

Your Guide to Industrial Automation

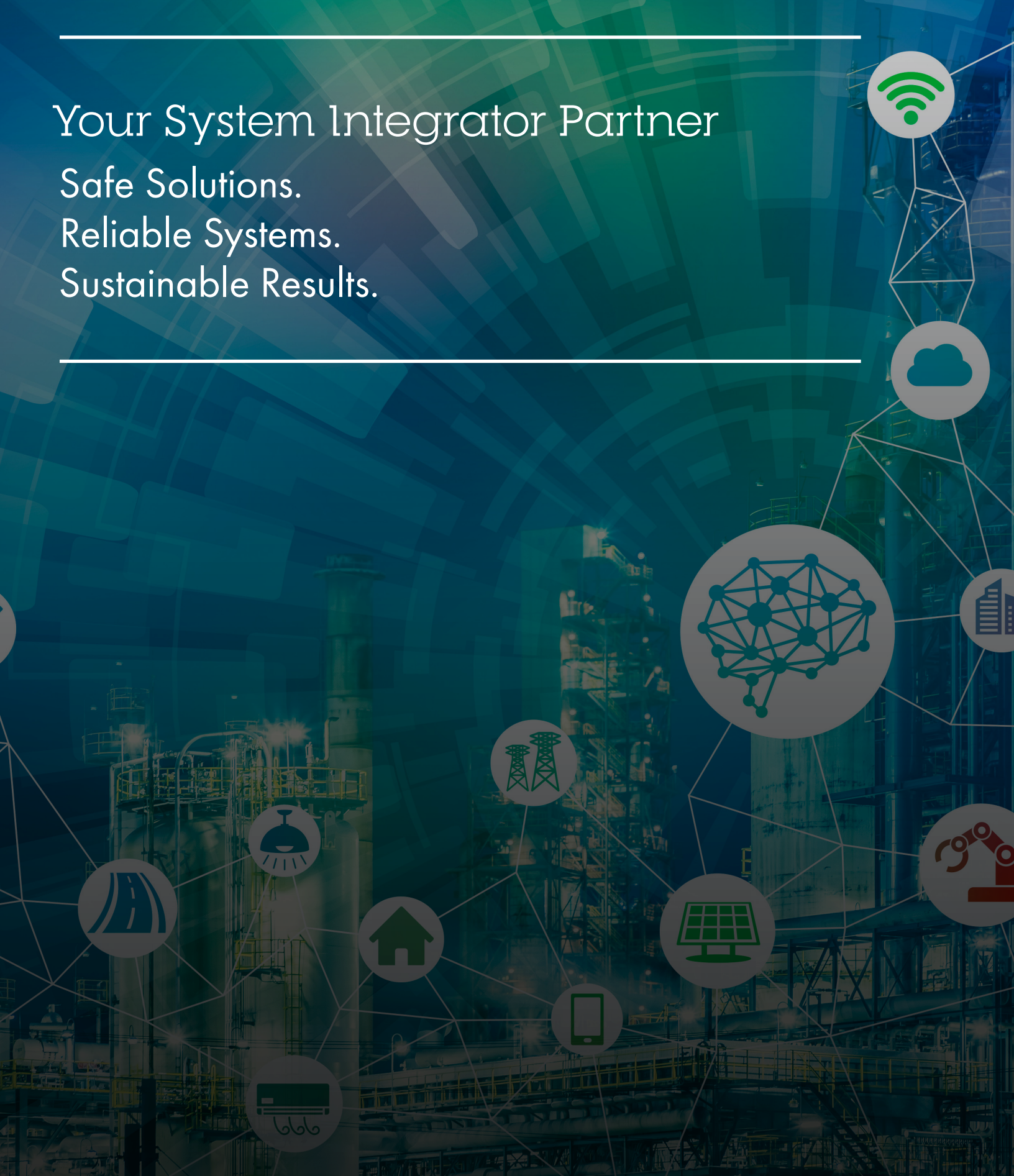
Executive Summary

Your System Integrator Partner

Safe Solutions.

Reliable Systems.

Sustainable Results.



