



IMPACT OF
COVID-19
ON THE
**CONSTRUCTION &
INFRASTRUCTURE
EQUIPMENT**
INDUSTRY



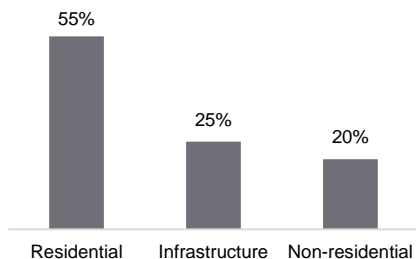
FutureBridge

Pre-COVID-19 scenario of Construction & Infrastructure Equipment Industry

Infrastructure and construction equipment sale reached its peak in year 2018, however, COVID-19 pandemic is expected to lower equipment sale by 4% in 2020. Countries such as US, Japan, Australia, France, Italy, and Germany are expected to have higher impact

Construction Industry Overview

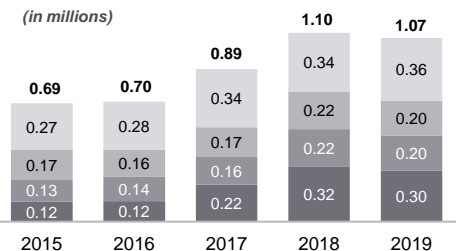
Construction Industry, By Type (2019)



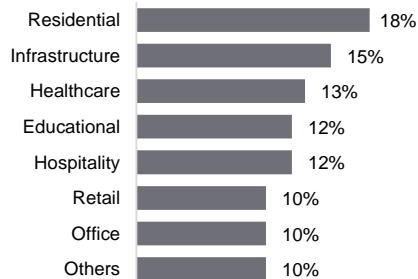
Construction Equipment Unit Sales, By Geography

■ China ■ Europe ■ North America ■ Rest of the World

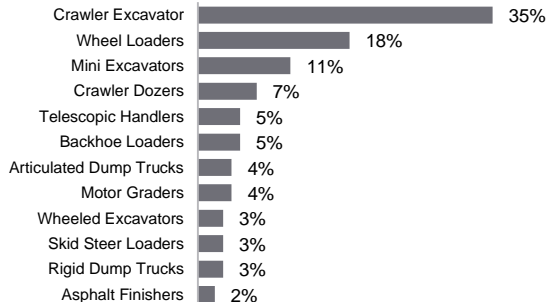
(in millions)



Construction Industry, By End-use (2019)



Construction Equipment Sales, By Type



Top 10 Construction Market Real Growth Forecast with COVID-19 Impact

Countries	Pre-COVID-19 Forecast	COVID-19 Forecast	Impact Scale
US	2.0%	-4.0%	High
China	6.8%	5.0%	Moderate
Japan	1.0%	-2.0%	High
India	7.0%	5.5%	Moderate
Germany	1.3%	-0.7%	Moderate
UK	1.9%	0.6%	Moderate
France	1.5%	-1.0%	Moderate
Australia	4.5%	1.2%	High
Canada	2.1%	0.6%	Moderate
Indonesia	7.7%	5.0%	Moderate

● High ● Moderate ● Low

Source: Off-Highway Research, Fitch, and FutureBridge Analyses

Construction & Infrastructure Equipment Industry Response to the COVID-19 Impact

OEMs and Part Manufacturers along with end-users such as rental companies, EPC companies have been badly impacted. However, huge support/stimulus packages are expected to be offered by both the industry associations and the governments across the world

OEMs and Part Manufacturers' Response



Komatsu halted its production facilities in Asia & Oceania, and is planning to halt the production in Americas, Europe & CIS. However, the company has resumed operations in China



Caterpillar has temporarily suspended operations at certain facilities and executing the Business continuity plans including the use of alternative sources for parts, redirecting orders to other distribution centers and prioritizing the redistribution of the most important parts



Sandvik AB has stopped its production facility in Italy, India and partially in other regions. It is focusing on short-term activities such as reduced work time and considering long terms structural changes and workforce reductions to generate saving of about 1.5 billion Swedish kroner



Cummins announced a change in shift patterns of its employees and also implemented reduced working hours to ensure health and safety of its employees



The company is shutting down most of its production facilities in Europe and is taking precautionary measure to secure liquidity



Most of the manufacturing plants of Volvo Group are closed and their employees are temporarily laid off

Industry Associations' Response



The Association's advocate team is working closely with the government to advocate COVID-19 relief package that would include broader economic measures, such as a tax rebate, a payroll tax cut, small business grants etc. along with relief for equipment manufacturers



