

BENEFIT SOLUTION CASE STUDY TIMMONS GROUP



CUSTOMER PROFILE

Headquarters:	Richmond, Virginia
Founded:	1953
Industry:	Civil Engineering, environmental design
Employees:	Approximately 350
Business Issues:	Data storage and retrieval



HIGHLIGHTS

Goal:

Timmons Group sought to replace their legacy storage area network with a solution that would increase availability and retrieval speed while decreasing backup time and data migration time.

Solutions:

- EMC CLARiiON CX3-20 UltraScale™ FC/iSCSI system.
- EMC Celerra® network-attached storage gateway.
- EMC Replication Manager software.

Results:

- 27% ROI over 5 years.
- Servers reduced by 83%.
- Backup time decreased by 75%.
- Data migration time reduced by 81%.
- Overall availability increased to 99.9%.
- Payback in less than 3 years.



THE TIMMONS GROUP REDUCES COSTS AND GAINS IT PRODUCTIVITY WITH EMC CLARIIION SOLUTIONS THAT DELIVER A 27% ROI

EXECUTIVE SUMMARY

Timmons Group has benefited from the deployment of a flexible, more reliable and efficient information infrastructure based on EMC® CLARiiON solutions. The solution deployed will achieve a payback in less than 3 years with a projected 5-year ROI of 27%.

Timmons Group provides civil engineering design, surveying, land planning, construction management, landscape architecture, and geographic information systems (GIS) technology services to both public and private clients throughout Virginia, North Carolina, and across North America.

Since its formation more than half a century ago, Timmons Group has expanded from a small survey and civil engineering office in Richmond, Virginia to a diversified design consulting firm with more than 350 professionals in offices located throughout the Mid-Atlantic region. By focusing on client needs with unrivaled service, Timmons Group has solidified its position

as the design consulting firm of choice in all its market sectors making Engineering News Record's Top 500 Design Firms list for the last 10 years.

Timmons Group's data storage and retrieval requirements are demanding to say the least. For example, civil engineering GIS files generated from real-time photography and 3D virtual models of everything from storm pipes to underground pipelines can require as much as 500 megabytes of storage for a single file. The success of Timmons Group, in part, hinges on the ability to store, retrieve, and work with enormous amounts of data quickly, reliably, and efficiently.

By replacing their legacy HP storage area network (SAN) with an EMC CLARiiON® CX3 UltraScale series SAN, EMC Celerra® network-attached storage gateway, and EMC Replication Manager software, Timmons Group has consolidated their file servers from four SAN file servers

and six NAS file servers to one each. This consolidation of their information infrastructure has led to significant IT efficiencies and related benefits, which is anticipated to deliver a 27% ROI over 5 years on an initial investment of \$81K. The IT efficiencies and related benefits include the following:

- Reducing the time required to back up their systems by 75%.
- Decreasing data migration time by 81%.
- Raising the overall availability of their systems from 97% to 99.9%.
- Reducing server requirements by 83%.

CUSTOMER PROFILE

Timmons Group is a leader in the civil engineering industry and employs more than 350 professionals located in offices throughout Virginia and North Carolina providing multi-disciplinary civil engineering, planning, design, and consulting to public and private clients. They offer their clients senior-level experience and solve their challenges in creative ways, providing them with innovative solutions by understanding each client's unique needs.

Timmons Group has become an industry leader through their commitment to provide multi-disciplinary civil engineering, planning, innovative design and consulting to public and private clients. They have doubled their revenues since 1999 and continue to expand their employee base at an exponential rate. As their growth continues, they continue to invest in cost effective infrastructure to support their client's visions and needs, resulting in unrivaled customer service and shared success.

THE CHALLENGE

The massive storage capacity required to conduct civil engineering geographic

information systems (GIS) and environmental design work can strain any data storage system:

- Large storage requirements without a centralized, scalable storage solution required Timmons Group to constantly purchase storage and servers to replicate their customers' data.
- Data backups initiated at night would run into production hours during the day creating performance issues with production environments.
- Long project lifecycles and large files created capacity and data accessibility issues.

WHY THE EMC SOLUTION

In 2006, Timmons Group initially replaced its HP storage area network (SAN) with an EMC CLARiiON® SAN to minimize the processing load on their production server. As projects continued to increase in size and complexity, Timmons Group migrated to a dual-protocol EMC CLARiiON CX3-20 UltraScale™ FC/iSCSI system. This integrated solution gave Timmons Group the flexibility to leverage FC connectivity to support large Oracle 10g and Microsoft SQL Server databases; and iSCSI to support email, test / development, and departmental data. Timmons Group also deployed EMC Replication Manager software to facilitate faster backup and recovery processes.

