

MEGATRENDS THAT WILL CHANGE HOW YOU DO BUSINESS

PART 1

By Jay Bowman

The Dow reached 16,000. Women began serving in combat. The word selfie joined Merriam-Webster's dictionary, and the city of Detroit filed for bankruptcy. If you guessed that these events happened in 2013, you're right. But for many of us, these events feel like ancient history.

Such is the nature and pace of change. It is happening all around us, often so quickly that we risk not noticing how fundamentally different things are today from just 10 years ago. As a result, we struggle to imagine how different things might be in 10, 20 or 30 years.

Most engineering and construction (E&C) firms are planning one to five years out. While near-term strategic planning is critical, thinking 10 to 15 years in advance helps determine if the short-term path is leading an organization in the right direction. Thinking about the long-term impacts to your business is essential to crafting the right course and managing risk.



Take Blackberry, for example. The company created a market-leading product that was ubiquitous among businesses. The problem came when it refused to respond to shifting consumer tastes and to take competition from Apple and Samsung seriously. The company focused solely on the phone and failed to innovate to keep up with the market and new technology.

That's why having a long-term strategy can help your firm chart a course for the future. To assist in this strategic focus, FMI has put together a two-part series on megatrends that will impact our industry's future.

We invite E&C leaders to understand the impact of megatrends and then ask themselves, “If this megatrend were to grow exponentially, what would it mean for my current markets, customers, service offerings, employees and competitive position? How would we adapt?”

Megatrends Defined

Different from trends that come and go, megatrends are far-reaching patterns that relate to business, human behaviors, mobility and the environment. They are shifts that will change how we live, work, learn, get care, shop and connect to each other. Like bulldozers, they change everything they touch.

Megatrends don’t grow in isolation, but amplify each other exponentially. Often aspects of a current megatrend are quite apparent, but we don’t recognize its power until it is upon us. In short, a megatrend is:

- Far-reaching
- Powerful; it affects everything it touches.
- Growing exponentially
- Disruptive

Four Megatrends of Recent Decades

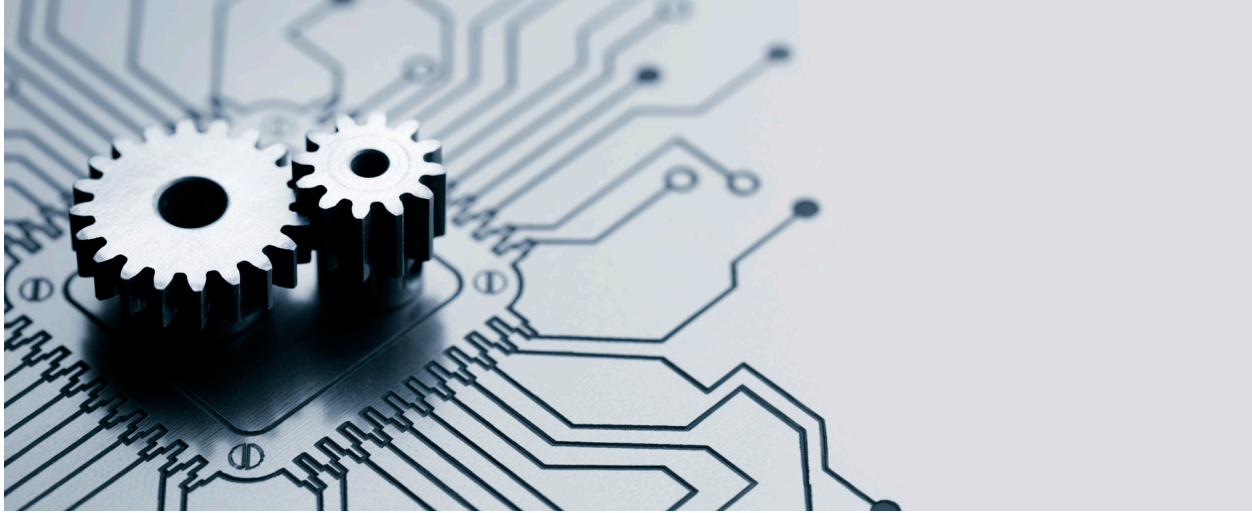
Some of the most meaningful and ongoing megatrends of the 20th and 21st centuries concern how we live in our built environment. They are:

Urbanization: This megatrend is several centuries old. In 1800, 6% of the U.S. population [lived in towns and cities](#). Today 80% of Americans live in what the [Census Bureau](#) defines as urban areas (towns of 5,000 or more). By 2050, [89% of Americans](#) are predicted to live in urban areas. E&C firms see this megatrend in not only development opportunities but also market concentration, with 12 markets accounting for one-third of total U.S. construction spending.

Globalization: For the past 50 years, the world’s economies have grown increasingly interdependent due to the cross-border trade in goods and services, technology and flows of investment, people and information. Globalization has exported some U.S. manufacturing and jobs to lower-wage economies and, in parallel, brought cheaper goods – such as fast fashion, household electronics and construction supplies – into the U.S.

