

Overview of Harris Group Inc. Program Management Services

Harris Group Inc. provides program management, consulting, process development, and multidiscipline engineering and design services. We help our customers implement capital projects that make them more competitive. Simply stated, we have the proven capability to take projects from conception through commercial operation.

Known for highly responsive services, Harris Group is one of the premier mid-market engineering firms in the United States. We have 12 offices in the U.S. and a sister company, AO Harris Group International, in St. Petersburg, Russia*. Our customers tell us that we manage the wide array of project sizes better than large EPC firms. They also recognize that we have broader capabilities than small or regional engineering firms.

Harris Group services key market sectors with its strategic business units:

- Process Industries
- Industrial Manufacturing
- Energy
- Financial Consulting

Each business unit is vertically integrated with engineers with specific knowledge in the industries it serves to better meet its customers' current and future needs. The approach makes customers comfortable – they know Harris Group employees have the operations knowledge and market-specific skills it takes to address their needs.

Founded in 1975, Harris Group has developed its reputation as a multidiscipline engineering firm through recruiting and training. Its consultants, engineers, and designers have a proven track record of competency and market leadership. Many come from operating companies within the industries they serve.

Harris Group's specialty services address our customers' management concerns. The goal is to contribute strategic input to improve technologies and other operational concerns. A short list of Harris Group's specialty services is as follows:

Financial Consulting provides due diligence and independent or owner's engineering services for lenders, developers, and project owners.

Process Solutions helps organizations commercialize technologies including biomass, ethanol, fuel cells, and biotechnology. Capabilities for computer-based modeling, pilot plant design, and operation offer efficient process solutions.

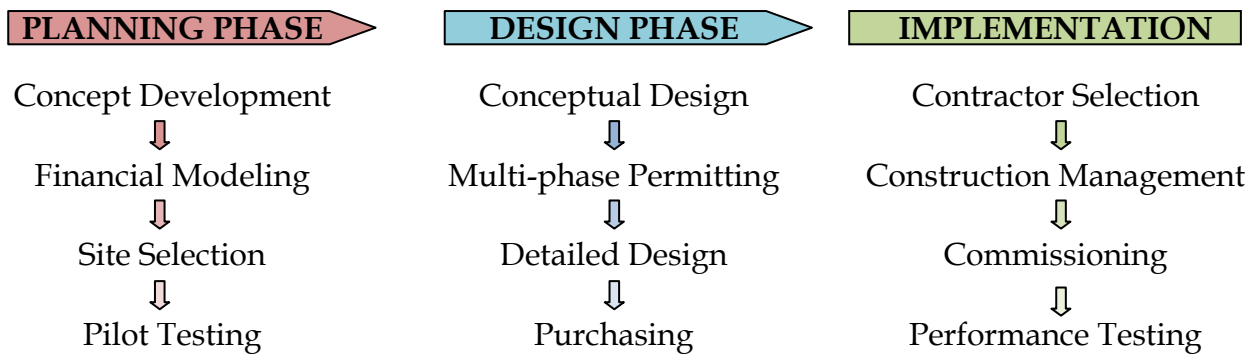
Systems Integration makes data on critical processes and systems more accessible, providing programming and integration of control systems, instrumentation, and manufacturing intelligence.



PROGRAM MANAGEMENT

What is Program Management Services?

Program management is the ability to lead the coordinated and efficient execution of all phases of the project, from the concept stage to commercial operation. This incorporates many of the duties led by traditional organizations with large internal project engineering resources. Exceptional project performance and centralized project responsibility defines Program Management Services. To achieve this standard, our engineers can perform the entire project scope of services as follows:



Case for Integrated Program Management

According to a recent Business Roundtable study, companies successfully executing project phases:

- Spend 28% less on projects
- Reduce cycle time to start-up by 30%
- Increase plant capacity by 6%
- Transform average 15% ROI projects into 22+% return winners

Clearly, integrated project execution is essential to business profitability and success.

Many companies today do not maintain their own engineering staff. Owners increasingly turn to contractors for assistance with both detailed design and construction. Problems arise when owners fail to provide for owner's engineering responsibilities. Without owner's engineering, companies find it difficult to define projects at the front end. During later stages, companies can become overly dependent on their detailed design and construction contractors, whom they are ill-equipped to manage.

Harris Group Solution

Harris Group offers a cost-effective, high-value approach to program management services. During the past decade, Harris Group has built a highly qualified project management group experienced in performing owner's engineering functions, supported as needed by Harris Group engineers specializing in process, architectural, civil, structural, mechanical, electrical, and instrumentation engineering. This virtual engineering group functions as the owner's personal engineering team on process-driven projects and can be integrated with the owner's organization. Harris Group works with owners to identify, manage, and/or provide engineering and project management services at each stage of a capital project.

Program Management Services

During the early project stages, Harris Group can:

- Assist in site selection and assessment
- Meet with regulatory agencies and elected officials to garner project support
- Define the project scope aligned with the business objectives
- Develop and implement pilot testing programs
- Perform market forecasts and competitive assessments
- Prepare capital budgets
- Identify and evaluate technological alternatives, and scope additional technology development as required
- Prepare owner's design criteria for use in detailed engineering
- Prepare project scheduling and cash flow projections

These activities make it possible to "freeze" the project scope and minimize further changes.

In later phases, Harris Group can perform part or all of the development and detailed engineering. We can oversee the work of other engineers or contractors, and represent the owner's interests throughout project execution. Finally, we can assist in staffing the new facility, provide technical leadership for commissioning, and conduct performance testing. This helps keep the project true to business objectives, schedule, and budget.

Permitting Leadership

- Develop permitting strategy as part of overall project plan
- Permit and code compliance review
- Develop documents and studies to obtain environmental permits
- Meet with agencies and assist in negotiating permit conditions

Front-End Engineering

- Site selection
- Project definition
- Conceptual design
- Feasibility studies – new or retrofit facilities
- Alternate technologies identification and evaluation
- R&D guidance or management
- Process development for emerging applications
- Capital cost estimates
- Operating and maintenance cost estimates
- Process optimization
- Technical and economic evaluations
- Pilot trial planning and execution
- Basic and detailed design packages
- Quality assurance and control
- Scheduling

Bidding and Awarding Process

- Prepare RFQ and evaluate bidders
- Selection and coordination of specialized professional services
- Purchasing, expediting, and receiving

Construction Oversight

- Scheduling and cost control
- Regular progress meetings
- Review/recommend contractor's invoices and change orders
- Quality assurance and control
- On-site monitoring
- Create and manage punch list
- Witness and sign off on key milestones and performance tests

Operation Services

- "As-built" line and equipment review and inspection
- Operating manuals and procedures
- Commissioning
- Assistance hiring plant personnel and training staff
- Start-up assistance
- Performance testing
- Safety services

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***AO Harris Group International**

AO Harris Group International, based in St. Petersburg, Russia, extends Harris Group's services to Russia and Eastern Europe. It also provides engineering support for projects elsewhere in the world.

