## Advancing United States Leadership in the Industries of the Future



The Administration is committed to advance the Industries of the Future through strategic investment in research and development (R&D) in artificial intelligence (AI), quantum information sciences (QIS), 5G/advanced communications, biotechnology, and advanced manufacturing.

The FY 2021 Budget provides robust funding for the Industries of the Future. Relative to the FY 2020 President's Budget, this Budget includes major increases in QIS and non-defense AI R&D as part of a commitment to double Federal AI and QIS R&D investments by 2022. Notable highlights of the FY 2021 Budget's R&D investments in Industries of the Future include:

- More than \$830 million, a 70 percent increase over the FY 2020 Budget, for the National Science Foundation for Al-related grants and interdisciplinary research institutes.
- \$125 million for the Department of Energy's (DOE's) Office of Science on AI research.
- \$100 million for the U.S. Department of Agriculture's Agriculture and Food Research Initiative competitive grants program to enhance application of advanced technology, including AI, in agricultural systems.
- \$50 million for new research at the National Institutes of Health on chronic diseases using AI and related approaches.
- Over \$210 million for the National Science Foundation (NSF) for QIS research, doubling the FY 2020 Budget for QIS.
- \$237 million for DOE's Office of Science to support QIS research. This will bolster quantum information efforts at the national laboratories and in academia and industry.

Beyond R&D investments, the FY 2021 Budget includes investments in science, technology, engineering and mathematics education and job training that will help create a diverse, highly skilled and entrepreneurial workforce to support the Industries of the Future. For example, at NSF, an additional \$50 million will go toward education and workforce development for AI and QIS, with focused efforts in outreach to community colleges, Historically Black Colleges and Universities, and Minority Serving Institutions.