The background of the page is a blue-tinted photograph of an industrial facility, likely a refinery or chemical plant, featuring large storage tanks, complex piping, and scaffolding. Overlaid on the bottom left of this image is a network of white lines connecting several circular icons: a factory with smokestacks, a semi-truck, and a laptop. The overall aesthetic is modern and technical.

Our Safety Mission

Our safety culture protects & promotes the well-being of every person who works with us & every person touched by our work.

As a leading system integrator, Hargrove Controls & Automation understands the challenges of DCS/PLC/SIS system integration, legacy system migrations, control strategy development and implementation, and Industry 4.0 implementation. We acknowledge the inherent risks within industrial environments that pose threats to the safety and well-being of employees and communities. Our Team works with you to identify and mitigate those risks to create a safe, sustainable work environment.

We provide our clients with multi-discipline automation services as a Main Automation Contractor (MAC), providing turnkey solutions for plant automation, safety systems, industrial internet of things (IIoT), industrial IT/OT system integration and industrial digitalization including AI-enabled advanced process control and multi-variate analysis. We implement control systems for pulp & paper, petroleum & chemical, life sciences, power generation, and other industrial facilities.

Our Team offers panel fabrication and customized training for client-side plant operators. As a vendor-agnostic company, we have extensive experience across a broad spectrum of platforms including Rockwell, Siemens, Honeywell, Emerson, Yokogawa, Triconex, HIMA, and others.

We help clients with both roadmap planning and digitalization implementation. Our Team's vast knowledge and skill in both new and legacy distributed control system (DCS), network architecture, and production needs of process industries provide the experience to know what data points need to be collected and analyzed to capture the benefits and ROI in digital technologies.

Our Process Safety Team of FS Engineers (TÜV Rheinland) and FS Experts (TÜV Rheinland) provides consulting services across the full process safety lifecycle. From building new systems, studying legacy systems, and recommending the most impactful safety changes, our Team can help ensure your facility meets regulatory requirements and adheres to the latest industry best practices.

Industry Certifications & Recognitions

CSIA Certification

Hargrove is certified by the Control System Integrators Association (CSIA). Through a rigorous, independent audit, Hargrove has demonstrated a commitment to meeting the highest standards for business, quality assurance practices and project management.

Successful completion of the certification audit every three years shows our company has successfully implemented best practices in ten key areas:

- General Management
- Human Resources Management
- Marketing, Business Development, Sales, & Opportunity Management
- Financial Management
- Project Management
- System Development Lifecycle
- Supporting Activities
- Quality Management
- Service and Support
- Information Systems Management and Cybersecurity



CSIA certification is similar to ISO, however ISO applies to a broad cross section of entities and industries. The audit for CSIA certification specifically addresses the management practices of an independent, professional services firm that provides control system integration services. The CSIA Best Practices and Benchmarks defines standards based on the collective experience of members in the only trade organization dedicated to the advancement of the control system integration profession.

2022 System Integrator of the Year

Hargrove was selected as the 2022 System Integrator of the Year by Control Engineering/Plant Engineering magazine in the mid-size category, one of the highest honors in the automation industry.

Three general criteria are considered for the selection of winners:

- business skills
- technical competence
- customer satisfaction

The System Integrator of the Year award represents our focus on quality and practical application of advanced automation and digital technologies ensuring continuous improvement to help their customers tackle a rapidly changing world.



Industry Standards and Committee Involvement

Members of our Team actively participate on safety standard committees including the National Fire Protection Association (NFPA) and International Electrotechnical Commission (IEC) and have a thorough understanding of industry best practices and requirements.

Several of our Team members have completed the industry's most rigorous and comprehensive Functional Safety Training Program to earn their certification as TÜV Rheinland Functional Safety (FS) Engineers. Two of our Process Safety Team members are FS Experts (TÜV Rheinland).

Our certified Functional Safety Engineers have developed a meticulous methodology for process safety, adhering to IEC 61508 / 61511, ANSI/ISA-61511-2018, and the entire Safety Life-Cycle.

