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Business Value of BIM in Infrastructure

Overview

The Business Value of BIM for Infrastructure 2017 **SmartMarket** Report analyzes the findings of a study spanning four countries (United States, United Kingdom, France and Germany) focusing primarily on the use of BIM for transportation infrastructure projects and the value it brings.

The study includes over 300 total respondents, including engineers, contractors and building owners, and the analysis demonstrates the degree of BIM implementation in this sector, the business and project benefits that result from BIM and the factors that will influence those not yet using BIM to begin doing so. The report also provides case studies and feature articles that cover the use of BIM on transportation projects as well as projects in other sectors, such as dams, and for use that expand beyond the individual project lifecycle, including regional planning and asset management.

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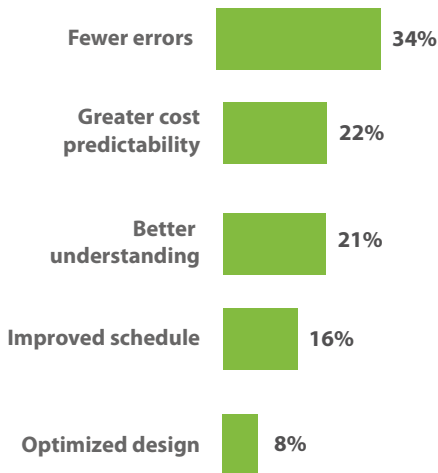


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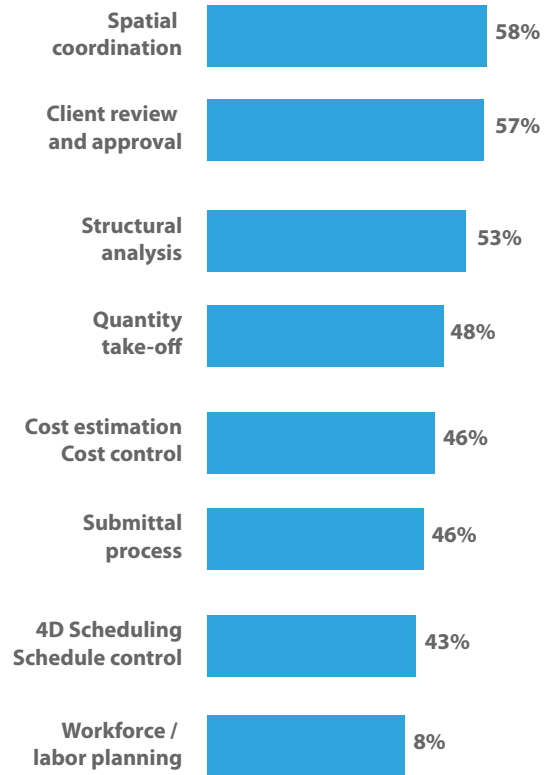
Benefits of BIM

Top ways BIM improves processes and outcomes - all countries combined. The majority (87 percent) of BIM users in the study report that they are receiving positive value from their use of BIM, and most believe that they have only begun to experience its full potential. Critical benefits reported by users include fewer errors, less rework, and greater cost predictability, all of which improve project delivery for transportation infrastructure.



