Innovations and Trends From the Nation’s Largest AEC Firms
3 ‘GIANT’ TRENDS FOR 2019-2020

very spring, as the BD+C editors connect with hundreds of architecture, engineering, and construction firms for our annual Giants 300 report (see page 17), we got a compelling snapshot of the business and project innovations—and obstacles—at the nation’s largest AEC firms.

A record number of firms (483) participated in our 43rd annual Giants survey. Collectively, this group represents well more than half of all nonresidential and multifamily building sector design and construction work completed in the U.S. in a given year. Starting on page 18, we report on the latest business happenings and innovations at many of these firms.

Based on feedback from the 2019 Giant firms, we pinpointed three emerging trends and themes for 2019-2020:

1. **Firms aim to incubate innovation.** From innovation competitions to grant programs to seed funding for startups, a growing number of firms are encouraging their employees to invent or reinvent AEC tools, services, processes, and business models. An April 2019 survey of 106 AEC Giant firms by BD+C showed that nearly half of responding firms (49%) have either implemented or are planning to implement an innovation grant/seed money program.

   Last year, Burns & McDonnell (page 22) launched a “Shark Tank”-style innovation incubator, called Ignite. Just a few months in and the firm already has funding earmarked for projects related to AI, machine learning, advanced analytics, business intelligence, and robotics.

2. **Data wealth spurs research initiatives.** The AEC industry isn’t exactly known for its research prowess—big or little—but especially concerning occupant performance and preferences in the built environment. But we’re starting to see a shift toward research, thanks in part to the influx of data, data tools, and analytics expertise in the market.

   In recent years, we’ve seen traditional architectural and engineering design firms and owners/developers adopt Lean—whether for efficiencies in internal/external project teaming or for space/operations planning for clients.

   Barge Design Solutions, Harvard Jolly, Integrated Project Services, and Trinity all implemented or expanded internal Lean programs last year. Trinity conducts two-day Lean 3P sessions with clients, while Barge Design is using a pull vs. push schedule method to streamline internal scheduling, reduce rework, and provide clear deadlines and impacts to the team’s efforts.

   For the full Giants 300 rankings and bonus categories, including complete rankings for 22 building sectors, visit BDNetwork.com/Giants2019 (short registration required).