



Skybridges, Test Towers and Innovations: thyssenkrupp Elevator sets the Tech Trends and Highlights for 2020

- New innovations including skybridges and smart technologies will lead the way
- These innovations, alongside “flying carpets” for city centers and the world’s first ropeless elevator for skyscrapers will make for an exciting year ahead

ESSEN, GERMANY (December 9, 2019) – A new decade looms as the year 2020 is knocking on the door. What will it bring for the technologies that disrupt or revolutionize industries? The future is hard to predict, but sometimes, there are exceptions.

Such is the case for thyssenkrupp Elevator, whose research engineers have developed smart innovations not only for next year but for the next decade and future generations, as well. Here is a look at some of the exciting trends and highlights for 2020:

Skybridges

One of the main trends for 2020 will be the further development and increasing use of ‘[skybridges](#)’ as an architectural element as they will no longer just serve as a connection between two buildings at lofty heights, but instead also be a useful area and living space.

“[Skybridges are the transportation routes](#) of the future instead of a mere architectural connection,” comments Markus Jetter, Head of Research & Innovation Center Rottweil at thyssenkrupp Elevator. “For example, rather than holding the function of a pedestrian bridge between skyscrapers, these areas will instead be turned into living spaces at exciting heights. These areas will include swimming pools, event spaces, meeting rooms or even a skybar. As a cross-connection with many functions, they also pave the way for our horizontally moving ropeless system, MULTI.”

thyssenkrupp Elevator is funding an 18-month research project, “Skybridges: Bringing the Horizontal into the Vertical Realm,” which will culminate in the publication of a Council on Tall Buildings and Urban Habitat Technical Guide on the topic, with richly detailed narratives and technical drawings, as well as historical overviews and future speculations about skybridges’ potential.

Expo 2020 in Dubai

MULTI will be presented as an important innovation at the [German pavilion](#) at Expo 2020 in Dubai, which starts in October. [MULTI](#), the world’s first ropeless elevator system specifically made for skyscrapers, will dominate the future development of urban mobility as it unlocked

passenger movement potential like never before. MULTI is driven by linear motors and cabins which move independently in a single shaft, just like in a metro system. That's what makes it perfect for multiple innovative applications. Moreover, it opens exciting new perspectives for architects and developers.

Test towers

At the test tower in Rottweil, Germany, [thyssenkrupp towerrun's](#) competitors will participate in a running event on September 20, 2020. The participants will have to conquer 1,390 steps and 761 feet in height. In 2019, some 1,000 runners from 18 nations took part in the competition. Next year, there will again be races in different valuation classes – including police officers and firefighters in full equipment.

In 2020, vertical construction on the tallest elevator test tower in the Western Hemisphere will continue in [Atlanta](#). The skeleton or core of the tower will reach its full height of 420 feet in spring with full completion on schedule for Summer 2021. The tower will be part of thyssenkrupp Elevator's Innovation and Qualification Center, which will be the crown jewel of the company's new North American headquarters at The Battery Atlanta.

AI and smart technology

Intelligent algorithms based on artificial intelligence have the potential to disrupt the industry in 2020. Taking an elevator often requires a long waiting time before the cabin arrives. New technology exists which controls traffic flows more intelligently across a building. Those systems are also embedded with a learning process, with every action telling the system what could be improved, ultimately ensuring minimal waiting times at the elevator.

While waiting for a working elevator is time-consuming enough, waiting for an out-of-service elevator to be fixed can seem endless. Even the most advanced technical systems require maintenance, and it is far better to do this proactively, rather than after the incident has occurred. Predictive maintenance courtesy of thyssenkrupp Elevator's [MAX](#) system reduces downtime to a minimum as well as optimizes spare part logistics. Achieved through artificial intelligence, this technology will get even smarter in 2020 by employing "human" methods of learning via carefully examining incidents that occur and drawing conclusions

Robots

Collaborative robots for installation and service will take over complex and risky tasks, such as the measurement of a shaft, which will relieve the workload off fitters and technicians considerably. This year, thyssenkrupp Elevator presented a new [robot interface](#) that enables automated delivery service inside buildings. This means that a robot can now also communicate with the elevator and move freely like a human passenger. The robot determines the destination floor and the elevator starts moving. With the help of image processing technology, the elevator can detect whether there are already too many people in the cabin and if it must wait or send another one without the need for additional call.