Expertise

Platform Experience

DCS Honeywell TPS/TDC and Experion, Emerson DeltaV
Rockwell PlantPAx, Siemens PCS7 & PCS neo, ABB Ability
800xA & Freelance, ABB Ability Symphony Plus / Bailey INFI
90, ABB (Taylor) MOD300, Yokogawa CENTUM 3000 / VP,
Schneider Foxboro I/A & EVO, Valmet (NovaTech) D/3

SIS HIMA HIMax / HIMatrix / HIQuad, Schneider Triconex,
Siemens (APACS) Quadlog, Siemens SIS, Yokogawa Prosafe,
Rockwell Triplex / ControlLogix for SIL 2 / GuardLogix,
Honeywell Safety Manager / FSC, Emerson DeltaV SIS

PLC Rockwell Allen Bradley, Siemens, Schneider Modicon,
ABB AC500, Omron NX / CJ / SYSMAC, Opto 22, Emerson
(GE) RX7i / Series 90 / VersaMax, B&R X20, Honeywell
ControlEdge / MasterLogic, Automation Direct CLICK /
Productivity / DirectLogic / Do-more, Beckhoff

HMI Rockwell FTView / Optix, Siemens WinCC / TIA
Portal, AVEVA (Wonderware) Intouch / Citect, GE Proficy /
CIMPLICITY / iFix, Inductive Automation Ignition, Schneider
EcoStruxure

Plant Historian Aspen IP.21, AVEVA (OSI) PI / (Wonderware)
Historian, Rockwell FT Historian, GE Proficy Historian, IBA

I/O Traditional, HART, ASi Bus, PROFIBUS, PROFINET,
DeviceNet, Foundation Fieldbus, Modbus, Modbus TCP,
EtherNet/IP

MES ABB MOM/MES, AVEVA MES, GE Proficy,
Rockwell Plex & FactoryTalk ProductionCentre, Sepasoft
(Ignition) MES, Siemens Opcenter

Digital AVEVA, Aspentech, ABB

Partnerships



EPC Partner

A ROCKWELL AUTOMATION PARTNER



SILVER
System Integrator

A ROCKWELL AUTOMATION PARTNER

ABB

REGISTERED
PARTNER

AVEVA

REGISTERED
System
Integrator

Honeywell

AUTHORIZED
HPS
Channel Partner

Solution
Partner
Industry

CERTIFIED

SIEMENS

Ignition

Gold
Certified

aspentech

Delivery Service Partner



Panel Fabrication

Your industrial facility relies on complex machinery that requires a control system and electrical panels that are safe, reliable, and easily operated by your team. With expertise in both new and retrofitted cabinets and consoles, the Hargrove Team will work to understand your best interests and build the right sized panel to fit to your facility.

Building panels the right way every time ensures better startups and easier maintainability for the life of the panel. Our Team knows how important it is to be flexible and responsive to your needs so that testing, delivery, and installation are on schedule and do not impact ongoing operations.

Hargrove's Controls & Automation Team offers Factory Accepting Testing, staging, and operator training at many of our office locations. We can also perform virtual Factory Acceptance Tests (FATs) with remote access to the staged hardware.



UL 508A / 698A

We are a UL-certified Industrial Control Panel Fabricator.

Whether integrating with Hargrove Controls & Automation as the MAC or fabricating custom built panels as a sole service, our fabrication team guarantees quality workmanship.

- PLC/DCS Panels
- Remote I/O Panels
- AC/DC Drive Panels
- Server & Network Racks
- Field Junction Boxes
- Fiber Optic Panels
- Breaker Control Panels
- Process Instrumentation Panels
- Control Room Consoles
- Remote Consoles via KVM
- Custom Nameplates & Tagging

A Full Suite of Capabilities

Automation Services

- » DCS/PLC/HMI integration
- » System migrations
- » Project scope development, definition & estimating
- » Process simulation
- » Process Control Networks (PCN)
- » Maintenance consulting & scheduling systems
- » Outage and shutdown planning, scheduling, & management
- » Program Management & Project Controls
- » DCS/PLC Server & Workstation Support
- » S88 Batch process automation
- » BMS/BAS building automation

Process Safety

- » Process safety management and mechanical integrity
- » Design, install, & maintain "failsafe" control systems for the full Safety Instrumented Function (SIF)