After the solution was deployed, the benefits were clear:

- Timmons Group could more efficiently undertake the time-consuming process of migrating data to a new production environment with EMC's CLARiiON CX3-20 solution. With EMC, the data migration was completed 81% faster than the legacy process primarily from improvements in the transfer speed. These efficiencies gained from the EMC solution allowed IT to migrate to the new environment without impacting production.
- Using EMC Replication Manager, the time transferring 1.5 terabytes of data monthly to a backup server and to tape for offsite storage was reduced by 75%, thereby allowing the backups to be run at night rather than bogging down performance during the work day.
 - Resulted in approximately 216 hours of IT administrative labor savings each year.
- Overall availability increased to 99.9% from 97%, ensuring 24x7 availability and thereby increasing resource productivity and efficiency across Timmons Group.
- Using the EMC Celerra® network-attached storage gateway, Timmons Group was able to reduce the number of file servers containing critical information from six servers down to one, resulting in a cost avoidance of \$63K over 5

“EMC enabled us to deploy a cost-effective and extremely flexible database management solution, allowing us to better serve our clients.”

Mark Farnsworth, Director of IT

years. In addition, because of the excellent performance of CLARiiON iSCSI Timmons Group will leverage the solution to support their migration to Exchange 2007.

THE BUSINESS BENEFITS OF THE EMC SOLUTION

The entire solution was rolled out in 2006 with software, hardware, and labor costs of \$81K total. The conservative estimate is that the solution will pay for itself in less than 3 years and provide a 27% ROI over the first 5 years.

The amount of time required to back up data was reduced 75% from 24 hours to 6 hours. This was achieved mainly through the use of local replication and a 300% data throughput increase gained from the EMC solution: 1.5GB per minute as opposed to 500MB per minute with the legacy solution.

The increased scalability and flexibility of storage due to iSCSI connectivity and support for Virtual Server features allows for quicker re-simulation of a client's environment, thereby reducing the number of required SAN and NAS file servers by 5.

The EMC SAN Copy™ functionality allowed Timmons Group to decrease the data migration time of projects by 81% from 48 hours to 9 hours due to faster data migration provided by EMC's SAN Copy software. Timmons Group could not previously reduce migration time due to the large data size being migrated, which slowed the data transfer speeds. In addition, by reducing the data migration window, productivity increased because data migration operations can now be run in off-hours rather than degrading

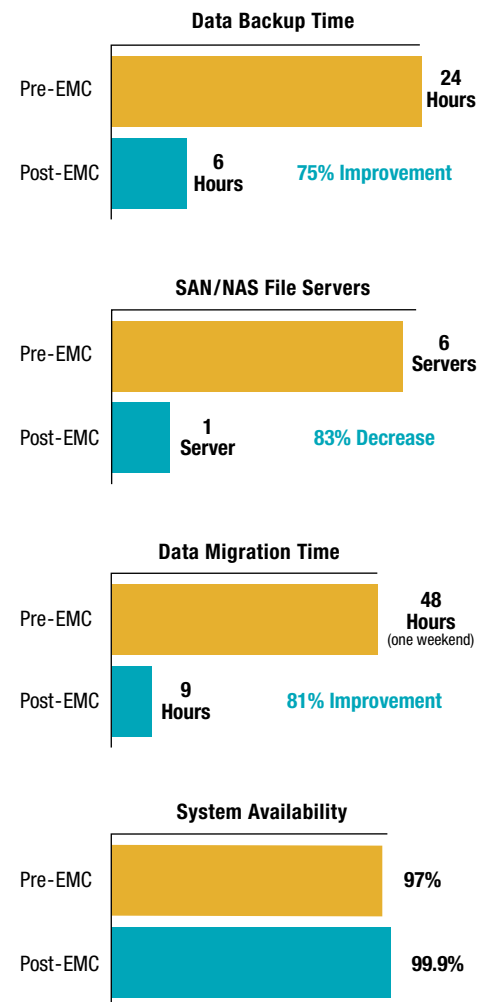
“EMC provided us with a centralized storage solution, which consolidates multiple servers and created the flexibility to replicate our clients’ environments faster and more efficiently.”

Mark Farnsworth, Director of IT

production environment performance during the work day.

Finally, overall availability increased to 99.9% from 97% across their environment. Engineers retrieving and working with project data went from intermittent access problems to virtually no access problems, thereby increasing productivity significantly. The increase in system availability ensures 24x7 ability to store, retrieve and work with huge amounts of data reliably and efficiently, also resulting in a productivity increase as less time is spent in data access delays. Developers, engineers and consultants now have faster and more access time to data sources, thereby improving resource productivity.

