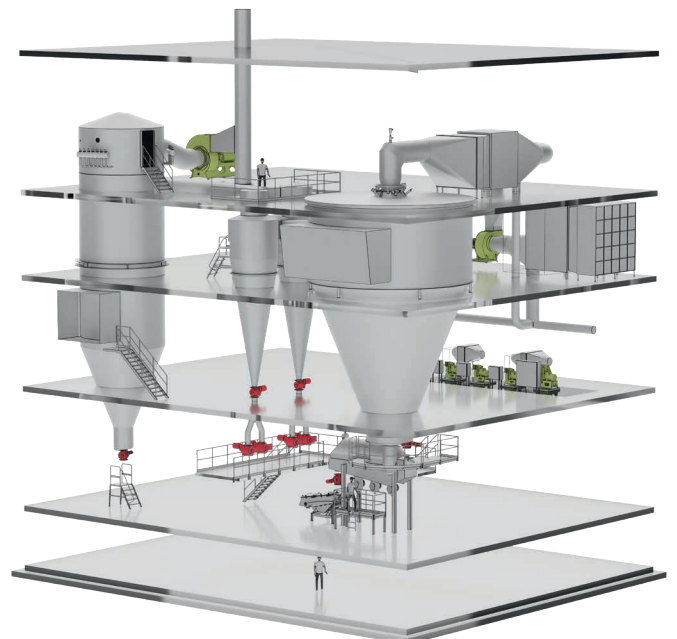




MAXIMISING LIFETIME VALUE

Upgrade Today to Meet the Demands of Tomorrow



SPXFLOW[®]

TAPPING THE HIDDEN VALUE IN YOUR SPRAY DRYER PLANT

Why Modernise?

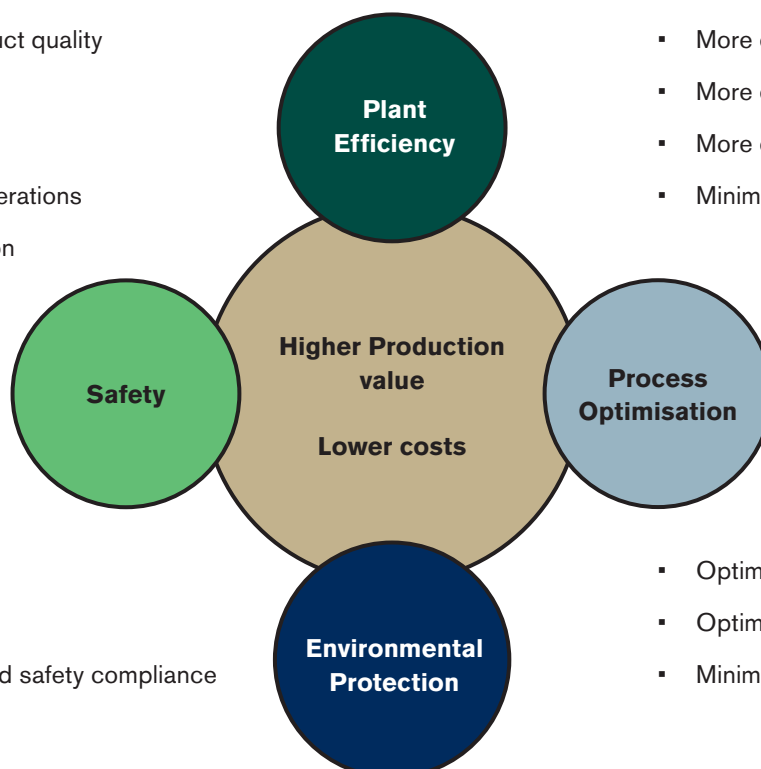
Upgrading your spray dryers can yield great rewards. Your plant will be more efficient, your people and plant will be safer, and you will be well positioned to take advantage of new market opportunities. Plus, you can get it all done with minimal CAPEX.

Identifying Your Needs

Equipped with proven techniques refined over decades of experience, SPX FLOW Rebuild & Upgrade specialists visit your site to assess your operations and identify areas where the greatest impact can be achieved. We then provide full installation, commissioning, and startup services, or can supervise your teams to ensure they are doing things right.