- » Perform hazard and operability studies (HAZOP) & layers of protection analyses (LOPA)
- » SRS Documentation
- » SIS design, programming, integration, & implementation
- » SIL analysis & selection
- » Burner Management Systems (BMS)
- » Safety audits, procedures, & training
- » Electrical power system analysis and safety studies (NFPA 70E)

Digitalization

- » RAM Modeling for Design & Operations Optimization
- » Predictive Reliability
- » Process Networking & IIoT Connectivity
- » Process Data Historians
- » On-Premise & Cloud Data Aggregation
- » Industrial AI and Machine Learning Applications
- » ERP, CMMS, LIMS, & Process Historian Convergence
- » MES Integration

Other Capabilities

- » Panel Fabrication
- » VMware & Hyper-V Virtualization Technologies
- » Machine Guarding & Presence Sensing Design / Calculations / Reports
- » Machine Safety Risk Assessment (SRA)
- » Training and technical manual preparation
- » Technical support services for maintenance & operations
- » Commissioning & startup services
- » GMP facility and design audit

Our Values

SAFETY

Our safety culture protects and promotes the well-being of every person who works with us and every person touched by our work. To keep safety top-of-mind, we begin every one of our internal meetings with a safety moment.

QUALITY

Hargrove fosters quality throughout the life of our projects through communication, commitment, compliance, continuous improvement, and leveraging industry best practices. We relentlessly pursue perfection and, in our pursuit of perfection, achieve excellence.

TEAMWORK

We are “One Team”—a Team of owners who work together to safely deliver what our clients need when they need it. Successful project execution hinges on personal accountability and team empowerment. Build the right team, and everyone wins.

INTEGRITY

We are responsive. We are professional. We are direct. Hargrove Teammates are trustworthy, genuine, and look out for our clients’ best interests. We know that trust isn’t just engineered—it’s earned.

INNOVATION

From concept to solution we encourage and embrace new ideas. We are not bound by the way things have always been.

The Right Approach





Ralph A. Hargrove
President & CEO



Karen Griffin, P.E.
Vice President of Controls & Automation

RIGHT People

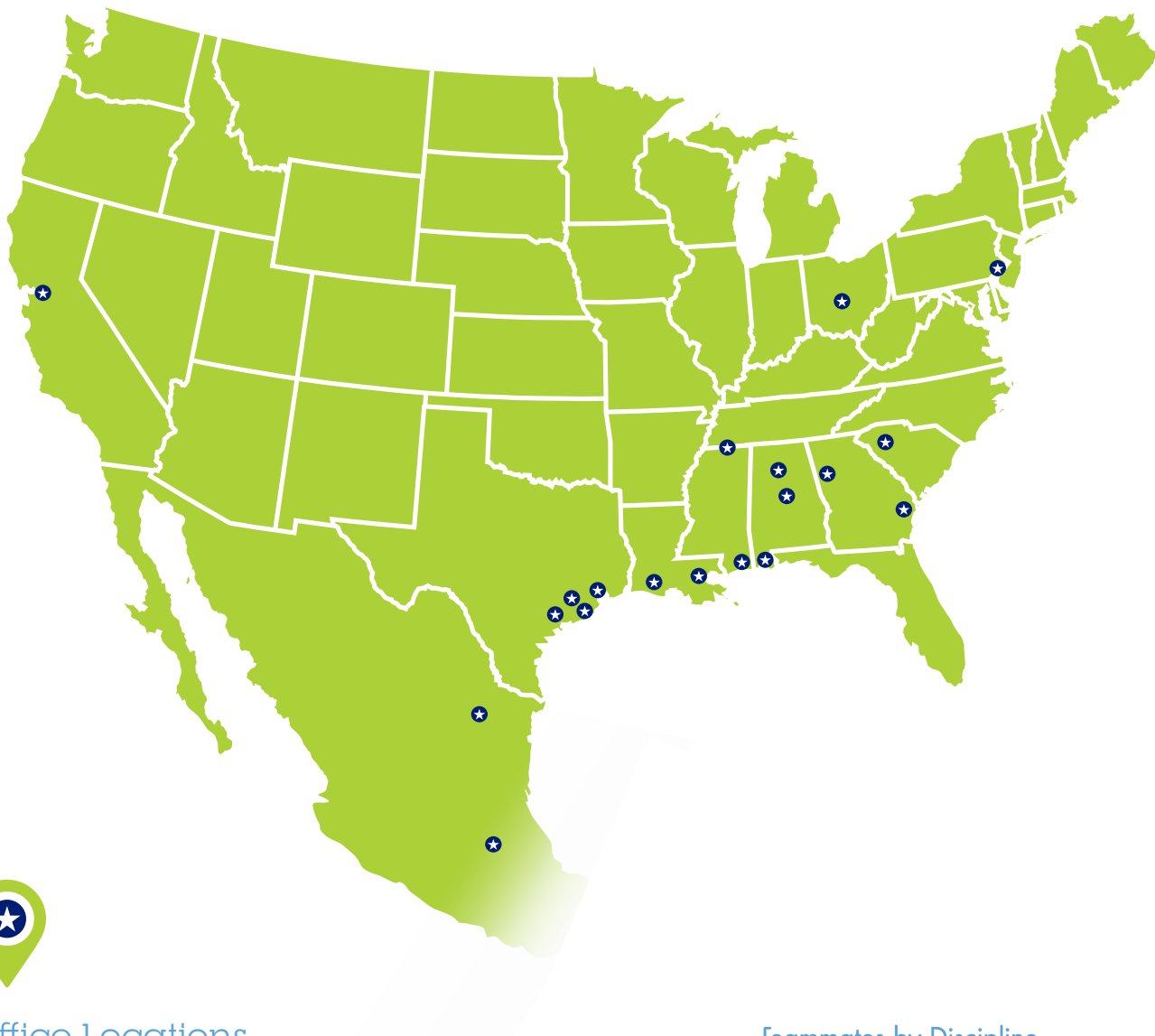
Hargrove Teammates bring a rich and diverse array of operational and construction experience to each client. Whether large capital projects or plant-level support, we are invested in the company— through our ESOP, every Teammate is an owner and takes personal responsibility for the success of your project.

