AUTODESK.

December 18, 2020

Dear President-Elect Biden,

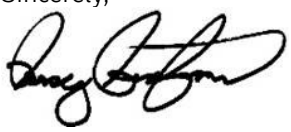
Congratulations on your election to serve as our nation's 46th President. The challenges we face—a global pandemic, a warming climate, rising inequality, and political polarization—will continue to test the resilience of businesses, countries, ecosystems, and our global community. We need new levels of conviction, and the confidence to believe that an economically inclusive, just, and environmentally restorative future is possible. To achieve this, we'll need to collaborate in ways previously unimaginable across sectors, industries, and disciplines.

Autodesk technologies empower people to build better buildings, infrastructure, and products in a more efficient, sustainable, and cost-effective way. We support your agenda to recover from the COVID-19 pandemic and rebuild an economy that is stronger, more resilient, more inclusive and more sustainable.

Attached we offer our policy recommendations for how to help American workers and businesses build back better in key sectors of our economy. These recommendations address infrastructure development, advanced manufacturing, sustainable construction and manufacturing, emerging technologies, workforce development; and equal opportunity, diversity, and inclusion.

Please consider me a resource any time if I can provide perspective on our technologies or the industries we support. I look forward to working with you to meet the challenges we face and create a more resilient and inclusive economy, and a sustainable future for all.

Sincerely,



Andrew Anagnost
President and Chief Executive Officer
Autodesk, Inc.

**Autodesk, Inc.**
The Landmark @ One Market, Suite 500 San Francisco, California 94105
PHONE +1 415 356 0700 | FAX +1 415 547 2222 | www.autodesk.com

AUTODESK POLICY RECOMMENDATIONS

# FOR THE BIDEN-HARRIS ADMINISTRATION AND THE 117TH CONGRESS

## The Digital Transformation of Infrastructure, Construction, and Manufacturing: Autodesk Recommendations to Create Jobs, Support Innovative and Sustainable Development, and Rebuild an Inclusive American Economy.

Autodesk congratulates President-elect Biden and Vice President-elect Harris along with those elected to serve in the 117th Congress. We look forward to working with the new Administration and Congress to help construction, manufacturing and other key industries weather the COVID-19 pandemic, rebuild the economy, give people the skills needed for the evolving job market, support sustainable development and promote economic opportunities for all.

**Autodesk makes software for people who make things.** We are a global leader in design and make software for architecture, engineering, construction, manufacturing and media and entertainment.

**Building** and **construction firms** and **transportation agencies** and **planners** use our software to design and manage the construction of buildings, highways, transit systems, and other public infrastructure.

**Manufacturers** of all sizes use our software to design products and fabricate them using digital and other advanced manufacturing processes.

**Digital artists** use our software to create visual effects for film, TV and video games.

Autodesk uses the power of the cloud, artificial intelligence, and other innovative technologies to give our customers increasingly powerful tools to help them build better buildings, infrastructure, and products in a more efficient, sustainable, and cost-effective way. Examples include our work with the California Department of Transportation that saved significant time and costs on highway construction and with General Motors to develop more lightweight auto parts.

According to McKinsey, sectors and companies with a high rate of digitization have outsized growth and productivity. As governments consider investing in economic recovery, encouraging digitization of key industries should be a core component of this effort to encourage growth and improve competitiveness. There is a large opportunity to accelerate economic growth especially of manufacturing and construction by promoting digitization.

Due to COVID-19, businesses and their employees are experiencing changes to their day-to-day work at a pace that would have seemed unimaginable before the pandemic. Digital tools are helping our customers continue to operate in the remote and socially-distant work environment brought on by COVID-19, while simultaneously setting them up for long-term success. For example, Autodesk's digital construction management solutions allow construction managers to set and distribute social distancing rules remotely and monitor worksites to ensure compliance. They also help teams work together remotely, reducing the need for in-person collaboration.

**Remote digital collaboration is now a necessity; businesses are investing in new technologies and automation more quickly than before.**

Even after the current pandemic is over, this digital transformation will help the infrastructure, construction, and manufacturing industries become more resilient against future disruptions and able to meet the challenges of a changing climate and a rapidly growing population.