By replacing its legacy system with the scalable, centralized, high-performance data-storage solution from EMC, Timmons Group has positioned itself to best serve its current customers as well as prepare better for its future growth needs. As always, when critical business information can be delivered to a highly trained, professional workforce faster and more reliably for a reasonable investment, their performance is maximized while their frustration is minimized.



CRITICAL SUCCESS FACTORS

Timmons Group credits several key factors with the success of its EMC solution deployment. Foremost was clearly defining the business requirements upfront in conjunction with the EMC implementation team. The use of standard project methodology further ensured tight project management. Throughout the project, Timmons Group maintained close association with the EMC product development group to ensure continuous support and access to the most recent data and product knowledge.

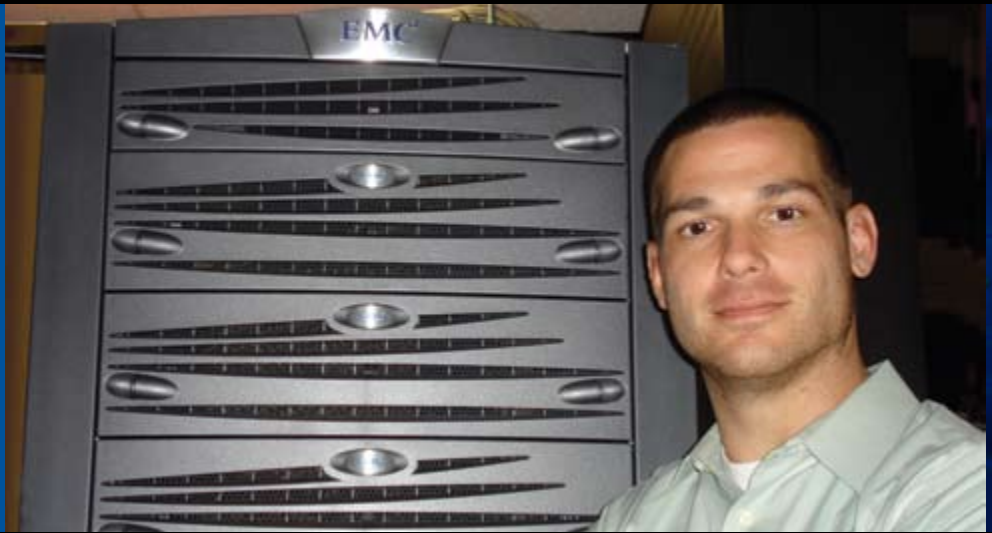
The flexibility and scalability of the EMC solution enables Timmons Group to add hardware when it is required rather than all up front, as was the case before the solution was implemented.

Detailed Five-Year Financial Analysis:

Summary						
ROI	27%					
IRR	42%					
Payback Period (in months)	34					
Project Cost						
	Year 1 2006	Year 2 2007	Year 3 2008	Year 4 2009	Year 5 2010	Total
Software Cost	27,000	–	–	–	–	27,000
Hardware Cost	37,000	–	–	–	–	37,000
Hardware Upgrade Cost	3,300	–	–	–	–	3,300
Consulting Fees	14,000	–	–	–	–	14,000
TOTAL Investment	81,300	–	–	–	–	81,300
Project Benefits						
	Year 1 2006	Year 2 2007	Year 3 2008	Year 4 2009	Year 5 2010	Total
Server Consolidation Cost Avoidance	35,000	7,000	7,000	7,000	7,000	63,000
IT Resources Productivity Increase	4,320	4,320	4,320	4,320	4,320	21,600
Business Resource Productivity Increase	7,680	7,680	7,680	7,680	7,680	38,400
TOTAL Benefit	47,000	19,000	19,000	19,000	19,000	123,000
Annual Net Benefits	(34,300)	19,000	19,000	19,000	19,000	41,700
TOTAL Discounted Benefits	(34,300)	16,964	15,147	13,524	10,781	22,116

“EMC provides a one-stop-shop for Timmons Group by working closely with us in solving our information infrastructure needs.”

Bryan Moore,
IT Infrastructure Manager



ABOUT THIS BUSINESS BENEFIT IMPACT STUDY

Research and analysis for this business impact study was conducted by Mainstay Partners, an independent consulting firm, and was based on interviews with Timmons Group executives, review of planning documents and searches of industry literature. ROI calculations use industry-standard assumptions regarding the time value of money.

Mainstay Partners is the leading provider of independent value assessment and

IT strategy services. Their clients include Motorola, Honeywell, Oracle, SAP, Microsoft, EDS and Hyperion. For more information, please visit www.mainstaypartners.net.

Information contained in this business impact study has been obtained from sources considered reliable but is not warranted by Mainstay Partners.