The Australia-based Hire and Rental Industry Association (HRIA) is working with financial advisories to investigate opportunities in providing financial support to its members. The association is also lobbying the government to provide commercial relief to the industry



The French contractors' association Federation Française du Bâtiment (FFB) has temporarily halted the construction work in the country to prepare for safety guideline measures for construction workers



National Association of Home Builders (NAHB) is urging lawmakers to ensure sufficient resources and funding are available in the US Small Business Association's Paycheck Protection Program and Economic Injury Disaster Loan Program (EIDL) to meet the needs of the nation's small businesses

End-users' Response



Strabag, Austria's largest contractor which has over 1,000 projects in the country has temporarily suspended almost all of its projects



Kajima Corporation, a major Japanese contractor which currently has over 700 projects in the country has halted most of its construction projects



Salini Impregilo, one of the large Italian contractors, have resumed their work post temporary shutdown with extraordinary safety measures

Government Response



US President Trump is calling for a \$2 trillion infrastructure package as part of the government's emergency response to the coronavirus pandemic.
















13 major cities and provinces in China announced infrastructure spending budgets which in total amount to 33.83 trillion yuan (US\$4.8 trillion)



U.K. Chancellor of the Exchequer set out a 5-year plan to spend £640 billion on infrastructure for developments in roads, railways, power networks, schools, hospital, and telecom.

Impact of COVID-19 on the Construction & Infrastructure Equipment Value Chain

Players across the value chain are facing challenges, well prepared OEMs would be able to convert these challenges in to opportunities

	Raw Material Suppliers	Part Manufacturers	OEM's	Distributors	Customers	Aftermarket
Impact	<ul style="list-style-type: none"> Large number of metal mines are closed & production at steel plants is halted Supply of other raw materials including thermoset plastics, rubber, etc. is also reduced; however, only plastic industry, as considered essential is moderately operational 	<ul style="list-style-type: none"> Several of the part or component or tool manufacturers have temporarily shut their businesses, while some big suppliers such as Cummins, Danfoss, etc. are operating at partial capacity 	<ul style="list-style-type: none"> Several construction equipment OEMs have temporarily shut down their business due to restricting policies and regulations by local governments. OEMs are also facing decreased market demand, workforce challenges and parts supply remain as major challenges for the OEMs. 	<ul style="list-style-type: none"> Reduced availability of freight forwarders due to suspended operations and transport restrictions are leading to longer delivery schedules. This is impacting the supply of spare parts and other after market products. Some distributors are offering their services with additional precautionary measures 	<ul style="list-style-type: none"> With most of the construction sites closed, contractors, EPC companies have halted operation Rental and infrastructure companies have reduced their capital expenditure. Financial obligation on placed orders is lowering their reserves, burdening them financially 	<ul style="list-style-type: none"> Decreased availability of parts and components hindering the aftermarket sales significantly. Absence of contractual workers to facilitate service of equipment in the remote areas is impacting the business
	 → Production Halt  → Production Halt  → Production Halt	 → Production Halt  → Production Continues  → Production Continues	 → Production Halt  → Production Halt  → Production Halt	 → Service Operational  → Operational	 → Construction Halt  → Construction Halt	
Opportunities for OEMs	<ul style="list-style-type: none"> Alternative procurement & inventory reallocation. OEMs should have their procurement centre's or manufacturing plants close to raw material supplier location. OEMs should also explore the possibilities of vertical integration like Hyundai Steel. 	<ul style="list-style-type: none"> OEMs should evaluate 3D Printing technology to manufacture high volume parts and tools by themselves. For ex., HCM has developed TRIAS hydraulics systems. Evaluate M&A opportunities to expand their capabilities and reduce their dependencies. 	<ul style="list-style-type: none"> To ensure minimum operability, OEMs need to fast track the uptake of automation solutions, such as autonomous robots and remote operation centers, to ensure business continuity. Partnering with regional part manufacturers to develop parts according to their specifications. 	<ul style="list-style-type: none"> OEMs can partner with distributor having strong financial capabilities and who can maintain additional inventory and are close to the customers. 	<ul style="list-style-type: none"> OEMs should explore possibilities to adopt Pay-per-Use business model with customers (contractors) thus eliminating their financial burden because of unprecedented situations. 	<ul style="list-style-type: none"> Use of Augmented Reality for service and maintenance activities would eliminate the need for traveling of service personnel. OEMs can use IoT and provide predictive maintenance for customers to reduce unexpected downtimes.