Digitalization: Far larger in scope than simply converting paper records into electronic files, digitalization is the process and strategy of using digital technologies and data science to radically alter how we do business. Digitalization has improved office efficiency, heralded the home computer, fueled e-commerce, facilitated global supply chains and threatened brick-and-mortar retailers.

Ageing infrastructure: No longer out of sight and out of mind, the nation’s water, transportation and communications infrastructures have aged at a rapid rate over the past 30 years. In 2021 the World Economic Forum rated the U.S. 13th in terms of the overall quality of infrastructure, and the [American Society of Civil Engineers](#) gives our country’s infrastructure a “C-.” Demand is high for renovation, repair and replacement.



Four Technology Megatrends Reshaping Construction and Engineering

“The future is here, it’s just not evenly distributed,” observed author William Gibson. FMI’s emerging megatrends were drawn from observations that seeds of these trends already have taken hold in some industries, cities or populations. They are expected to continue to grow rapidly.

E-commerce and Continued Digitalization:

Pundits expect e-commerce sales to account for about [one quarter of retail sales by 2025](#). In recent years, retailers have slimmed their brick-and-mortar footprints, with some going completely online. While traditional retail is far from dead today, most retailers are [adopting omnichannel strategies](#) such as buying online and picking up in store and curbside pickup. We could imagine a distant future where traditional retail is the exception, not the rule.

One of the biggest outcomes from the rise of e-commerce is the shift in consumers’ mindsets to be less reliant on interactions with sellers of products and services. This change could have far-reaching implications for those in construction procurement. Companies will need to implement tools to adapt to the changing nature of purchasing.

Technological Advancement, Artificial Intelligence and Automation

Technological advancements have allowed companies to be as efficient, collaborative and communicative as possible. Now artificial intelligence (AI) brings new levels of speed, insight and automated problem-solving to business.

Already, 94% of global business leaders say that AI is critical to their company’s success, but the applications are largely limited to voice assistants, chat bots, cloud data optimization and prediction of future maintenance needs.

A recent FMI article documented [emerging applications of AI](#) in the E&C industry, including AI-enabled scheduling, machine learning-supported estimating and safety monitoring with computer vision. At this point, leaders see AI as augmenting the work of experienced professionals; however, in the next several decades, it could become as indispensable as email and word processing.

If AI-enabled tools become as reliable and trusted as professionals they support, how might AI change staffing needs? How could AI enable more productive and autonomous workflows, better risk management and happier, more enriched teams?

Remote and Flexible Work

An outgrowth of the COVID-19 pandemic, remote and flexible work grew from about 6% of full workdays pre-pandemic to [more than 50%](#) in spring 2020. Since then, remote workdays have declined to 28% of workdays. Still, despite calls for a return to the office, most executives expect remote work to continue for the foreseeable future. Not only do employees like it, but also it can be cheaper for companies (through reduced office costs) and better for the environment (less commuting).

For the E&C industry, this megatrend means that high office vacancy rates are likely to continue and suggests ongoing difficulties in traditional office construction spending. We can anticipate foreclosures and distressed sales, opening the door to renovation and repurpose projects.

Remote work is fueled by data. [Data centers](#), classified as a subset of the office sector, will continue to be highly sought after. Data center construction could comprise as much as 50% of the office sector in the coming two decades. What's more, data centers may be built in new locations as energy and land constraints open the way for opportunity.

To consider: If hybrid and remote work are the norm, could temporary workers also become a larger part of the workforce? How might this impact company reputation, privacy and security as well as the traditional contract between worker and employer? Also, might dramatic changes in office vacancies devastate some U.S. cities, with the impact also being felt by surrounding multi-family owners, retailers and restaurants?



Rise of Data and Cybersecurity Issues

As transactions and work become digitized, AI grows and work is remote, so too rises the threat of cyberattacks. The global market for [cybersecurity is growing rapidly](#) while the number of victims grows exponentially.

This raises questions about how E&C companies are using and storing data and how companies can defend against attacks. In the future, project owners will likely require greater security to participate in their projects. What's more, ransomware attacks and data breaches could affect construction project timelines. Cybersecurity needs may also increase the size of data centers.

Questions to Ask Yourself Now

“Most people overestimate what they can accomplish in a year,” Bill Gates once said. “But they underestimate what they can accomplish in 10 years.” Gates’ wisdom invites E&C leaders to think about the impact of the above megatrends on their current operations, staffing, tech stack and markets.

Once you identify a relevant megatrend, you should do your research on the potential threats and opportunities it could bring. Finally, for every future opportunity or threat, brainstorm reactions and counter-moves that can position your company for success.



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Jay is a well-known speaker, offering insights on the construction industry and market outlooks based on his research. He helps clients understand where the industry is heading and design corporate and strategic responses to make business decisions to solve challenges.

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