Excellence in Integration

cross

Over the course of implementing thousands of applications Cross has developed a proven methodology for successful implementation of process control projects. We know the key to a successful project is a thorough understanding of the requirements from existing conditions to end goals.

Our process utilizes information gathering, system auditing, documentation review and detailed interviews to develop a document that defines the end requirements and the roadmap to achieve them.

Solutions designed to your specifications

WHAT DEFINES PROJECT SUCCESS?

A SUCCESSFUL PROJECT MUST:

- Meet business goals and objectives
- Be delivered and maintained within budget and schedule
- Deliver the expected value and return on investment

"By failing to prepare, you are preparing to fail."

– Benjamin Franklin

Common Characteristics of Successful Projects

- A positive working engagement between client and provider
- Clearly defined goals and project objectives
- Proven methodology for execution to include:
  - * Strong project management
  - * Rigid change management procedures
  - * Effective controls and communication process
  - * Defined responsibility matrix
- Excellence in technical leadership and experience

FUNCTIONAL SPECIFICATION

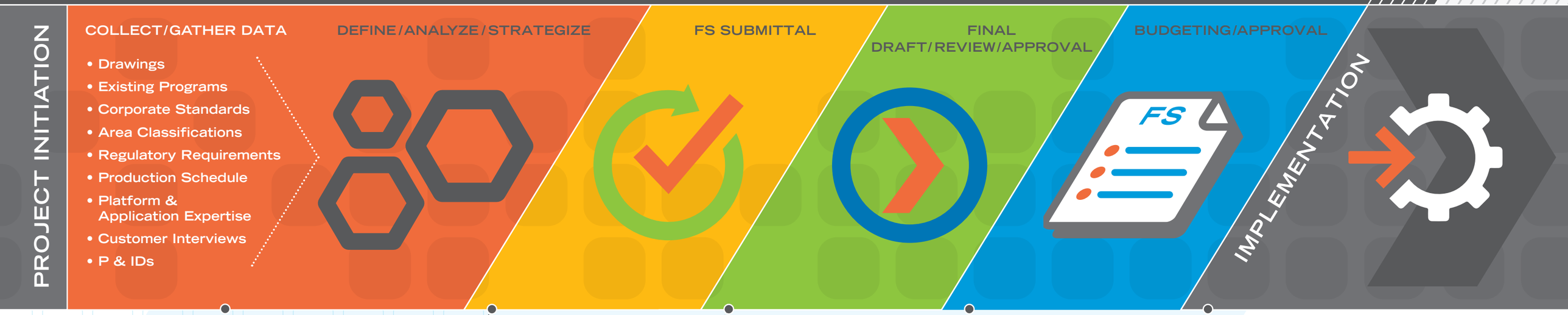
Functional Specification (FS):

A custom document that defines the functions that your new or replacement control system must perform, and an outline of the engineering process needed to reach the design and performance goals of the system.

"All you need is the plan, the road map, and the courage to press on to your destination."

– Earl Nightingale
Author of "The Essence of Success"

PROCESS ROADMAP FOR EXECUTION



- Define requirements
- Analyze data
- Develop preliminary implementation approach
- Review options with the client to ensure the proposed method meets objectives
- Complete a draft document based on criteria

- Preliminary customer review and feedback

- Working document

- Customer uses document as basis for cost planning or RFQ
- Customer obtains budgeting approval
- Customer selects integrator

- Project execution based on a proven and certified quality process

Key Goals of a Functional Specification (FS)

- Defined project goals and objectives
- Defined and detailed scope
- Established implementation roadmap
- Defined realistic milestone schedule
- Accurate budget appropriation
- Defined Responsibility Matrix
- Identify and document critical information gaps
- Obtain input and buy in from operations, management and engineering
- Inherent reduced project risk
- Generates reference documents for Acceptance Testing

PROCESS ROADMAP FOR EXECUTION

Project Execution process:

Our project execution process ensures excellence by design at every phase of implementation and includes customer involvement at key intervals to ensure project success.

Documentation sets boundaries, details goals, incorporates testing and serves as a basis for operator and personnel training.

PROJECT PHASES

HARDWARE DESIGN SPECIFICATION | SOFTWARE DESIGN SPECIFICATION | PROJECT INITIATION | PLANNING AND DEVELOPMENT | PROJECT EXECUTION | INSTALLATION, PERFORMANCE MONITORING & COST CONTROL | PROJECT CLOSEOUT

PROJECT PHASES

HARDWARE DESIGN SPECIFICATION

Defines the hardware design of the control system and details how the system should operate.

Includes:

- Cabinet requirements
- Client/Server requirements
- I/O distribution requirements
- I/O termination wiring drawings
- System layout/communication drawings

SOFTWARE DESIGN SPECIFICATION

Defines the software design of the control system and describes how the system should operate. This document will guide the integration engineer during the programming phases of the project.

Includes:

- Project description
- Design standards
- Basic control functions
- Graphics design functions
- Alarm management standards
- System security
- Data archiving
- Interlocks
- Third party interfaces
- Process reports
- Specific design requirements
- Batch requirements

PROJECT INITIATION

- Kickoff meeting
- Communication contacts
- Project schedule
- Review of the project scope
- Define deliverables
- Define action plan for missing information and clarification items

PLANNING AND DEVELOPMENT

- Material ordering
- Panel build
- I/O list definition
- Control module development/testing
- Hardware configuration
- Software & faceplate development
- Interlock development
- Simulation
- Acceptance test documentation
- Reference documentation is defined
- Definition of the test protocol
- Generation of a discrepancy report to manage open items

PROJECT EXECUTION

- Programming
- Internal Acceptance Testing
- Customer Witnessed Testing
- Factory Acceptance Testing

INSTALLATION, PERFORMANCE MONITORING & COST CONTROL

- Installation Qualification (IQ) – does the installation meet the approved design?
- Operational Qualification (OQ) – does the system operate as required?
- Performance Qualification (PQ) – does the product meet the specification?

PROJECT CLOSEOUT

- Resolution of all action items and outstanding discrepancies
- As-built documentation
- Project closure
- Post project support

PROJECT EXECUTION PROCESS

cross

www.crossco.com

850 Discovery Lane | Knoxville, TN 37932 | 800.332.3418

6625 ISG-FS_8-2021