RIGHT Place

Our infrastructure assures that you receive the attention and prompt service you expect from an engineering partner. Hargrove has strategically placed our offices across the United States to best support our clients' needs. Whether your initiative requires boots-on-the-ground support or process-specific subject matter expertise, Hargrove delivers.

RIGHT Time

A solution is only "right" when it's on time. Our job is to understand when your needs must be met and to deliver. We engage in long-term service relationships with our customers to gain insight into their capital improvement plans and to pre-position personnel for a quicker more client-focused response.



Office Locations

Headquartered in Mobile, Alabama, Hargrove has 19 full-service offices supporting clients both domestically and internationally. Additionally, our project offices and site-based teams are deployed where our clients need us most. Hargrove is situated to provide rapid response and face-to-face support to the people in the industries we serve.



Hargrove Was Founded



Top 500
Design Firms

Teammates by Discipline

Project Management	285
Chemical (Process)	235
Mechanical and Piping	592
Civil, Structural, and Architectural	277
Electrical and Instrumentation	460
Controls & Automation	125
Document Controls / Project Admin	228
Procurement	55
Health & Safety (HSE) and QA/QC	41
Project Planning and Controls	169
Construction Management & Startup	172
Management and Administration	98
Total Teammates	2737

High Capability, High Responsiveness.



High Standards

The quality Hargrove delivers does not happen by chance. We have installed systems to ensure what is important: safety, quality, and efficiency. They are based on recognized engineering standards, codes, and best practices that have been established by Construction Industry Institute (CII), Associated General Contractors of America (AGCA), Engineering & Construction Contracting Association (ECC), and Control System Integrators Association (CSIA).

