

Construction Industry Trends 2021

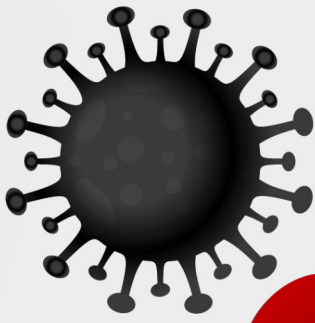


**A Detailed Guide for
Construction Contractors**

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Introduction

Even though 2020 has ended, the year has turned out to be extremely unfortunate for humankind. COVID-19 hits the globe in December 2019 causing unprecedented disruption for various businesses and industries.

This has made the construction industry struggle with consistent downtime due to extensive pressure of managing change orders, sustaining labor, and of course, the lawsuits. However, the year has equally helped the construction contractors and workers to flourish by expanding their familiarity with the technology.

Especially, the rise of teleworking and cloud technology, under the social distancing norms were the major highlights of 2020. Even if the sudden shift in resources, supply chain disruption, and halted cash flow were some reasons for creating the odds, some tech trends have still managed to grow.

Since 2020 is coming to an end, every construction irrespective of their job is looking forward to what 2021 is likely to unfold for the industry. Since most trends are created around technology, the future of the construction industry calls for greater growth with improvement in building design and construction.

Even though it is essential for these construction professionals to cut the competition, it would be equally important for these experts to focus on all new trends in the construction industry in order to sustain the business.

With so many construction technology trends gaining traction, this eBook will help you learn about all the latest and expected construction industry trends that can help construction enthusiasts to lead the industry in 2021 and the future. Let's begin!

Construction Industry Trends

Safety

Though safety standards were always a concern for construction contractors across the world, the spread of COVID-19 has redefined the entire concept of safety. Since 2020 was all about mitigation and implementing practices that can prevent the spread of the disease, safety has turned out to be the top trend of 2021.

Safety as a trend will need contractors to focus on the intelligent division of workers along with equipment use practices and other cleanliness protocols. As construction is a process that involves simultaneous operations at the site through teamwork and labor efforts, separation as a part of safety becomes difficult to practice.

However, contractors in 2021 would need to stick with staggered shifts to avoid crowded job sites. Also, construction site protocols are likely to include uses of safety gears like masks, gloves, and hand sanitizers while preventing any kind of sharing between the teams. This may need project managers to have arrangements for separate equipment for skilled workers or ensure anything that is passed to other workers on the field must be sanitized before use.

Living Materials

Another thing which will make an interesting trend to watch this year would be living materials i.e. the biological compounds that are built of and by bacteria and fungi. 2021 is likely to be a year where we could see growth towards full-scale production of these lightweight yet strong and portable materials. Known with the phrase, “grown in place” could soon get common as “cast in place.”

Self-mending concrete is the concrete that is saturated with bacteria that binds material around them into new structural material. The bacteria in the concrete is meant to grow into the pores of the concrete to make it more impermeable and fix all the cracks or fissures.

Besides this, we have Mycelium composites, a material that is worked by fungi that live underground and have mushrooms as its flowers. Due to their robust nature, these mycelium materials are under production for use in the insulation and flooring process.

Remote Working

The post-pandemic times are all about modular construction which was already on the rise before the pandemic hits the global stage of construction. This will include modular construction as well as prefabrication of buildings.

Manufactured buildings can help contractors overcome challenges related to worker density since most part of developing such buildings involves heavy use of equipment. Also, the process needs a limited workforce that can help reduce proximity at the site and prevent the extensive cost of labor.

Since manufactured buildings are small and have limited ability to move with trucks, they are ideal for independent systems such as offices, additional rooms for hospitals, etc. They are not only affordable but are temporary which makes them perfect for uncertain times.

3D Printing

The next thing which we have added to our list is the technology that has the potential to cut down the entire stress of job site workers. 3D printing is all about a big nozzle that is methodically designed to lay concrete in vertical piles as per the design programmed into the system.

Earlier the method was much popular for commercial buildings but now its popularity amongst residential contractors has made it a trending topic for construction enthusiasts. The technology is also gaining popularity for the small-scale factory processes as it can help make small components of the larger assemblies and that too at a very affordable price. Though it cannot be the substitute for injection molding, it can still interest designers for creative construction.

Modular Construction

When it comes to construction technology trends, one word that has been actively associated with rapid task completion and growth was “Remote Working.” Either it comes to building materials or administration, remote technology has helped construction firms meet their productivity goals with much ease.

Some of the common examples of remote technology at a construction site include the use of drones for mapping and surveying that helps in evaluating material quantity, estimate projects, and create maps for added visibility, simplifying working even on the largest job sites.

Design Technology: BIM & VDC

The evolution of the construction paved way for the extensive adoption of design techniques that can be used to create structures in virtual space. Especially, the architects and design experts are quickly adopting BIM (Building Information Modeling) technology as well as fundamental tools like REVIT to improve the task of designing and production.

BIM allows project managers to create a model of the building in virtual space to go for a quick practice run and create drawings from images on how it needs to be built in the real world.

Work Disruptions

Capital management is the essence of the construction business that can define the success or failure of the projects. Since the spread of the pandemic in 2020 has caused the extensive business disruption, poor financial stature is likely to happen in 2021.