Given the increasing pace of technological change, it is critical to scale up workforce development efforts to help people obtain the digital skills needed to obtain jobs and thrive in these industries. We have been working with schools at all levels, building trade unions, and our customers to develop curriculum and training programs that help students and workers learn the skills needed for the construction, manufacturing, and digital design jobs of the future.

> The Biden-Harris Administration and Congress have an opportunity to shape these transformational changes in ways that build a more resilient and inclusive U.S. economy, while putting people back to work in jobs that promote a sustainable future.

## Below we offer recommendations in six areas to support these goals:

**Infrastructure Development**

**Advanced Manufacturing**

**Sustainable Construction and Manufacturing**

**Emerging Technologies**

**Future of Work**

**Diversity and Inclusion**

# Improving Infrastructure Development and Creating Jobs

**An ambitious and bold investment in U.S. infrastructure is needed now more than ever.** This will revitalize the economy in the wake of COVID-19, improve quality of life for Americans and put people back to work. Digital design and construction technologies can play a key role in getting the most out of this investment by helping design and build more innovative, cost-effective, resilient, and sustainable infrastructure and buildings, and allowing the building and construction industries to operate safely during the ongoing pandemic.

We urge the Administration and Congress to include in any infrastructure bill measures to foster better use of digital design and construction technologies and to scale up programs to help infrastructure workers gain the digital skills necessary to use these technologies.

## Autodesk Recommendations:

- **Enact broad and ambitious infrastructure legislation that invests in all modes of infrastructure,** from roads, bridges, and public transit, to water systems, ports, schools, broadband and housing.
- **Include measures that foster better use of technology in infrastructure development** to improve designs, reduce costs and delays, enhance safety, and develop more sustainable projects. This can be done by expanding existing incentives for projects that use innovative technologies, helping state transportation agencies work with and promote the use of infrastructure technologies, and coordinating infrastructure technology adoption initiatives across the federal government.
- **Ensure significant investment in infrastructure workforce development programs,** including training on digital construction management and other digital skills, to help build a more diverse construction and infrastructure workforce.

# Supporting Advanced Manufacturing

**New technologies like generative design, additive manufacturing (3D printing), artificial intelligence (AI), and robotics are radically changing the manufacturing industry.** They are breaking down walls that have long existed between digital design and the physical manufacturing process, allowing for faster, more sustainable, and more cost-effective development and fabrication of innovative products, while also improving supply chain resilience. We urge the new Administration and Congress to pursue policies to make American manufacturing more competitive by ensuring that product design and manufacturing firms large and small have access to digital and advanced manufacturing technologies and a skilled workforce.

## Autodesk Recommendations:

- **Provide small and medium manufacturing firms access to capital** to modernize their operations and improve their competitiveness.
- **Support and expand the Manufacturing USA program** that brings together industry, government, and academia to ensure U.S. manufacturers are developing the technologies that will drive the future of manufacturing.
- **Support and expand the Manufacturing Extension Partnership (MEP) program** that helps small manufacturers be more innovative and competitive.
- **Expand federal training programs,** including in the Department of Energy, aimed at helping manufacturers adopt new technologies to make their operations more sustainable.

# Enabling More Sustainable Construction and Manufacturing

**Autodesk is developing innovative technologies that help our customers design and** make things more sustainably **and we are making our entire business operations climate neutral.** The digital transformation of building, construction and manufacturing drives a greener economy. Technology offers solutions to enable architects, engineers, factories, product designers, and contractors to design and build more sustainably by improving efficiency, increasing energy and materials productivity, and managing embodied carbon levels.

The building industry is increasingly focused on making net-zero buildings, reducing embodied carbon, minimizing construction waste, and building smarter, more resilient and more sustainable cities. Manufacturers are developing more sustainable products – like lighter-weight car parts that lead to better fuel efficiency – and reducing waste in manufacturing through rapid prototyping, additive manufacturing, and other processes driven by digital tools. We support policies and international efforts to promote measurement and reduction of carbon emissions, and reduce waste in our industries, as well as broader market-based efforts to tackle climate change.

