

# Expanding Siemens Digital Capabilities

U.S. Innovation Day 2018

Siemens has reinvented itself into **one of the world's top 10 software companies**, creating digital solutions that enable customers across the company's largest market to reduce costs, improve reliability, develop new business models and improve quality of life for millions of Americans.

## Making it Real



**Teaming up with Microsoft** to prove alternative energy sources for data centers, including establishing the world's first zero-carbon, waste-to-power data center in Wyoming



**Partnering with Chicago-based utility company Commonwealth Edison** to build and test software that will manage community microgrid clusters



**Providing digital twin software** to companies like startup RadioBro for faster time-to-market



**Saving the City of Chicago millions in USD** by retrofitting their water supply with Siemens technology



**Introducing virtual verification software** that dramatically reduces the number of logged test miles necessary to demonstrate autonomous vehicle safety


## Increased U.S. R&D Investment



**\$175 million**  
increase in U.S. R&D spend  
year-over-year



**\$1 billion**  
invested in U.S. R&D in 2017



**In Chicago,** Siemens is investing nearly \$13 million annually in a new digital R&D hub focused on cloud and internet-of-things applications to support the building management and automation market.

## New Digital Service Hubs

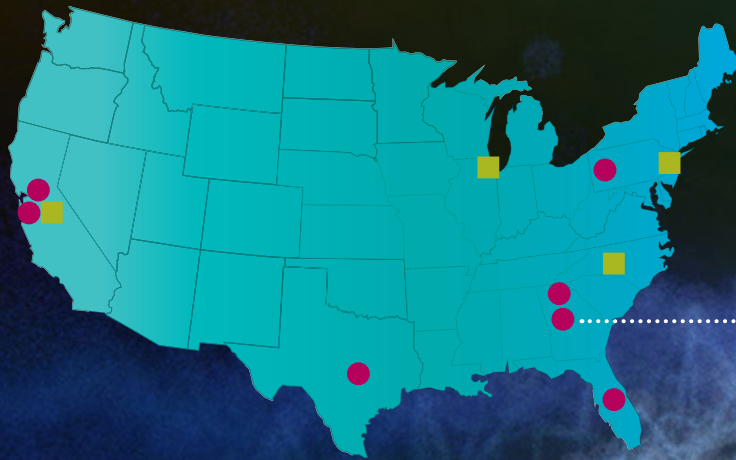
New digital and R&D hubs across the U.S. expand Siemens' digital focus, including eight new U.S.-based MindSphere Application Centers (MAC) — digital services hubs dedicated to developing innovations for data analysis and machine learning with customers.

### MindSphere Application Centers

Alpharetta, GA    Foster City, CA  
Atlanta, GA    Pittsburgh, PA  
Berkeley, CA    Austin, TX (2)  
Orlando, FL

### R&D Hubs

Chicago, IL: Building Technologies  
Princeton, NJ: Corporate Technology  
Berkeley, CA: Corporate Technology  
Charlotte, NC: Energy



## Building a Next-Generation Workforce

**1,500+** open positions across the U.S.

**Software or STEM-related education** is required for most open positions

**Training & recruiting** for backgrounds in computer science & engineering, combined with expertise in software development & programming

**Hiring 120 positions** in Illinois & Texas for Building Technologies' digital services hub

**Hiring 100 digital positions** in PLM in software & coding

**Hiring IoT researchers and big data scientists** in areas such as artificial intelligence, machine learning and 3D design at R&D centers in Berkeley, Princeton and Charlotte



### Atlanta MindSphere Application Center

Siemens is using intelligent sensors and software tools at its Atlanta MAC to put intelligence behind billions of data points created on the country's rail systems, insight that helps operators like the Atlanta Streetcar reduce unplanned downtime, improve operational efficiency, enable improved performance and generate energy and cost savings.



## Advancing the Innovation Pipeline

Siemens' commitment to advance and secure its technology has resulted in:



**15,000**  
total patents held in the U.S.



**5**  
inventions per day



**614**  
U.S. patents filed in 2017