

# Antigen Transfer Modernization (ATM) Suite

## Solution Overview

### Requirements

Increase existing production capacity & overall production, and create a modern & expandable infrastructure for ATM Suite

### Solution

Modern and expandable Suite including Media Preparation, Fermentation, Downstream Processing, Clean-in-Place (CIP), and supporting Process Clean Utilities with streamlined processes.

### Summary

#### Costs:

Technical Services	780,270
System Hardware, Software	411,370
Expenses	13,900

#### Schedule:

13 Months - Delivery On Time

Feedback: Client was pleased with the solution offered, including many mid-project requested changes that were accomodated successfully.

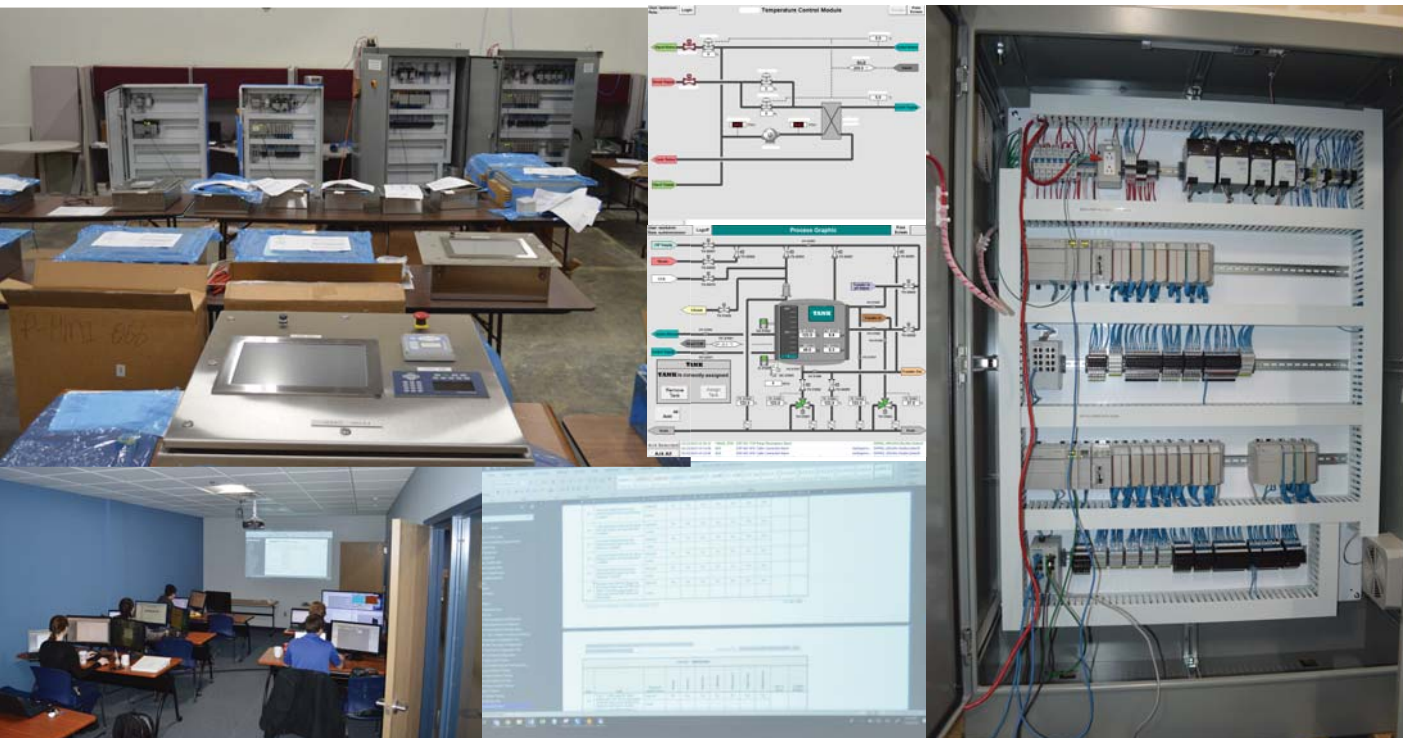
### Technologies Used

Allen-Bradley ControlLogix

Allen-Bradley CompactLogix

WonderWare System Platform

ThinManager thin client terminals



## Antigen Transfer Modernization (ATM)

QSPEC Solutions executed a multiphase design and implementation project to design, document, configure and implement the control system for our client's new Antigen Transfer Modernization at their St. Joseph, MO manufacturing facility.

The client requested automation and controls design for ATM including GAMP documentation, control system hardware design & review, instrumentation & hardware procurement, PLC programming, Wonderware System Platform configuration & graphic development, control system startup services, and Software Site Acceptance Test (SAT) execution. The ATM scope included the following process areas: Media Preparation, Fermentation, Downstream Processing, Clean-in-Place (CIP) skids and supporting Process Clean Utilities.

The ATM control system was comprised of two (2) Allen-Bradly ControlLogix process automation controllers (PACs), nine (9) Allen-Bradley CompactLogix PACs, 16 Human-Machine Interface (HMI) ThinManager thin client terminals, and seven (7) Wonderware System Platform applications running in a dedicated Wonderware System Platform 2017 Galaxy.

GAMP documentation developed included a Functional Requirement Specifications (FRS) for each of the process areas based from the Sequence of Operations (SOO) and process design. Detailed Design Specifications (DDS) were also developed to further define the software and hardware details of the process control system. Each of the process areas also required a software Factory Acceptance Test (FAT) plan prior to field installation and a Site Acceptance Test (SAT) plan to verify each process area met the functional and detailed requirements. The successfully executed SAT plan was leveraged by the validation team to support the commissioning and validation of the manufacturing suite.

QSPEC Solutions provided a project team of eight (8) project engineers to successfully execute the project. The project manager and project execution team coordinated the project requirements, deliverables, subcontract management, procurement and schedules between the client, and process design firm, as well as third-party vendors, service providers, and subcontractors