WHAT IS THE NEW NORMAL FOR ENGINEERING WORKPLACES?

Since spring, ASME Market Intelligence has been surveying more than 1,500 engineers in industry and academia on their experiences during the COVID-19 pandemic and its impact on engineering. The responses are a mixture of short-term pain and long-term change. The economic impact of the pandemic has been severe in many cases, and some engineers who responded with worry that their companies may be severely impacted. On the other hand, the shutdown of offices and the rise of working from home has created an opportunity to revisit traditional working environments.

1,500+ ENGINEERS

The following results stem from the fifth wave of questions, which were posed toward the end of summer.

NEARLY HALF OF WORKPLACES ARE STILL PARTIALLY OR ENTIRELY CLOSED

While many of the workplaces that closed initially have reopened, some 35 percent of respondents said their businesses were only partially open and 12 percent said their offices were still fully closed.

> We had plans to partially reopen, but with numbers of infection cases increasing, this has been delayed indefinitely – Senior engineer

Plants/sites/locations never partially or fully closed due to COVID-19	29%
Fully reopened	19%
Partially reopened	35%
Remained closed, but there are plans to partially reopen in the next three months	7%
Remained closed, but there are plans to fully reopen in the next three months	1%
No current plans to reopen plants/sites/locations	4%
Other	6%

"AT WORK" MEANS WORKING REMOTELY FOR MOST ENGINEERS

Only about a quarter of engineers in industry say staff is working mostly on site, while 49 percent say their businesses are fully staffed but doing half or more of the work remotely.

> Our power plants are open, but the corporate offices are closed. Staff required to work from home – Energy industry engineer

Fully staffed with most or all working on site	22%
Fully staffed with half working on site and half working remotely	22%
Fully staffed with most or all working remotely	27%
Partially staffed with everyone working on site	4%
Partially staffed with half working on site and half working remotely	11%
Partially staffed with most or all working remotely	8%
Other	7%

COMPANIES LOSING BUSINESS, CUTTING EXPENSES

Most engineers in the industry report that their companies have lost business and revenue, and that the trend is increasing since spring. About a third report reductions in staff.

> We should make some changes to supply chain, but unfortunately management seems to look at it as "abandoning" our foreign subsidiary companies and they are very resistant despite the severe effects it's having on product availability and project deadlines – Early-career female engineer

	LATE SUMMER	CHANGE SINCE SPRING
Reduction of business from customers	60%	12%
Reduction or elimination of travel budget	59%	8%
Loss of revenues	57%	13%
Postponement/loss of projects	56%	4%
Slow-down in production	39%	4%
Reduction of staff	36%	17%
Supply chain disruption	36%	3%
Reduction or elimination of learning opportunities for staff	25%	6%
Reduction or elimination of professional development budget	24%	5%
Loss of customers	17%	4%
Supply/equipment shortages	9%	1%
Re-tooling operations to address pandemic	8%	2%
Locations closing	7%	-8%
Changing focus of R&D to address and combat Coronavirus/ COVID-19 pandemic	6%	1%

ENGINEERS SEE MORE CHANGES TO COME

For the rest of the year, engineers see limits on travel as the biggest effect, but more than half see adjustments to operations as an outcome.

> This will be the final push to work in a full 4.0 Industry. Robots and AI will be the new normal – Mid-career engineer

	LATE SUMMER	CHANGE SINCE SPRING
Continued travel limitations (non-essential)	73%	8%
Adjustment to operational processes	52%	2%
Reduction of travel budget	51%	11%
Limitations on contractor access to facilities	48%	7%
Reduction of staff	28%	0%
Changes to supply chain operations	28%	-2%
Staff training and learning opportunities	25%	5%
Decreased investment in R&D	16%	-3%
Closing of certain plants/site/locations	11%	0%
Increased investment in R&D	5%	2%
Expansion of plants/sites/locations	3%	0%
Increase in staff	2%	0%

MECHANICAL ENGINEERING
THE MAGAZINE OF ASME