

Anatomy of a Tech Leader

By Jay Snyder



In construction, the role of the tech leader is pivotal and ever-evolving. Previously identified as the gatekeepers of IT, their responsibilities have grown far beyond the basics of IT infrastructure, devices, and software applications.

Today, they stand at the forefront of pioneering change — contractors are looking for these tech leaders to drive technology-based innovation, integrating IT and construction operational technologies to push efficiency, safety, and quality on projects and core business functions that support improved workflow, reduced workload, and enhanced insights.

This article explores what contractors are now expecting of their tech leaders at the strategic, operational, and tactical levels and highlights critical roles, challenges, and the future outlook.

THE BACKBONE OF INNOVATION: REDEFINING CONSTRUCTION

Today, tech leaders need to have proven experience, mature processes, and a collaborative approach to play the game.

— Andrew Zombek, President of Martin-Zombek Construction Services, Inc., points out the importance of a tech leader: “Technology and the modernization of construction is an incredible movement likened to a freight train

upgraded to a nuclear-powered engine or swapped for maglev. Remaining the same is like slowing down. It will lead to the company getting run over [by competitors] that are faster and more efficient.

“Knowledge and ideas must not just come from the top — it needs to be shared with a company culture that allows new ideas, processes, tools, and IT from all personnel. That next crazy idea or thing that someone sees while sweeping floors may lead to the next big step for our business.

“Ideas and inspiration are welcome at our company. Follow through with beta testing and pilots must be done to prove tech.”

STRATEGIC SYNAPSES IN CONSTRUCTION TECH

Strategic planning is at the core of a tech leader’s responsibilities. They are tasked with setting a vision for how technology can enhance construction projects and aligning technological strategies with overarching business goals. Tech leaders don’t just predict future trends; they also pave the way for their adoption within the organization.

In the construction industry, a technology executive’s role extends beyond managing IT systems. It also encompasses being a visionary strategist who can foresee the integration of emerging technologies into construction processes.

Strategic thinking involves identifying how digital tools like artificial intelligence (AI), internet of things (IoT) devices, and building information modeling (BIM) can optimize workflows, reduce costs, and improve safety. This foresight requires understanding the technological landscape, assessing its relevance to current and future projects, and planning for its seamless integration.

These executives ensure their companies stay ahead in competitive markets by leveraging technology not just for operational efficiency, but also as a fundamental driver of business growth and transformation. Their strategic vision aligns technology initiatives with business goals, fostering a culture that embraces change, encourages innovation, and prepares for future challenges.

THE BRAINS OF THE OPERATION: TECH LEADERSHIP

Tech leaders in construction don’t just manage systems and technologies; they also lead people and the business. Building and leading a diverse team of technology professionals is crucial, as is fostering collaboration among IT, construction teams, and external partners. Effective communication of technology strategies and their benefits to stakeholders is also key.

Building Partnerships for Innovation

Those leading technology must possess the ability to encourage and influence, even when they do not have the authority.

The CFO of Bond Brothers, Inc., Richard Small, explains why: “A tech leader in our industry must be able to collaborate, influence, and partner with the executive leadership team to create and drive a company’s technology strategy that aligns with the business strategy. To do this, this person must be able to establish partnerships across the enterprise and build trusted relationships with key leaders in the company.”

“Given the nature of the role, to be successful, they must be a problem-solver and an innovator with superior analytical skills. They must have a customer-service mindset focused on enabling all members of the company to utilize and leverage technology to work smarter and deliver increased value to our clients. This person must be an effective communicator and team builder who can align resources, empower, and motivate staff. They must be a skilled manager with a proven ability to deliver results.”

THE ROLE OF A TECH LEADER ... is no longer just about support; it's about **LEADING TRANSFORMATIVE CHANGE**, ultimately creating a symbiotic relationship between technology and **STRATEGIC BUSINESS OUTCOMES**.

Strategic Communication

Influencing without authority is a pivotal strategy for technology executives in construction companies, where collaboration across various disciplines is essential. Such leaders excel by leveraging their expertise and networks to drive innovation and change without relying on formal power. They build credibility through consistent, value-driven communication, demonstrating how technology can solve real-world problems and enhance project outcomes.