Achieving Maximum Value from Your Spray Dryer

- More consistent product quality
- Expanded capacity
- Increased availability
- Automated manual operations
- Tighter MES integration



- More efficient energy use
- More effective energy recovery
- More efficient water use
- Minimised carbon footprint

- Improved safety
- Validated processes
- Regulatory hygiene and safety compliance
- Reduced emissions

- Optimised batch operations
- Optimised CIP
- Minimised product loss

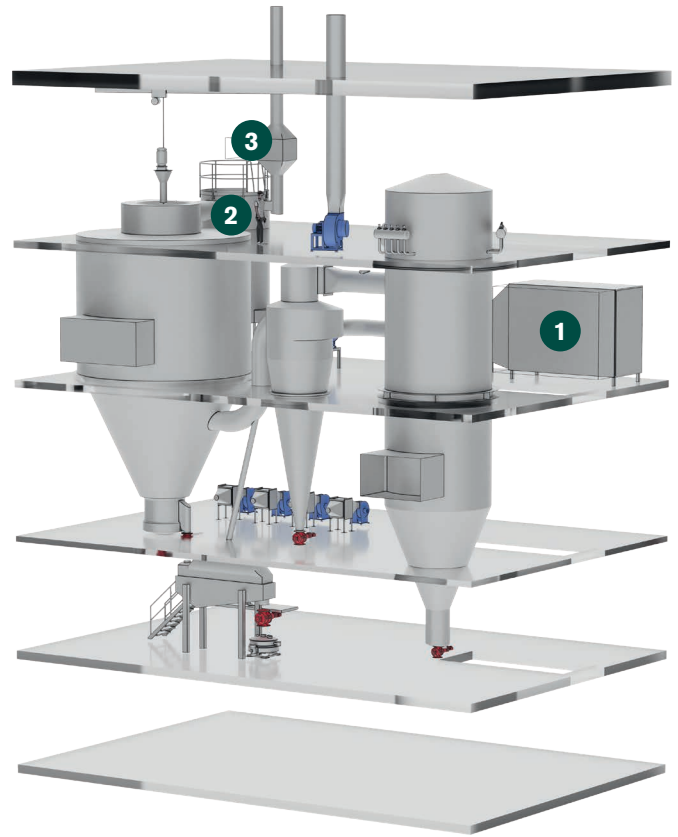
PLANT EFFICIENCY

Efficient spray drying reduces energy use and other operating costs while improving process stability, yield, and hygiene.

A carefully planned rebuild or upgrade scenario improves performance and extends the life of your equipment.

Our spray dry process experts apply a unique methodology to rejuvenate under-performing air heaters, dehumidification, and heat recovery systems. They also make your process smarter with software that self-corrects process anomalies and dramatically compresses product delivery schedules via dual feed lines.

With SPX FLOW, you can rest assured you are getting maximum return on your assets.



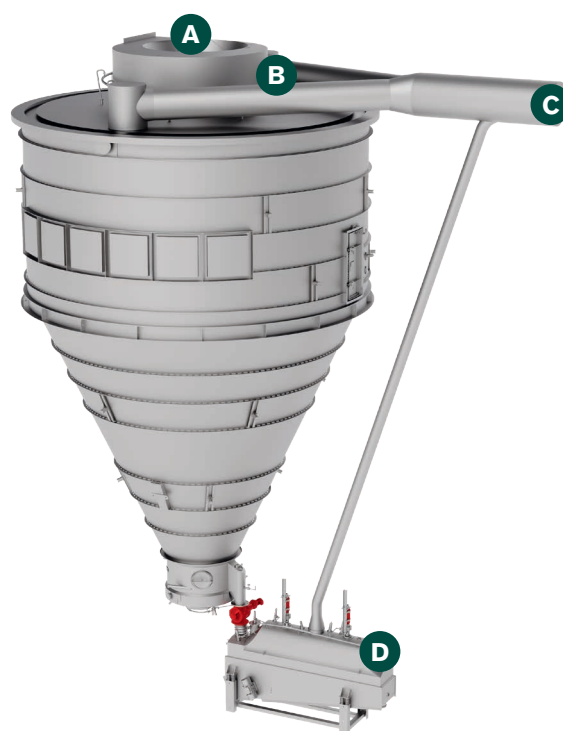
1. DEHUMIDIFICATION	2. AIR HEATING	3. HEAT RECOVERY
<ul style="list-style-type: none"> Increased production; energy reuse; stabilised processes; output powder year round 	<ul style="list-style-type: none"> Variety of heater options depending on heat source Hot process air will meet hygiene standards more efficiently, lower energy costs 	<ul style="list-style-type: none"> Recuperating functionality for flue gas or main air outlet Recovery of lost energy; reduced energy consumption
4. CIP	5. DUAL FEED LINE	6. MODEL PREDICTIVE CONTROL
<ul style="list-style-type: none"> Increasing flexibility in zoning production and cleaning areas Accelerating cleaning and drying Enhancing cleaning performance Streamlines operations with minimal downtime 	<ul style="list-style-type: none"> Increases production Maximum availability 	<ul style="list-style-type: none"> Automated control of residual moisture in powder Improved product stability and quality; higher capacity

