

CS502966

# The Intersection of Infrastructure & Technology

Mark Contino

Topcon Positioning Systems

## Learning Objectives

- Understanding the infrastructure demands created by population growth
- How traditional construction methods & workflows must be challenged
- What is the Intersection of Infrastructure & Technology
- Navigating the technology options to find the right solutions for your business

## Description

The construction industry is at the crossroads of growing infrastructure demands and having the technology needed to meet them. Topcon is at this intersection with customers – helping to make informed decisions and integrate the right solutions and positioning technologies to meet infrastructure demands now and into the future.

So, what is the “Intersection of Infrastructure and Technology”? It is the meeting point where construction productivity is improved by applying advanced positioning technology, design and management software, and newly adopted workflows.

We will review the following main drivers and outcomes:

- Global population growth will continue to drive demand for expanded and updated infrastructure.
- Current global infrastructure investment is estimated at \$2.5 trillion, yet the demand is projected at over \$3.3 trillion.
- Traditional construction methods will simply not be able to meet the demands of the future. Modern technology must be adopted to greatly increase productivity & efficiency.
- Construction professionals today are inundated with technology options and choices. How do you sort out what is best for you?

For decades, designers, developers, contractors and engineers have continued to struggle through this intersection. As technology has expanded, so has the speed and the volume of traffic increased. It is when the expanding technology continues to meet the increasing demand for productivity, that drives changes in the way we meet these growing demands. We have the technology right now that empowers users to seamlessly integrate into their workflow to experience immediate results. However, navigating the sea of options can be daunting, so finding the right Autodesk Partner is critical.

## Speaker

Mark Contino has spent over 21 Years with Topcon in various roles from product development, distribution, and sales & marketing. Mark has spent all of his career, over 35 years, in the precision measuring and positioning industry including land surveying, construction, and civil engineering.

Understanding that the traditional construction industry is slow to change, Mark has been a strong advocate for helping to further the modernization and digitization of job sites and overall workflows. In that effort, mark helped to create the Topcon Solutions Stores in partnership with Autodesk, to fully connect precision measuring and positioning systems with the full Autodesk software portfolio.

Topcon Solutions was named Autodesk Construction Partner of the Year for 2022, and is an Autodesk Platinum Partner.

Mark currently leads Topcon's direct retail distribution for North America – The Topcon Solutions Stores.

Graduate of Rochester Institute of Technology, Rochester, NY



## **Expanding Global Population Driving Increased Infrastructure Demand**

The global population was 7.9 Billion at the end of 2021, and was recently reported that we have now topped the 8 Billion mark. The conclusion is a simple one: the more people on the planet, the more demand for infrastructure to support them. Infrastructure can be a broad term which makes the problem even bigger. Roads, rail lines, water, sewer, telecom, houses, offices, stores, energy sources, storage, and deliver – the list goes on and on. The only given is that in this modern world, people require modern infrastructure.

According to the McKinsey Global Institute, the current global infrastructure investment is estimated at \$2.5 trillion, and this only includes projects that are currently funded. It does not include others waiting in the queue. To meet the growth projections of the global population, the real current annual infrastructure demand is projected at over \$3.3 trillion and climbing.

Many people confuse this data as showing us “what we can afford to spend.” The real takeaway from this data is “what can our current construction output capacity accomplish.”

## **Traditional Construction Methods are Challenged**

The demands placed on the construction industry to modernize can not be underestimated. Construction has traditionally been labeled as the slowest industry to automate and adopt new methods and practices, including the adoption of new technology.

However, today we are seeing a complete sea change in how construction companies both large and small are looking to new technology to greatly increase their efficiency and productivity. Much of this can be attributed to the demands of a much more competitive environment. More and more projects are requiring some sort of data sharing and digital collaboration between the contractors and stakeholders.

There is now a real necessity for contractors to learn how to get much more production without large increases in manpower and equipment. “How can we do more with what we have?” is the question many are asking. Contractors see the need not to just hire more people, or buy more equipment, but to utilize technology to automate outdated processes and workflows.

## **What is the Intersection of Infrastructure & Technology?**

When we considered an analogy to represent the convergence of an industry need and the potential solutions, a busy intersection of two roads came to mind. It's a busy place with many things flowing through it. From all phases of a construction project – design, estimating, to production and as-built, and then intersecting with the development of technology – positioning technology, data and telecom, software, cloud solutions.

Any kind of information you can think of on a construction project flows through this intersection.

The modern demands of the construction industry are increasingly calling for this information to flow seamlessly, and interconnect at multiple levels. The power of the intersection is that with realtime data access and management, new workflows can be created, processes can be identified and tested, and efficiencies can be achieved at higher levels than ever before.

## **Navigating the technology options to find the right solutions for your business**

Implementation of any new solution can be challenging, especially when you are changing the way people have been working for decades. The industry is seeing a huge increase in the use of cloud-based construction management platforms. But how do you navigate through all these options to find the right solution for your business?

First, don't try to do this on your own. Finding the right partner with the right experience can make all the difference in the world.

That right partner will learn about your existing business tendencies and challenges, and provide guidance on how to introduce and implement Construction Cloud software from Autodesk. Most importantly, they will be there not only through initial implementation, but through training, adoption and expansion as well as help inspire your team to use it!

### **AEM Article link:**

<https://www.aem.org/news/why-jobsite-connectivity-is-much-easier-said-than-done>