Green & digital construction

From Scopus, https://www.elsevier.com/solutions/scopus/who-uses-scopus/research-and-development (Jan 30, 2020)

Innovation in the design, planning and execution stages of construction are on the rise. Overcoming challenges in the engineering & construction industry requires insight into as many infrastructure breakthroughs as possible. See how you can identify impactful developments and identify the right professionals to plan and navigate your intricate development projects.

Construction worldwide is expected to boom as infrastructure ages, and global population grows. Concurrently, the industry is evolving under increased pressure to support sustainable development, reduce waste, improve construction site safety, and meet timelines and budgets of increasingly complex projects. Looking at *green* and *digital construction*, what are focal research areas aimed at achieving those goals?

Step 1: View the landscape

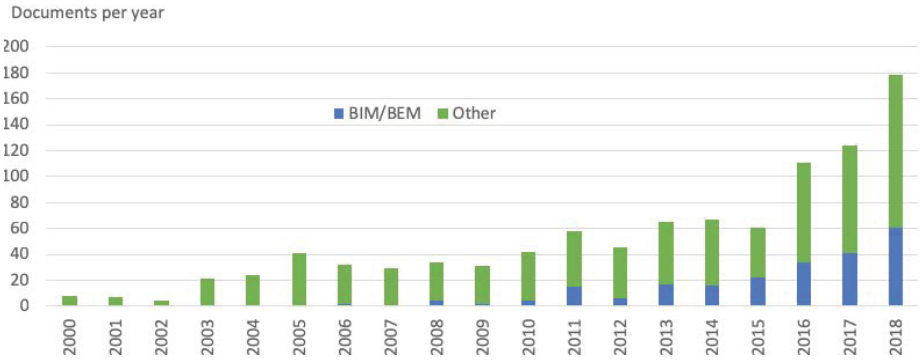
The body of literature that **Scpus** retrieves in a search or *green*, *smart* or *sustainable construction* encompasses a variety of topics. The description and testing of *construction materials* accounted for one-fourth of publications in 2018. Indexing terms related to *energy efficiency* and *project planning* were less frequent. Finally, the *Internet of Things* shows a steep climb in the last four years.

Step 2: Identify active areas

The Internet of Things has the potential to revolutionize energy efficiency and functional interoperability throughout the home and workplace. A keyword analysis in **Scopus** shows that for the construction industry the Internet of Things (IoT) has been a game-changer beyond the building itself. IoT is used in project design (green), to coordinate activities at construction sites (dark orange), and to generate increasingly complex and accurate *building information models* (light orange).

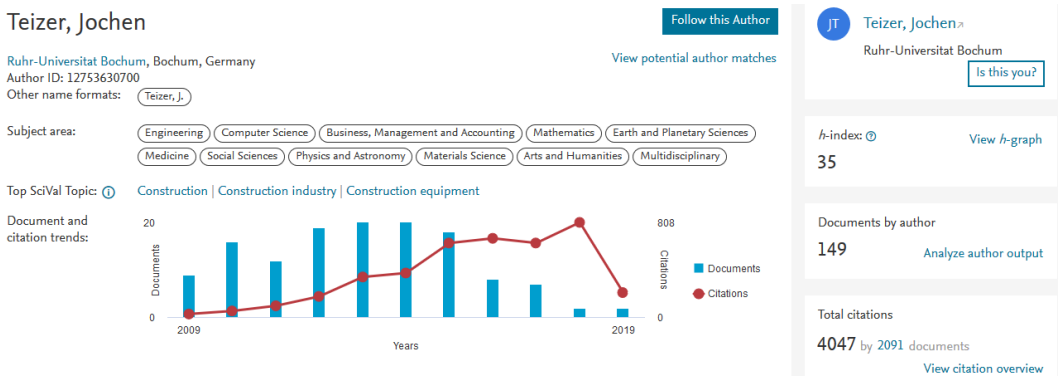
Step 3: Visualize trends

In fact, in the 10 years that building information modeling (BIM) has been a staple in the construction business, it has accounted for an increasing proportion of industry-related publications on digitization and IoT. In 2018, one-third of all publications indexed with the term IoT also included the term BIM.



Step 4: Find experts

Scopus reports the top authors of this publication list. **Dr. Jochen Teizer** is among the most prolific. As key opinion leader on construction site safety, he leads a team at Aarhus University, Denmark, that uses large-scale data capture, BIM and virtual reality to predict potential safety and process risks.



Meeting challenges in today's construction environment requires every breakthrough that adds transparency to the design, planning, and execution of highly complex projects. Identify impactful developments and find the right expertise. Discover **Scopus** and see beyond citations.