OPTIMISE PROCESSES AND ENVIRONMENTAL PROTECTION

Rebuilding and upgrading is not simply about fixing what is broken. Our customers often want to raise their operations to a new level - perhaps to modify a product or meet an emerging market trend. Whatever optimisation is required, SPX FLOW has the experts and equipment necessary to make it happen.

Product Preparation and Air Parameters

- A** Feed (water % + solids %)
- B** Air inlet (temperature and moisture content)
- C** Air outlet (temperature and moisture content)
- D** End product (solids % + moisture content %)



CONVERT SINGLE TO MULTI-STAGE DRYER

- Combined spray or fluid bed drying, with internal and external fluid beds
- More capacity, more flexibility to optimise process and plant efficiency

EMISSION CONTROL

- Filters or scrubs pollutants
- Cleaner air to atmosphere; avoids fines; supports recovery

EVAPORATORS

- Removes water from ingredients
- Process optimisation and production capacity increase

AUTOMATION UPGRADE

- Improves consistency and quality; increases availability and utilisation
- Improve process and safety for dryers and evaporators

IMPROVE SPRAY DRYER PLANT SAFETY

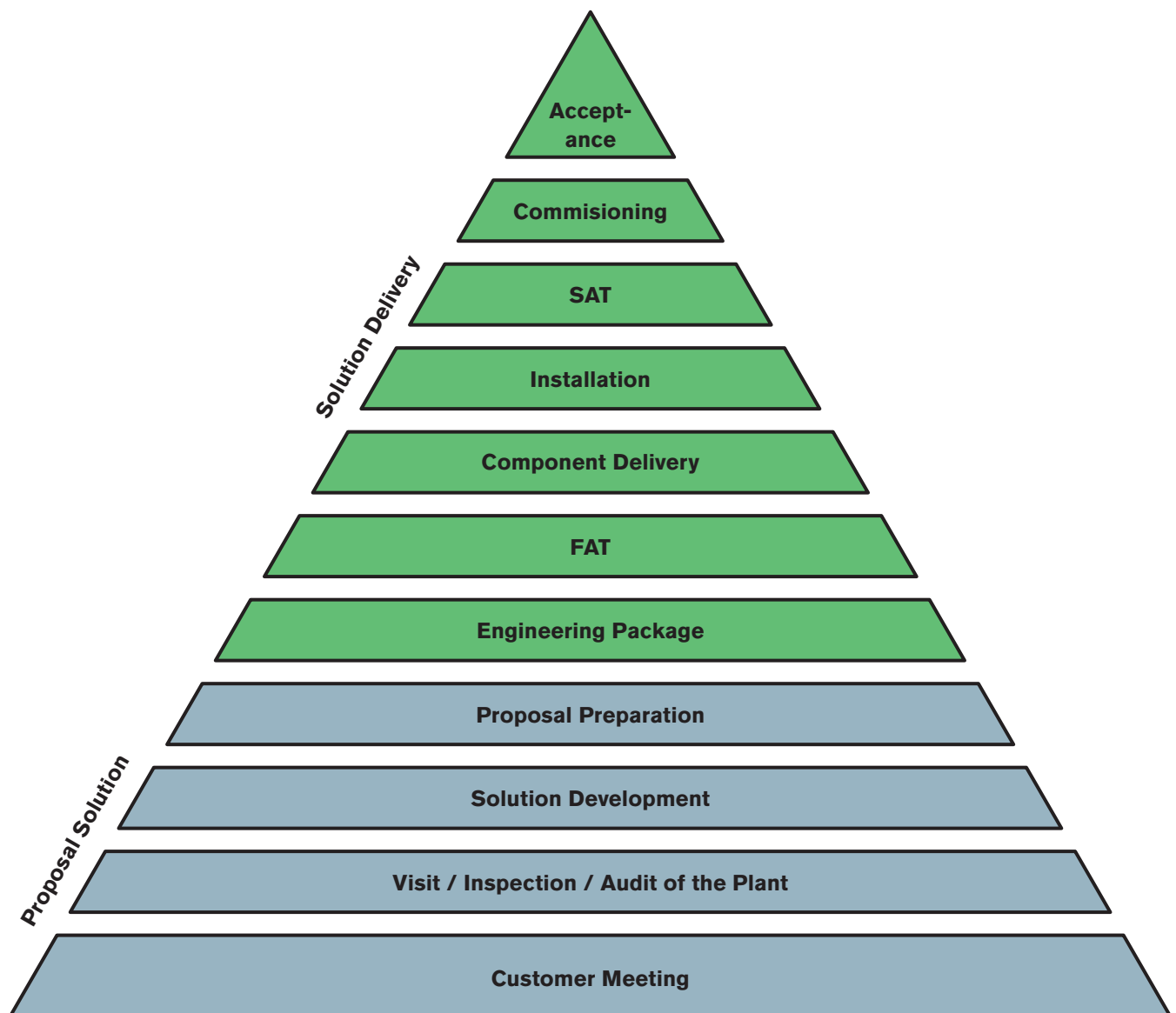
Safety is a critical factor for most rebuild and upgrade projects. An inefficient operation can put your people and plant at risk, and negatively affect profitability. SPX FLOW helps identify and eliminate potential hazards while offering solutions that make your operation safer than ever.