“The new thyssenkrupp Elevator interface not only benefits hotels and hospitals, but a fashion manufacturer is also testing robots and interfaces for transporting goods from the warehouse to the store rooms,” explains Javier Sesma, Managing Director of the thyssenkrupp Elevator Innovation Center in Gijón, Spain. The company is also testing its own [autonomous vehicles](#) to bring spare parts to technicians on site in the future.

Regarding the delivery of spare parts, intelligent systems have taken a big step. For example, big data analysis identifies components that will be needed by technicians on particular routes throughout the day and even throughout the week. This means they will literally have everything on board on Monday for what will be needed on Friday. Defect parts can be removed just in time without any order or waiting times. Next year, thyssenkrupp Elevator will introduce a concept for a corresponding spare parts warehouse.

Smart energy

Smart energy management is not an option in the 21st century, it's a must. Sophisticated elevator solutions can contribute to such management significantly. For example, energy management systems can ensure that brake energy will not need to be fed back into the grid but can be used for further powering of the elevator instead. The operators of buildings will save costs because they can better control the peak power. Soon, peak performance can be reduced by up to 60 percent through smart energy management by thyssenkrupp Elevator.

Passenger boarding bridges

[Unveiled in 2019](#), a Remote Control System by thyssenkrupp Elevator enables airports to control their passenger boarding bridges conveniently and efficiently from a remote post. Previously, it was necessary to move the bridges manually at each landing – which was a time-consuming process. The Remote Control System is fitted with a set of surveillance cameras to give the operator an enlarged field of view when docking and undocking passenger boarding bridges remotely. With the new technology, turnaround times of airplanes will be improved at busy airports around the world.

City walks

People are moving faster throughout all parts of a city, and those demands will not change in the future. City walks, or iwalks, will help people move faster throughout a city as they do not require a pit and can therefore be installed almost anywhere: temporarily or permanently, horizontally or inclined, in existing underground metro stations in an historical street or even on a skybridge.

“City walks are like a flying carpet, so to speak, that moves passengers forward in an almost magical way. The good thing about it is that no digging work is required for installation. Whether flat or with a gradient, roofed or open: City walks are the ideal solution for equipping cities with continuous and sustainable pedestrian transport systems,” adds Sesma.

While many things are uncertain in the upcoming decade, one thing is for sure: 2020 will be a very exciting and versatile year for thyssenkrupp Elevator and the future of urban mobility. thyssenkrupp Elevator will further drive innovation and bring existing solutions to the next level, ensuring the safest, most comfortable and most efficient experience for passengers moving forward.

Press images are [available for download here](#).

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About us:

thyssenkrupp Elevator

thyssenkrupp Elevator brings together the Group's global activities in passenger transportation systems. With sales of €8.0 billion in fiscal 2018/2019 and customers in over 100 countries, thyssenkrupp Elevator built its position as one of the world's leading elevator companies from scratch in a mere 40 years' time applying thyssenkrupp unique engineering capabilities. With more than 50,000 highly skilled employees, the company offers smart and innovative products and services designed to meet customers' individual requirements. The portfolio includes passenger and freight elevators, escalators and moving walks, passenger boarding bridges, stair and platform lifts as well as tailored service solutions for all products. Over 1,000 locations around the world provide an extensive sales and service network to guarantee closeness to customers.

thyssenkrupp

thyssenkrupp is a technology group with strengths in materials. Over 162,000 employees in 78 countries work with passion and technological know-how to develop high-quality products and intelligent industrial processes and services for sustainable progress. Their skills and commitment are the basis of our success. In fiscal year 2018/2019 thyssenkrupp generated sales of €42.0 billion. Together with our customers we develop competitive solutions for future challenges in their respective industries. With our engineering expertise we enable our customers to gain an edge in the global market and manufacture innovative products in a cost- and resource-friendly way. Our technologies and innovations are the key to meeting diverse customer and market requirements around the world, growing on the markets of the future, and generating stable earnings, cash flows and value growth.