



Trilliant Technology Group
A Resource for Technology Expertise

Telecommunications

Trilliant's **Five-Step Service Model**, when combined with its extensive experience with telecommunications technology, allows the project team to provide a unique set of skills and expertise in the areas most critical to the successful design, deployment and operation of today's complex and heterogeneous information systems.

Step 1: Audit

The first step in the typical engagement is a formal audit and documentation of existing systems (if any), equipment and services. Understanding precisely what is currently in place is necessary to assess the current capabilities. Typical services include:

- Audit and documentation of the existing voice systems and applications currently in use, including help desk, IVR, ACD, trading turrets, etc.
- Audit and document the existing data systems and applications currently in use, including network hardware, firewall, web applications, server farms, etc.
- Audit and document the existing video and A/V systems and applications currently in use, including boardroom conferencing systems, distance learning facilities, etc.
- Audit and document the existing telecom and data service resources, including the current Wide Area Network configuration.
- Create equipment inventories and schematic work diagrams.

Step 2: Programming & Master Plan

In this phase, the focus is on the ability of the current technology resources to support the organization's goals. The programming phase tells the Trilliant project team if those resources, in part or as a whole, are appropriate for the client to achieve its goals in a new or renovated facility.

The development of a technology master plan is the extension of the programming phase. It goes beyond the current goals of an organization to plan the evolution of technology to meet the organizations long-term goals. The master plan can be the difference between having the flexibility to change strategy in response to the business environment or potentially having to justify costs for all new systems every few years. Typical services include:

- Interview client representatives to establish project goals.
- Develop the technology program for the construction initiative, including required technology systems, size of those systems, and required performance of those systems.
- Establish standards for the facility infrastructure, including the cost benefit analysis of copper, fiber optic and wireless mediums.



Lynne Randall, Principal

“Flexibility is what keeps a facility sustainable for the future.”

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- Develop and document conceptual design alternatives of technology systems to meet the program requirements.
- Perform cost benefit analysis of conceptual designs of technology solutions with associated budgets, schedules and migration strategies.
- Assess the ability of the existing voice, data, video and A/V equipment to be migrated and re-used.
- From the technology program, develop a strategic master plan for technology, which will set the standards and direction for future technology procurements.

Step 3: Design & Specification

The infrastructure of an organization is the physical network and hardware that it uses to transfer and store information. It is the highway to and keeper of all internal information, as well as the gateway to the rest of the world. The design and specification effort includes voice, data, video and transmission medium systems. It also includes the design and recommendation of the physical spaces, pathways and environmental conditions, which are the support structure for the network. Typical services include:

- The development of detailed designs for all technology systems required by the technology program.
- From the detailed designs, provide performance-based, non-product specific specifications and contract documents, including drawings.
- The design and specification of the copper, fiber optic and/or wireless infrastructure for a facility that will support integrated voice, data and video traffic, including coring and riser systems, horizontal wiring requirement to the desktop and entrance facilities from communication carriers.
- The development of preliminary requirements for equipment rooms and other aspects of a facility necessary to support technology systems, including equipment layouts, raised floor design, power requirements, HVAC requirements, floor loading, fire suppression and UPS systems.
- The production of AutoCAD drawings showing equipment room design and space planning, equipment and rack layouts, cable routing and instrument placement.

The development of a detailed plan that coordinates the migration of existing systems and the installation of new systems that minimizes disruption to the client.

Step 4: Procurement

The procurement of large-scale technology systems and services is as critical as the design itself. The products and vendors chosen will determine the performance and reliability of new technology systems. Since Trilliant is involved in the procurement of millions of dollars each year in technology systems and equipment the Trilliant team well understands what it takes for a project to be successful. Trilliant also knows how to assist clients with avoiding long-term obligations that are not in their favor. This knowledge of the industry, combined with proven competitive bid procurement processes assures clients of a quality product, as well as a strong return on investment.

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Typical services include:

- Working with the client and A/E team to determine which vendors are qualified to bid on the project.
- The development of requests for proposals (RFP) and bid packages for all specified technology systems, including schedule of work, bid instructions, technical specifications, support and training requirements, vendor references and company information.
- Holding bidders conferences and manage the bid process, including answering inquiries and issuing clarifications through an addenda process.
- Evaluating vendor responses, including a financial evaluation, technical evaluation, company viability evaluation and past performance evaluation.
- Assisting clients in the preparation of a short list of finalists and the interviews of those finalists.
- Preparing a formal evaluation of the process and present a final recommendation.
- Representing clients in contract negotiations with the chosen vendor, including issues such as initial price, ongoing maintenance and service levels, vendor conduct and delivery schedule, terms and penalties.

Step 5: Project Management

Today's complex, heterogeneous and rapidly changing technology landscape requires the utilization of strong project management and tracking skills. While studies have shown that poor project management is the leading cause of project failure, many technology firms think of it as little more than "administrative support." Leadership and direction provided by strong project management is critical to successfully meeting your client's needs and expectations. The Trilliant team has proven project management expertise that has helped organizations successfully complete large, complex and geographically dispersed projects in a variety of functional and technological areas. Typical services include:

- Producing a project manual that will establish project procedures, schedule, and lines of communication and codes of conduct.
- Confirming that the construction schedule, vendor progress and the migration plan are in sync.
- Holding regular project status meetings with vendors and the construction team.
- Providing hands-on management of the installation of the systems and servicing; including field inspections for workmanship and vendor conduct, approving vendor payment requests, reviewing and approving vendor documentation of the completed systems, etc.
- Providing construction management support for the general contractor of a construction project when the technology systems for a facility are under their supervision.
- Conducting final inspection and approval of the installation, including analyzing test results and as-built documentation.

Scope of Services

Voice / Data

PBX and C.O. Based Systems
Wireless Applications
Call Centers
Trading Systems
IP, Frame Relay, Sonet, ATM
Wide Area Networks
Local Area Networks
Nurse Call Systems
Paging Systems

Transmission Mediums

Outside Plant
Fiber Optic Networks
Structured Cable Systems
Coaxial Networks
T1 / T3
ISDN and DSL offerings
Satellite / Microwave

Networked Audiovisual Systems

H.320, H.323, H.324 and T.120
protocol
IP video technologies
CATV and CCTV systems
Broadband Video Distribution
Two-way interactive Video
Conferencing
Multimedia Projection and Sound
Wall Boards and Plasma Display
Systems

Acoustics

Room shaping
Materials selection
Finish selection
HVAC noise control
Vibration isolation
Sound masking

Facility Design

Computer Rooms
Telecommunications Closets
Building Entrance Facilities
Emergency Power Systems
Cable Pathway and Riser Design
Power and Environmental
Specifications

Project Management

Microsoft Project
Trilliant Project Management
Methodology & Documentation

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