Effective leaders who influence without authority understand the importance of emotional intelligence. They listen actively, empathize with others, and can navigate diverse perspectives to find common ground.

Such leaders are adept at persuasion, using compelling narratives and logical arguments to convince others of their vision. Rather than imposing their ideas, they inspire enthusiasm and commitment through shared values and mutual respect.

By fostering relationships, understanding stakeholder needs, and presenting compelling visions for technological integration, they gain buy-in and lead transformative initiatives. This approach not only advances technological adoption, but also promotes a culture of collaboration and continuous improvement within the construction industry.

Attracting Talent in a Digitally Evolving Sector

Strong leadership matters when recruiting talent as well. The construction industry is undergoing a digital transformation that demands a workforce skilled not only in traditional IT, but also in these specialized technologies.

Top talent prospects are drawn to companies that foster innovation, provide opportunities for growth, and embrace new technologies. As a tech leader, creating an environment that values continuous learning and encourages experimentation is key.

Showcasing your company's commitment to leveraging cutting-edge construction technologies can make it more attractive to prospective employees.

Additionally, building relationships with the tech community can help tap into a pool of potential candidates. Participating in tech meetups, conferences, and seminars can raise your company's profile among tech professionals while also keeping you informed about the latest trends and innovations.

Engaging with educational institutions through internships or collaborative projects can also be a fruitful strategy to attract young talent.

Recruiting the best IT talent and construction technologists requires a multifaceted approach, combining competitive benefits, a culture of innovation, and active engagement with the tech community.

BEYOND THE SERVER ROOM

A core responsibility of the technology executive is the performance of the traditional aspects of the IT department, including infrastructure management and network administration, cloud application management, database administration/data storage, cybersecurity, device management, software agreement management, etc.

In larger construction companies, there could be managers for each of these specialized areas of IT, but often, the company's tech leader directly manages these functions with a staff of technicians.

Tech leaders are also responsible for establishing IT governance frameworks — including developing policies for cybersecurity, data management, and compliance — ensuring that technology operations are secure and aligned with industry standards and regulations.

Most contractors are finding that it is time to reconsider the role of IT, shifting away from seeing it as general overhead to viewing these teams as key stakeholders that are a part of the company's leadership team.

THE INTERSECTION OF CONSTRUCTION & TECHNOLOGY

Tech leaders identify and integrate new technologies such as workflow automation, business intelligence/data visualization, robotics, IoT, AI, and BIM into construction processes. Their goal is to enhance operational efficiency, improve safety standards, and ensure quality outcomes in construction projects.

The Adaptive Tech Landscape in Construction

In a conversation with Pat Saleen, President of Lyles Services Company, the corporate shared services company of Lyles Construction Group, he expresses that the tech leader must understand the landscape of tools and capabilities: "We live in a world where change is constant, and technology advances are leading the way.

"For years, the construction industry has been somewhat insulated, as the work we perform is unique and complicated, making it difficult to find a one-size-fits-all technology approach. However, the landscape is changing, and our industry is on the cusp of being dominated by advances in automation, analytics, robotics, and artificial intelligence, to name a few. These tools have the potential to improve our work efficiency and productivity, but they also have the potential to overly complicate the work, provide unnecessary data and/or produce inaccurate results.

"Therefore, we need to decide which technologies will improve our competitive edge, create efficiency within our construction operations, and improve the lives of our people — our most valuable asset.

"We believe high-performing construction companies need tech leaders who understand the complexities of our work, appreciate the need to thoroughly evaluate a technology, and determine if it will effectively move the

needle. Construction will always lead the way, and technology will support its path to success.”

Many contractors see the activity occurring in technology research and development and struggle to keep up with what is relevant to their business. In fact, many construction leaders have noted confusion and frustration with staying up to date on technology trends, including new entrants, failed startups, and constant mergers and acquisitions, which is important to understand when considering onboarding a new capability to the company.

Supporting PMs With Technology

Rich Nemmer, President of Lyles Construction Group, takes Pat’s comments a step further to explain the importance of supporting operations: “The project manager is on the front line leading the charge in doing what we do: *constructing*. The art of construction continues to become more complex each year, which adds demands and responsibilities to the PM’s role.