		 Construction Industry Institute®	 control system integrators association		
 Safety Excellence Award AGCA 3M Work Hours	 #65 Top 500 Design Firms ENR 2025  #1 Chemicals Industry 2025 Sourcebook 3 Industrial Process 5 Pulp & Paper 6 Refining 9 Pharma 11 Petroleum 12 Power	 Serving on Leadership Boards Construction Industry Institute (CII) and Engineering & Construction Contracting (ECC) Association	 Integrator of the Year 2022  Control Engineering System Integrator Giants 2026	 #5 Hot Firm List Zweig Group 2019  #43 Best Firms to Work For List Zweig Group 2017	 Top 10 Engineering Design Firms Inc. 5000 Fastest Growing Private Businesses In America 13 Years In A Row

Hargrove Team of Companies

Hargrove is a family of companies that began with Hargrove Engineers & Constructors and now includes Hargrove Controls & Automation, Hargrove Life Sciences, and Tormod, LLC. No matter which entity you work with, we are One Team. That's how we are able to seamlessly offer value-added capabilities and innovative solutions.



nationally among
Industrial Process Firms

- | | |
|----------------|----------------|
| 1 Chemicals | 9 Pharma |
| 5 Pulp & Paper | 11 Petroleum |
| 6 Refining | 12 Fossil Fuel |

Hargrove Engineers & Constructors

Hargrove Engineers & Constructors is a full-service EPC project execution firm. We serve our clients with project management, multi-discipline engineering, procurement, construction management, system integration, startup support, and operations as well as providing site-based and remote teams.

Founded in 1995 in Mobile, Alabama, we recognized there was a need for specialized technical services as well as quality engineering and project management services. We positioned ourselves to provide support for small projects and turnarounds, which were areas largely ignored by other firms.

What we build best are relationships. We serve our clients' long-term needs through executing major capital expansions, plant-level projects, controls & automation upgrades, and onsite support arrangements. Our success stems from our team's willingness to do the small things that make our clients' operations more efficient and sustainable.



Hargrove Life Sciences

Our company is well-positioned to meet the specialized needs of the life sciences industry. Hargrove Life Sciences, LLC, based in our Philadelphia office, serves drug manufacturers and the biotech industry in the U.S. and abroad. In an industry where the facility and “clean” process elements must work together, our experienced Teammates understand how to design and build in order to meet the rigorous GMP standards.

Our teams of engineers, architects, and project managers offer extensive experience in the planning of greenfield facilities as well as the renovation and expansion of existing process development, clinical manufacturing, and commercial operations. In addition, Hargrove has a culture and system of seamless cross-office collaboration. Our clients benefit from all the expertise of a specialized engineering firm supported by the experience and capabilities of a larger firm with a broader focus.

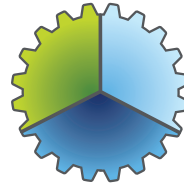
Tormod

Tormod, LLC was founded with your day to day operations in mind—as a solution for your startup and maintenance needs. We help our clients develop and execute turnaround/startup and commissioning plans, prepare for an audit, review your plant’s efficiency, build the right HSE (Health, Safety, and Environmental) for your site, and write procedures specific to your needs. By providing operational support for your industrial and manufacturing assets, we serve as stewards for our clients, ensuring your financial and operational goals are exceeded, safely and efficiently.

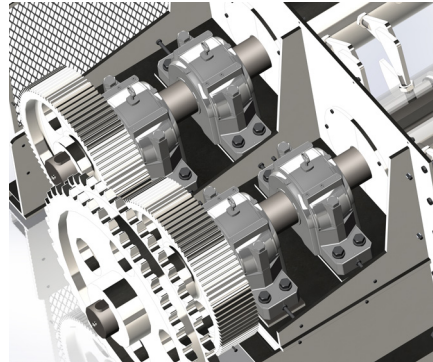
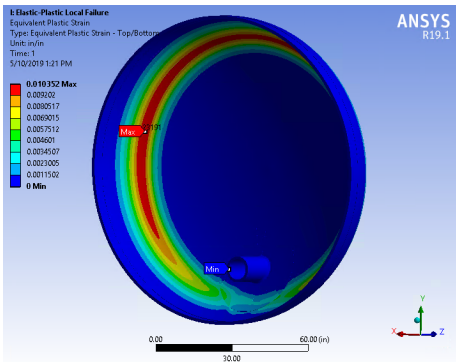
We offer a wide range of services to keep your operations on track from procedure writing, to training and hiring the right team, to overseeing your daily operating facility. Tormod’s goal is to add value wherever we startup or operate by reducing risk and assuring safety and environmental performance. At Tormod, we bring safety, integrity, teamwork, and excellence to our clients in their own facilities, and we are ready to assist in your planning, safety compliance, and operational needs.

