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TECHNOLOGIES CHANGING CONSTRUCTION

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Nowadays it is important for architects, manufacturers and other construction professionals to stay ahead of the game when it comes to advances in the industry.

The construction industry, in general, suffers from a traditional hesitancy to embrace nascent technologies, caused partly because projects take years to plan and complete. Recently, however, progressive construction honchos have begun to harness and realize the potency of tech – whether it's virtual reality, autonomous drones, artificial intelligence, concrete three-dimensional (3D) printing and much more.

Thanks to incredible tech advancements, great value is generated by optimizing efficiency and productivity – at every stage, from planning to construction. Indeed, many within the industry predict that in a decade a building site will look very different. There are few of the most game-changing technologies in the construction world.

1) Drones. Many construction sites are already heavily dependent on the use of drones. These drones are very beneficial in that they save a lot of time. For instance, surveyors can survey an entire site in just a few minutes, whereas in the past it'd take them several weeks or months. Obviously, this will also save construction companies a lot of money. As drone technology continues rapidly developing in its accuracy and precision of its readings, even less human involvement will be necessary. In the past, many companies were hesitant to use drones because they still needed a controller, but today as the technology grows much more efficient, more construction companies are willingly and openly embracing this technology.With the advent of machine intelligence, drones are becoming smarter and more capable. Real-time obstacle avoidance, gesture recognition and fully automated flight used to be the realm of science fiction.

2) Building Information Modelling (BIM). BIM technology could be the catalyst for a fundamental change in how we manage, design and develop a construction project. There are many different levels of programming enabled through BIM. 4D and 5D BIM are two very representative examples in that direction.From a general point of view, BIM will bring more accuracy to the building process and empower the exchange of important project information between the numerous stakeholders. Moreover, its further evolution is anticipated

to make construction projects more productive and affordable by including revolutionary sustainability and safety measures.

It is evident, then, that BIM could function as a game changer for construction and offer a detailed depiction of the project development in an open and highly collaborative environment.

3) Robotics. Industries like healthcare are already investing a lot of money in them. As these robots grow even more precise and accurate, they'll become a commanding force in the construction industry. In the beginning, the cost of robotics will be high, but it will still be well worth it to at least pay attention to this technology. Eventually, we may witness robots being able to do things like lay bricks and tie rebar, we may even see them complete most of the current man-operated construction projects.

4) Advanced materials. The world of construction materials is advancing at an incredible rate as new technologies enter the construction sector, enabling further research and development. You only have to look at innovations like Self-healing concrete, Kinetic paving, 4D-printed structures and smog-eating buildings. All these sounded like they were something out of Star Trek a few years back and they're now becoming staples of the construction industry.

5) Green Construction. Technology is continuously improving and setting new standards, including higher environmental sustainability. Green building is no longer considered optional or a passing fad, but the future of construction. Forward-thinking designers and architects are leading the race introducing bold new solutions. Consequently, companies have to keep up the pace if they want to stay competitive. The continued success of modular construction, prefabricated processes and the rise are clear signs that this "trend" is here to stay.

Construction technology trends will always follow a typical pattern – how to build quicker and smarter, how to be more environmentally friendly and how to house people in different ways. Construction inventions and construction materials will always advance – who knows what the future holds?

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