“Tech’s number one goal comes down to this — we need to make the project manager’s job easier. Tech must provide the PM instant access to granular data, streamline process steps, and integrate the many systems needed to manage construction.

“We need to help our PMs become more efficient by saving them valuable time and providing accurate information. Other technologies that help accounting and other support staff are important but pale in comparison to the priority that needs to be placed on helping the PM.

“When reviewing new technology, construction executives need to ask themselves, if it doesn’t make the PM’s job easier, why are we doing it? We can’t implement every technology that is proposed by staff; we only have so much bandwidth and can only handle so much change. We need to review carefully any new proposed technology to make sure this is the tech that is needed, this is the tech that moves the needle the most, and that tech, if selected, will not introduce red tape and bureaucracy to our systems. Construction execs need to be the filter in choosing technology that best helps the company with a focus on the PM.”

Understanding and managing operational technologies specific to construction (such as reality capture, advanced scheduling software, BIM, drones, and wearable tech) is a unique aspect of a tech leader’s role in this industry. They are responsible for the implementation and integration of these technologies, ensuring they work seamlessly with existing IT systems and are acceptable to the end users.

BRIDGING THE GAP: ADVANCED DATA & INTEGRATION

Integrating technology in construction comes with its own set of challenges, from staff’s resistance to change to the complexity of managing multiple disparate technology platforms. Tech leaders must navigate these challenges, leveraging best practices and insights to overcome obstacles and maximize the benefits of technology adoption.

But where do you find such experts in technology who also understand the dynamics and drivers of the construction industry from experience in supporting construction projects?

There has been a recent surge of professionals from within construction software companies that have migrated to the contractor side. Though they may not have extensive experience within a construction company, they often have more technical knowledge and a vast support network, which can be beneficial in the

role. If you consider these professionals for a position, then be sure to understand their previous position at their software company.

Those who lead product management or customer success may bring a heightened understanding of the software solution landscape and skills to gain widespread adoption. And those coming from sales or engineering may also have strengths. Other ideal candidates can be found currently working for contractors.

As with any career progression, these tech leaders may be at a small company looking for broader challenges at a larger company or with a big company seeking to have a closer relationship and impact with the C-suite and the field. Recruiting companies specializing in technology professionals do quite a good job sourcing and vetting highly qualified candidates for the construction industry.

In looking at other industries that have evolved such as finance and retail, it can be seen that those successful companies embraced digital transformation, sought advantages with technology, and acquired key technology leadership to thrive. Examples include Walmart's position as a global tech leader in e-commerce,¹ Alcoa's digital transformation in industrial manufacturing,² and Kimberly-Clark in the consumer products manufacturing space.³

THE FINANCE IMPERATIVE

A company's total spend on technology can typically be in its top three expenses, often behind labor and equipment. These costs and future investments mean that the costs and benefits of technology are discussed more often in the C-suite.

Tech outcomes may be defined as improved efficiency and productivity, a better employee experience, cost reduction, or margin improvement — all of which can be summarized by generating greater financial stability and performance for the company. Retaining talent leads to lower costs associated with training and turnover, and improved productivity equals reduced cost and increased margins.

There are certainly other drivers, but it would be unusual not to be able to map a tech initiative to some sort of financial upside. Being able to quantify that return on investment (ROI) is another topic, and very difficult to do in most cases because contractors have difficulty measuring the base line or current state.

Tech outcomes are hard to achieve without capable and competent technology leaders overseeing these critical projects.

CONCLUSION

The role of a tech leader in the construction industry is at a pivotal crossroads, blending IT expertise and construction know-how to forge paths toward innovation and improved business performance. It is a role that is no longer just about support; it's about leading transformative change, ultimately creating a symbiotic relationship between technology and strategic business outcomes.

Looking ahead, the future of tech leadership in construction has endless opportunities for those ready to embrace change and lead their organizations toward technological advancement.

Leaders must now possess a blend of innovative thinking and robust technological knowledge to transform their companies into sophisticated digitalforward, data-driven organizations.



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Endnotes

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