Source: Industry Articles, Company Websites, Press Releases and FutureBridge Analyses

Impact of COVID-19 on Business Functions

COVID-19 has created lot of uncertainty across the business functions in short term; Supply Chain, Product Development & R&D functions are expected to have medium to low impact in long term

Business Functions	Impact	Impact Level	
		<6 Months	>6 Months
Sales & Business Development	<p>Short Term Impact</p> <ul style="list-style-type: none"> Decreased market demand owing to the temporary halt of construction projects and reduced spend on capital expenditure Cancellation or postponement of equipment deals Uncertainty over market demand in the near-future <p>Medium Term Impact</p> <ul style="list-style-type: none"> No clarity or clear visibility on countries / geographic markets to focus in the near-future Limited understanding on impact on customer segments and challenges in prioritizing the customer segment to focus in the near-future Changing customer priorities an limited visibility on customer buying behavior changes (if any) or competitor's product pricing strategies 		
Strategy	<p>Short Term Impact</p> <ul style="list-style-type: none"> Existing strategies on new product launch or expansion or growth becomes irrelevant Companies have limited or halted their investments on R&D activities and strategic activities like expansion, etc. <p>Medium Term Impact</p> <ul style="list-style-type: none"> Uncertainty over long term market scenario, strategies, product development plans, etc. Uncertainty on market attractiveness - certain existing market attractiveness might change in medium to long term 		
Supply Chain/ Procurement	<p>Short Term Impact</p> <ul style="list-style-type: none"> Ban on import/export and regional/global transport restrictions, making it difficult to efficiently source the required raw material/parts/components Low-cost sourcing countries are non-operational and temporarily shut making the supply unavailable Several raw material suppliers such as Posco and Aperam have temporarily halted production <p>Medium Term Impact</p> <ul style="list-style-type: none"> Limited visibility over best alternative freight routes or low-cost partners to work with in the future for uninterrupted supply Disruption in distribution and supply chain network impacting geographical demand 		
Product Development & R&D	<p>Short Term Impact</p> <ul style="list-style-type: none"> Temporary halt on product development and innovation in order to increase liquidity of the company Change in customer priorities impacting the type of product needs resulting in postponement of new product launches, etc. <p>Medium Term Impact</p> <ul style="list-style-type: none"> Uncertainty over current technological trends impacting the customer buying pattern Limited visibility on potential technological development best suited for future product portfolio in post COVID-19 scenario 		

High Moderate Low

What is Construction & Infrastructure Equipment Industry asking us?

Strategic Growth Opportunities

What is the intensity impact of COVID-19 pandemic on market potential for our construction equipment business in short and long term?

How are the business development and expansion activities, including M&As, collaborations, etc. are expected to be impacted in short-term and long-term due to COVID-19 pandemic? What could be lucrative potential acquisition targets for us in near term?

What are the key risks associated with construction equipment manufacturing and supply chain? How do the risks change with geography?

How companies are leveraging exponential technologies such as 3D Printing, Digitalization, AR/VR to overcome the impact of COVID-19?

What measures have been taken by competitors to minimize the impact of COVID-19 on their different business units?

Which are the alternate sourcing option available for us for supply of fabricated parts?

What are the details of stimulus packages announced by federal governments in different countries? How will it impact the construction & Infrastructure equipment industry?

Strategic Response Options for Companies



FutureBridge supports decision-makers across industries and verticals by keeping them ahead on the technology curve, identify new opportunities, find answers to unknowns such as COVID-19 impact and recovery roadmap, and facilitate best-fit solutions and partnerships using our platforms, programs, hyper-customized solutions.

Consolidation

Understand the impact of COVID on global economy and consider partnerships or acquisitions to reduce competition



Servitization

Evaluate various business models and look to strategize on growth opportunities, if required by resetting and repositioning your business



Innovation

Research and develop new products or modify existing ones and update your product development strategy



End-use Industries

Evaluate which industries are most affected and further analyze and modify your business strategies accordingly.



Applications

Understand which applications to focus on and frame growth strategy opportunities



Locations

Strategize which locations to target and penetrate and plan sales, marketing and distribution strategies



Thank you

North America

55 Madison Ave, Suite 400
Morristown, NJ 07960
USA
T: +1 212 835 1590

Europe

328-334 Graadt van Roggenweg
4th Floor, Utrecht, 3531 AH
Netherlands
T: +31 30 298 2108

United Kingdom

5 Chancery Lane
London EC4A 1BL
United Kingdom
T: +44 207 406 7548

Asia Pacific

Millennium Business Park
Sector 3, Building # 4, Mahape
Navi Mumbai 400 710
India
T: +91 22 6772 5700