## Autodesk Recommendations:

- **Foster use of technology to design and construct sustainable infrastructure and buildings** that produce less waste, limit the use of carbon-intensive materials, and improve energy efficiency.
- **Develop embodied carbon reporting and reduction policies.**
- **Support training and other programs that promote use of advanced manufacturing technologies** that help design more sustainable products and reduce waste in the manufacturing process.
- **Adopt market-based carbon reduction programs.**

# Fostering Emerging Technologies

**The construction, manufacturing, and media and entertainment software that helps these sectors thrive rely on emerging technologies in areas including artificial intelligence and data analytics.** For example, we are pioneering use of artificial intelligence and data analytics to help improve safety on construction sites and to design more energy efficient products. We support technology policies that enhance consumer trust, enable innovation, and promote global trade in technology products and services.

## Autodesk Recommendations:

- **Enact a** strong federal privacy law that gives consumers better information about, and control over, how their personal data is collected and used, enhances obligations on companies handling this data, and raises standards and provides consistent protections for consumers throughout the country.
- **Pursue policies that promote the development and deployment of artificial intelligence technologies while mitigating risks.** Our AI policy agenda includes increasing government AI use and research & development, making more government data available for AI systems, expanding AI skills training, enhancing transparency of how AI systems work, ensuring privacy and security, and mitigating bias and discrimination in AI systems.
- **Make digital trade a key priority of the U.S. trade agenda** aimed at opening markets to U.S. cloud software and other data-related products and services.

# Scaling Up Skills Development for the Future of Work

**Americans face an evolving economy and must adapt to new ways of working, including remote digital collaboration and use of automation technologies.** The private sector needs to step up its training efforts, but significant government investment in digital skills training and workforce development is required given the scale of this challenge.

We support policies that help workers take advantage of the new jobs and tasks that technology will create and broadly share the gains of technology across all racial and income groups. We believe that strong federal investment in making America's workforce future-ready is critical.

## Autodesk Recommendations:

- **Invest in training for industries critical to economic vitality,** including construction and manufacturing. Americans who are out of work due to COVID-19 could benefit from gaining new in-demand skills in fields with higher wages and traditional labor shortages.
- **Support public and private investment in quality short-term learning and upskilling,** with increased resources for workers to develop stackable, portable credentials in in-demand industries and sectors focused on the dynamic needs of businesses in the current work environment.
- **Fund career and technical education,** including cross-sector partnerships between education and industry, to deliver both in-person and virtual educational and work-based learning activities.

# Ensuring Equal Opportunity, Diversity and Inclusion

**Inequality in our country and industry are not sustainable, and for Autodesk, it is a moral and business imperative to act.** We believe that any successful effort relative to diversity and belonging rests on having a healthy culture, and the work we've done over the last two years to define and operationalize our culture – our values and the ways we work together – has helped create a strong foundation.

We are committed to building a diverse and inclusive environment at Autodesk and in the industries we support. We want our company to reflect the world we live in, providing opportunities for everyone to thrive. We also want to help develop a more diverse workforce across the industries we support, to provide opportunities for workers from underrepresented groups, through education and training programs. As a company leading technological transformation, it is our responsibility to create opportunities for Americans from all backgrounds to participate and thrive in the future of work.

## Autodesk Recommendations:

- **Promote safe, fair, and equitable workplaces free from discrimination.**
- **Support policies to increase opportunity and diversity** in science, technology, engineering, arts, and mathematics (STEAM) fields and in digital design, construction, and manufacturing, and to promote the advancement of women and minorities into senior leadership positions within these industries.
- **Enact immigration policies that enable the U.S. to attract a diverse pipeline** of talent to support growth of the U.S. economy.

We believe our country is at a critical inflection point and must seize the opportunities for transformational change. We look forward to working with you to build a better economic future for all Americans. Please contact us if we can serve as a resource or provide additional information.

### About Autodesk Government Affairs

Autodesk Government Affairs champions public policies that advance the technological transformation of construction, manufacturing, and production; enable cloud and data-driven business models; promote sustainability; prepare students and workers for the careers of the future; and create a diverse and inclusive workplace.

For more information, contact the Autodesk Government Affairs & Public Policy team at GovernmentAffairs@autodesk.com.