Learn more about Tormod’s capabilities at tormod.com.

Hargrove Equipment Solutions



Hargrove Equipment Solutions thrives on a strong culture of innovation, pushing the boundaries of what is possible. We add value by designing and fabricating custom specialty and proprietary equipment and modeling complex industrial applications. Our goal is to provide turnkey solutions that utilize Hargrove's EPC services to solve our client's business needs.



Computational Modeling

Analyses & Dynamics

- Static & Dynamic Pipe Stress Analysis
- Multimode Heat Transfer
- Linear & Nonlinear Materials
- Buckling
- Dynamic & Vibrations
- Steady State & Transient Flows
- Multiphase Flows
- Combustion & Reactions
- Fluid-Structure Interactions
- Corrosion Modeling

Asset Validation

- Agitators
- Kilns
- Furnaces
- Boilers
- Piping Systems
- Tanks
- Reactors
- Columns & Scrubbers
- Fitness for Service

Machine Design

Design

- Specialty and client proprietary equipment
- Retrofits and upgrades to existing equipment
- Safety guarding (OSHA, ISO, and CE)
- Use SolidWorks & AutoCAD

Support

- Equipment manufacturing process
- OEM vendors as needed
- Equipment checkout
- Equipment Installation/Start-up

Bulk Material Handling

Capabilities

- Discrete Element Modeling (DEM)
- Air volume assessments
- Dust collection & management
- 3D design & modeling

Material Properties

- Cohesive
- Loose
- Size
- Wet
- Dry
- Particles/bulk
- Sticky
- Flowing
- Pellets/grain/pills
- Shapes
- Interlocking
- Varying

4D Construction & Augmented Reality (AR)



Construction Visualization

Hargrove utilizes progressing software with a “4D Timeliner” to visually sequence construction. Modelled 3D components are tied to activities within the P6 schedule so that the entire team—including contractors—can watch the model being built right before their eyes (either in the field with augmented reality or in a video showing field installation week-by-week.)

Capabilities

- Utilize 3D model to optimize path of construction
- Simultaneous view of the project schedule & time-based 3D model (aka 4D)
- Animate path of construction
- Construction progressing/reporting
- Directly interfaces with field computers, field tablets, and HoloLens for progressing

Full-Service Data Capture & Laser Scanning



Drone Data Capture

- Complement to 3D Laser Scanning
- Topographic Surveys & Mapping
- Visual Inspections
- Construction Progress Monitoring
- Successful completion of Aviation Safety Audit that meets International Association of Oil and Gas Producers (IOGP) standards
- 3 Full-time Teammates with FAA Drone Pilot Certification



