the stage gate FEED process
- Construction Readiness Analysis
- Digital Laser Scanning



RESULTS

By leveraging the D&Z Capfx® approach, Bayer Crop Science realized the following benefits:




Project completed
On Budget



Provided
\$500,000 in cost savings

PROJECT COMPLETED ON SCHEDULE

Engineering duration 
40% below industry average

Construction duration 
15% below industry average



Provided value-engineering solutions that
Reduced the total installed cost of the project.

D&Z's Capfx® approach delivered performance metrics that beat industry benchmarks:

METRIC	D&Z BCS PROJECT	INDUSTRY*
Project Cost Growth	< 1%	1.2%
Change Cost Factor	5%	5.6%
Project Schedule Growth	0%	4.3%
Engineering Schedule Growth	10%	19.8%
Total Piping Productivity (hr./ft.)	0.7	0.83
Structural Steel Productivity (hr./ton)	33	41.35
Rework Cost Factor	3.8%	4.9%

*CII PAS
Construction Industry Institute Performance Assessment System

“Congratulations to all of you for this great achievement of a truly important milestone for the project, KC site, and our company. Job well done everybody as a united team for one great cause: setting the KC site up for future success and providing our customers with our highly regarded product.”

– HEAD OF ENGINEERING & MANUFACTURING EXCELLENCE, BAYER CROP SCIENCE

“What separates success from failure, I believe, are Leadership and Integrity, in particular when working with different groups, organizations, and companies, all of whom must to a certain extent set aside their individual objectives to achieve a common purpose. We did that on this project, which includes Bayer, D&Z, and the other contractors and suppliers who contributed to our success. Thanks to all of you for your effort on the project.”

– PROJECT MANAGER, BAYER CROP SCIENCE