1. ATEX REGULATION	2. VISUAL CAMERA	3. CO DETECTION SYSTEM
<ul style="list-style-type: none"> Standard zoning for explosion protection Guidance in applying best explosion protection practices 	<ul style="list-style-type: none"> Monitors nozzle atomization Enables early action to avoid unnecessary shutdowns 	<ul style="list-style-type: none"> Monitor excess CO Prewarning of fire or explosions
4. SUPPRESSION SYSTEM	5. EXPLOSION MEMBRANES	6. FIRE EXTINGUISH SYSTEM
<ul style="list-style-type: none"> Detects a starting explosion and applies chemical suppressant Reduces risk of post-deflagration thermal events in plants with high Kst values 	<ul style="list-style-type: none"> Rupture disk technology for chambers and filters Reduces risk of post-deflagration thermal events in plants with high Kst values 	<ul style="list-style-type: none"> Monitors temperature to shutdown plant or activate water Mitigates disaster

A SINGLE SOLUTION FROM INQUIRY TO ACCEPTANCE

Where most spray dryer solution providers provide expertise in just a few areas and rely on third-party solutions to address your needs, SPX FLOW delivers a single solution from beginning to end. The result is a system composed of high-quality components that work seamlessly together to deliver maximum value. Additionally, we offer a single point of contact so that you always know an expert is on the job. Our goal is to deliver lower operating costs with increased performance and higher production value. That is the SPX FLOW difference.



WHY PARTNER WITH SPX FLOW?



Years of Experience

- We have been in the spray dryer business since 1948
- Implemented 6,000 different types of spray dryer plants around the world
- Extensive experience rejuvenating spray dryers for safety, efficiency, optimisation, and sustainability
- Developed a proven process for matching strengths to market opportunities
- Long and successful track record in project development and execution



Our Mission

SPX FLOW combines extensive experience and proven technologies to help you capitalise on market trends with:

- Maximum utilisation of your existing assets
- Maximum return on new investments
- Maximum environmental protection

We help you find the best solution for your long-term needs. We work with you to evaluate market opportunities and provide the modernisation, upgrade, or repairs necessary to capitalise on them.



Your Account Team

Your SPX FLOW project manager selects the ideal team for your specific project based on the following criteria:

- Customer support
- Process and design
- Mechanical engineering
- Supply chain optimisation
- Installation and commissioning



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For more information, visit www.spxflow.com.