Besides this, many construction associations and agencies have announced a likelihood of a decline in non-residential construction. This simply refers to dramatic downtime leading to an increase in government debt and delayed deliveries. The slow down is already visible in the private sector and is likely to expand across different trades and sectors.

Payment Disputes

Since the spread of COVID-19 has affected every industry, it is natural to have conditions that can cause financial issues and payment disputes. As many contractors are already dealing with bankruptcies, the trend is likely to worsen this year with financial clashes happening between construction firms and project owners.

Though negative, 2021 will be the year that will bring a new trend of lawsuits before the construction contractors along with mechanic liens, an instrument that is used by contractors to claim the property as a mechanism for collecting payments. But still, the payment disruptions due to cash flow interruptions are likely to make contractors and project owners some maneuvering of lien or bond claims to protect their payment rights.

Supply Chain Diversification

Another trend that can be considered as an after-effect of COVID-19 would be the disturbing supply chain. The loss of trade across regional or international boundaries have forced contractors to find alternative suppliers. Since it is quite evident to see no signs of improvement in the near future, contractors might need an immediate reevaluation of the resources and aim for new alliances. Also, the efforts to diversify the supply chain would need maximum coordination from suppliers, contractors, subcontractors, as well as project owners.

However, the new supply contracts would require all the stakeholders to cover unforeseen costs as well as revision of all the contracts. Also, this is equally an opportunity for all the suppliers and general contractors to improve their client base by approaching areas that were earlier dominated by other established firms.

Reduced Non-Residential Construction

When it comes to commercial or non-residential construction, it was all odds in 2020 with a decline in the start of new projects. As per the reports shared by Dodge Data & Analytics, it immediately slipped down by 31 percent only from June to July 2020. However, there was a growth of residential starts by 22.6 percent mostly containing multi-family five-unit projects.

Though low-interest rates could be the reason behind the surge in residential construction, the pandemic has made people shift to individual apartments rather than traditional and crowded city living. On the other hand, the non-residential decline could be the reason for uncertainties related to investments, returns, delays, and other factors that might affect the industry.



Popular Construction Technology Trends for 2021

Construction of Smart Buildings

Another big trend that is likely to hit in 2021 and afterward is increase interest in smart buildings. With the advancement of IoT and other technology solutions, smart buildings are going to be developed in a connected environment with automated operations. These include air conditioning, lighting, ventilation, security, and more.

Also, smart buildings include the use of sensors, chips, and other devices that keeps on collecting user data to have optimized use of space, save energy, and have the least impact on environmental aspects.

Energy-Saving Buildings

As 20 percent of the U.S. energy goes for commercial buildings, energy-saving buildings can be the next big thing that could be seen growing into the construction world. Practicing the construction of energy-saving buildings could not only help businesses to save energy but improve the cash flow and its impact on the environment.

However, the construction of such buildings would need a wholesome approach where the design and construction process should align to ensure the proper functioning of the structure. Also, making such projects success could help leverage energy-efficient buildings that are 70 percent more efficient than other commercial structures.

Connected Devices

The next big thing which is going to be the technological trend of 2021 and the future is the use of connected devices. This can be understood as the adoption of all-in-one cloud-based integrated construction accounting and project management software like ProjectPro that allows easy control over operations for project managers as well as field teams.

The best part of using such solutions is the added visibility of the job site that users can have working on cloud-based technology. Moreover, using such a solution can help meet the remote working goals which are essential for future construction.

Also, the use of connected devices could help contractors to practice real-time collaboration on all the project related updates improving the quality of construction.

5D Macro-BIM For Cost and Schedule Modeling

Last but not the least, we have 5D BIM in our list of construction technology trends that will rule the construction industry in 2021. Based on the linking of 3D CAD components, 5D BIM allows modeling of building information into cost and time data constraints. Over the years, more and more construction firms are moving towards this technique to ensure a more accurate understanding of the projects.

Either it comes to conceptual designs or planning of the budget and schedule, project managers and contractors could take advantage of this technology to track real-time changes. This includes a check on material, layouts, design elements, building costs, the appearance of the structure, and the overall schedule of the project. Also, using 5D Macro-BIM can help project teams to have a clear and well-defined scope of the project while overcoming any over-expenses or aligning changes in the process.

About ProjectPro

ProjectPro is a cloud-based Construction Accounting Software Solution integrated with Microsoft Dynamics 365 Business Central. It is designed to help construction companies manage tasks and requirements related to Project Accounting, Resource Management, and Project Management.

Streamlining business processes for construction firms, real estate developers, and contractors, ProjectPro can be used to work on integrating data, transaction processing, and robust reporting. Moreover, features like Cloud and Power BI help construction companies for improved Business Decision Making.

Some of the other features include Project Management, Project Billing, Advanced Job Labor, Change Order Tracking, and Material Planning. Moreover, ProjectPro includes Subcontract Management, Contract Billing with Retention, RFQs, TimeSheets, and keeps users updated with real-time Notifications and Alerts. It also comes with a dedicated mobile technician app that can help with field service operations.


At ProjectPro, we help construction firms with customized software solutions to make their construction business sustain and grow in this digitally growing world. We help you turn your vision into a value with promising services and a pleasant customer experience.

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Take Care! Stay Safe!