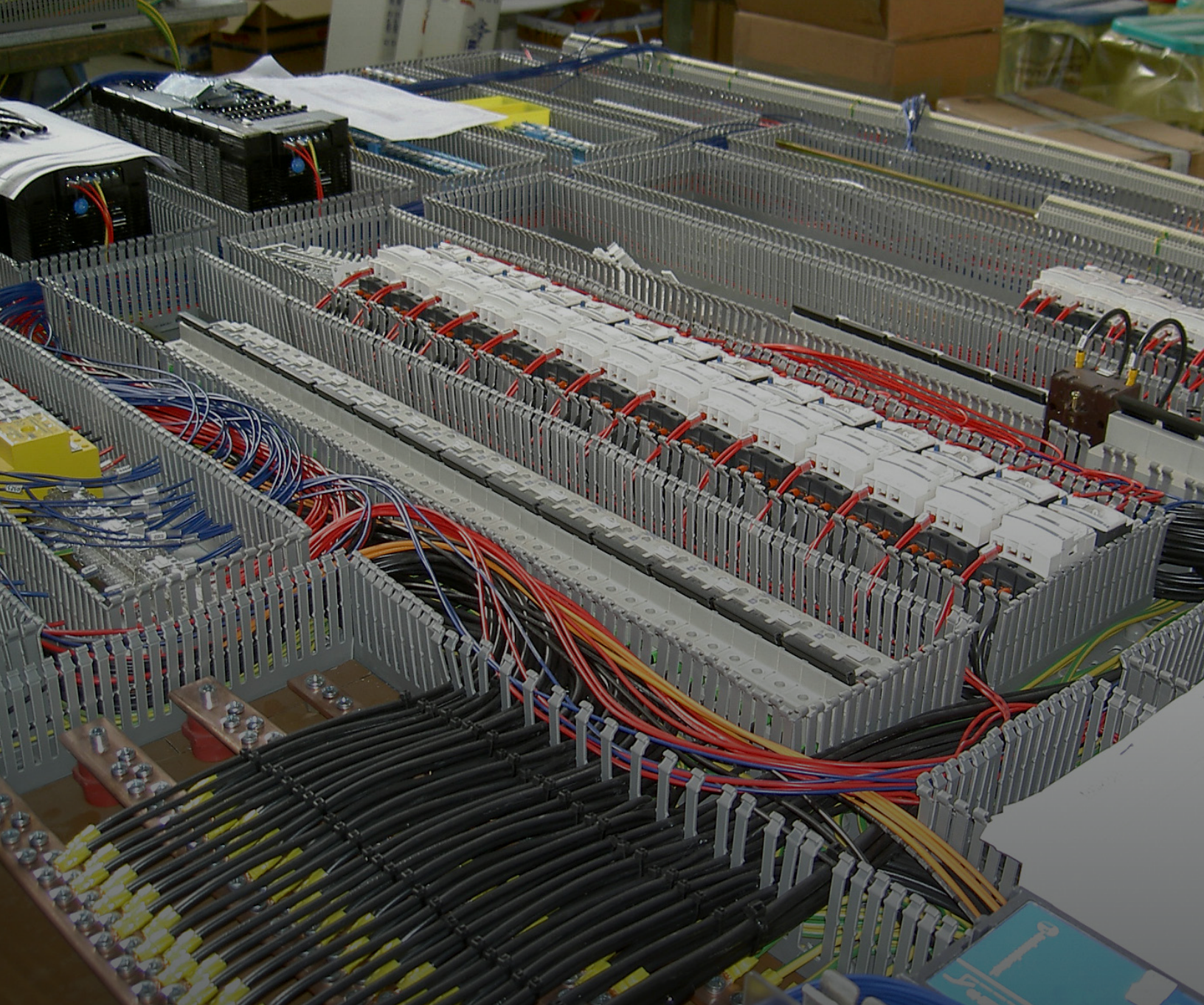
3D Laser Scanning

- Improved Flexibility in Design
- Enhanced Communication & Coordination of Info
- 3D Model Integration
- Verification of Existing Conditions
- Clash-Free Constructability
- Digital Format of Info used by Multiple Disciplines
- Topographic & Boundary Surveys
- Drainage Study Surveys
- GPS Control Surveys
- As-Built Surveys
- Survey Data Integrated Design Projects



Ground Penetrating Radar (GPR)

- In-house Quantum Imager Triple Frequency GPR System
 - Electromagnetic Detection
 - GPR Data Integrates into Scan & 3D Modeling
- GPR Scans Can Help Locate:
- Underground Utilities (Cables, Electric Lines, Water, etc.)
 - Concrete, Rebar, Conduits, or Foundations
 - Buried Pipes or Tanks
 - Soil Cavities or Other Obstructions



www.hargrove-ca.com
877.388.8356
info@hargrove-ca.com



Follow us on
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Multi-Discipline Office Locations

- › Angleton, TX / 979.291.2507
- › Atlanta, GA / 678.477.7450
- › Baton Rouge, LA / 225.227.2000
- › Beaumont, TX / 409.292.9918
- › Birmingham, AL / 205.484.0227
- › Concord, CA / 925.303.3332
- › Decatur, AL / 256.432.4489
- › Greenville, SC / 864.990.5464
- › Houston, TX / 832.910.8775
- › Lake Charles, LA / 337.607.3600
- › Memphis, TN / 901.435.3700
- › Mobile, AL / 251.476.0605
- › Pasadena, TX / 832.906.2601
- › Pascagoula, MS / 228.201.5556
- › Philadelphia, PA / 215.789.9660
- › Savannah, GA / 912.239.1411
- › Monterrey, MX / 877.388.8356
- › Mexico City, MX / 877.388.8356



Scan the QR Code
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