



Real Estate Predictions 2022

The value of green buildings

How technology is pushing the Real Estate industry to become more sustainable



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Buildings and construction processes need to become “greener” and more environmentally friendly. This is a cross-industry challenge for all stakeholders. What is happening in the field of regulation, how are start-ups stepping in, and how can all stakeholders prepare for a greener future?

Technology is playing an increasingly central role in the Construction and Real Estate industries as they usher in a new era, opening themselves to new types of methods, business models, and disruptive

processes. More specifically, enterprises and investors are increasingly interested in disruptive technologies and innovations in the ConTech and PropTech domains. The technology adoption trend in the

Construction and Real Estate industries has also been accelerated by the COVID-19 pandemic.

ConTech

or Construction Technology - is 'the application of technology before and during the construction of the property, in any of its facets, at any of its moments but always within the temporality of the construction phase' (e.g. Building Information Modelling— Virtual models used in building construction).

PropTech

or Property Technology - is 'the application of technology to the property when it is already built and can be marketed' for sale or lease.¹ It was defined by Forbes as 'Businesses using technology to disrupt and improve the way we buy, rent, sell, design, construct, and manage residential and commercial property.' Although a relatively young field, PropTech start-ups have already raised over \$43 billion in funding worldwide since 2012.

Significant shifts in the use of Real Estate

In recent years, the Construction and Real Estate industries have faced a variety of challenges. Some challenges are long-standing, arising from the very nature of the industries, whereas others are a by-product of overall macro-level developments in the economy and market-wide trends appearing and impacting across industries.

All these challenges encourage the increased use of technology and are some of the main catalysts for development of ConTech and PropTech technologies and innovations. One of the hot topics is sustainability. Due to the increased demand for sustainability that the construction industry is facing, one of the

solutions is building “greener” and more sustainable buildings. In order to create green, environmentally friendly buildings, the construction process should be transformed to include new operational and process methods. Also, it should be able to incorporate new demands in the operational phase. A green building is 'a building that, in its design, construction, or operation, reduces or eliminates negative impacts and can create positive impacts on our climate and natural environment. Green buildings preserve precious, natural resources and improve the occupants' quality of life.'

Green construction

“Green construction”, i.e. the need for buildings and construction processes to become more environmentally friendly and

'green', can be viewed as a cross-industry challenge in the Construction and Real Estate sectors concerning all the stakeholders, with a strong link to the overall green sustainability trend impacting various sectors of the economy (e.g. manufacturing, energy, consumer goods and more).

Its primary goal is to reduce the industry's impact on the environment by using renewable and recyclable materials as well as limit energy consumption and waste reduction within the construction process. Sustainability here goes beyond the end of the construction phase and the building's completion, since the building will have a reduced impact on the environment over its lifespan.

Regulation

Regulators are also stepping in - European countries are tightening regulation and demanding higher standards from developers and property owners. All European countries are now following a path to tighter regulation and more demanding standards. In Germany, the European Energy Performance of Buildings Directive (GebäudeEnergieGesetz) will be introducing numerous building efficiency regulations to combat the impact of the Construction industry on the environment.

Consumer and investor preferences

In addition to growing regulatory demands requiring industries to reduce their environmental footprint, this shift is also driven by consumer and investor preferences. More specifically, millennials want to "go green" and are incorporating this factor into their buying and investment decisions. A 2021 survey by the American National Association of Homebuilders found that most buyers prefer "green" when given the option. On average, buyers are willing to pay a premium for green features that can save future utility costs and for homes certified for health and

wellness. These trends are also emerging in commercial Real Estate segments and amongst asset managers, with many property firms pledging that all new buildings will be net-zero carbon.

Start-ups and greener solutions

In response to these developments, start-ups are stepping in to offer greener solutions. There are a number of start-ups in the ecosystem that offer technological resolutions in this field. Some examples are:

- Sustainable and Environmentally Friendly Architecture
- 3D Printing (Construction 4.0/ Additive Manufacturing)
- Increasing Use of Automation and Robotics
- Industrialized Construction- Prefabricated and Modular
- Advanced Building Methods - Digital Twin and Building Information Modeling (BIM)
- AI, Data, and Advanced Analytics in Project Management and On-site

Preparing for a greener future

How to prepare for a greener future? Construction and Real Estate stakeholders must review their operations, processes and supply chains, adapt to operating models, and increase their R&D investments. They need to recruit, hire, and train for new positions such as environmental or energy engineers and carbon specialists. These types of positions are required to meet new and evolving regulatory demands and the different engineering and planning requirements of greener buildings. These changes will require new ways of working, collaboration with additional external partners and successfully leveraging technology to ensure fluidity, traceability, and accountability.

To read more on upcoming trends and technologies in Real Estate and Construction follow the [link](#): "Shaping the Future of Real Estate and Construction".

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