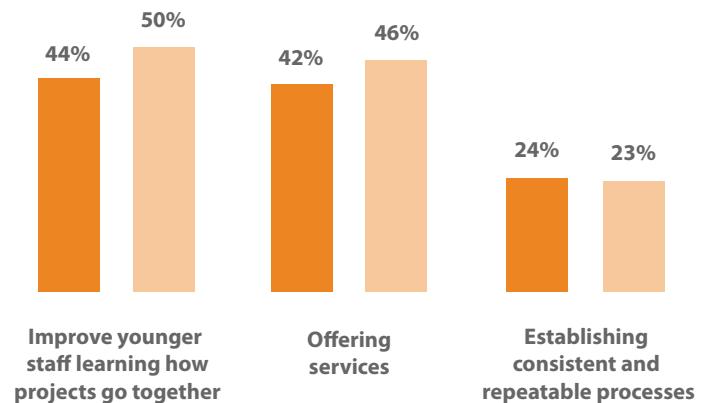
Highest value project activities

Project activities that yield the biggest benefit



Top internal benefits

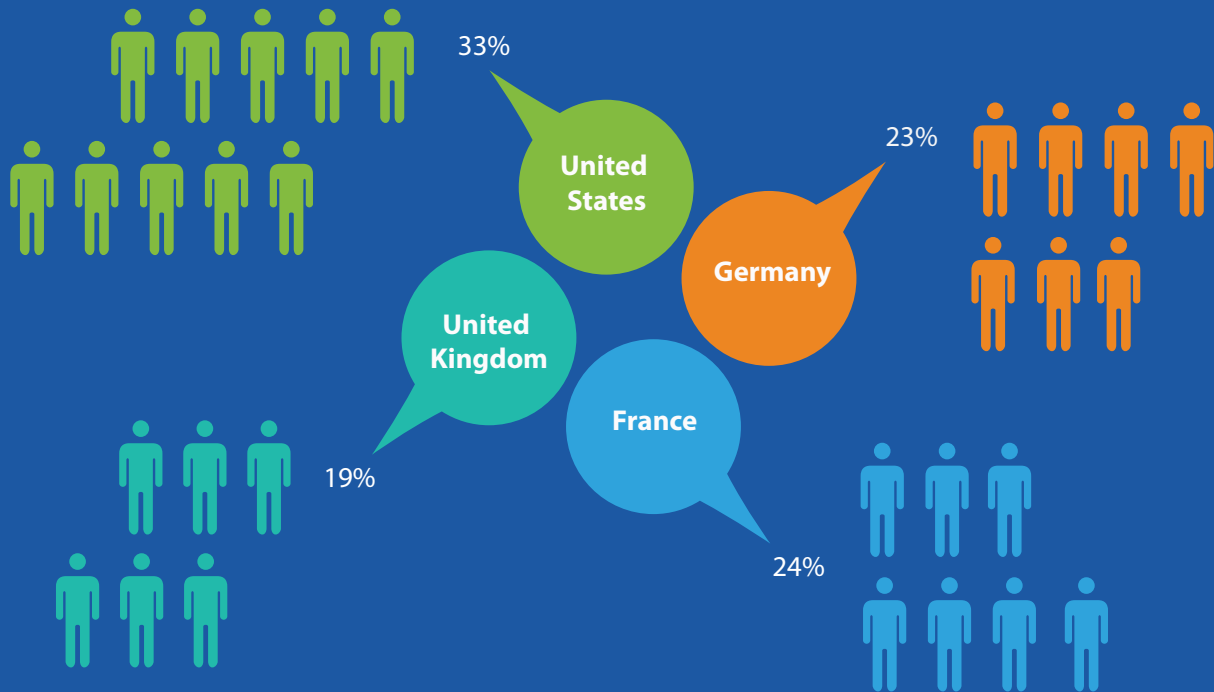
Internal benefits to implementing BIM - all countries combined. Most users report that having BIM capability yields important internal benefits to their own businesses. This includes increasing revenue by expanding their ability to offer services and maintaining business with past clients. Also it includes conducting business more effectively by improving the ability to teach younger staff about projects, establishing consistent and repeatable processes and for design professionals spending less time documenting and more time designing. Here are the top three internal business benefits for both contractors and engineers.



 Contractors
  Engineers

Types of projects

The SmartMarket Report also includes a summary of the use of BIM and the value it provides in the four countries included in the study: US, UK, Germany, and France.



Survey respondents work on projects in these infrastructure segments. The report features projects that exemplify the value being gained from BIM, including rail, airports and smart roadways. Other articles in the report explore how BIM is of particular value to infrastructure owners, from the ways it can support city planning efforts to asset management long after construction is complete, including a case study on an ambitious project to model Glen Canyon Dam.



Aviation
49%



**Rail
Mass Transit**
45%



**Roads
Highways**
62%



**Bridges
Tunnels**
75%

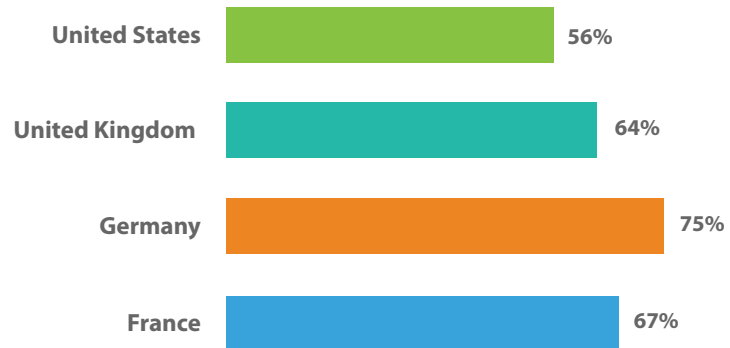


**Other
Infrastructure**
19%

"This report makes clear that BIM is not only for building design, but a 'must have' for transportation infrastructure projects," says Nicolas Mangon, Vice President of AEC Business Strategy at Autodesk. "With a significant portion of the world's transportation infrastructure funded by taxpayers, BIM reduces risk and waste enabling a more responsible way to design, build, operate and maintain roads, bridges, and public transit systems."

ROI

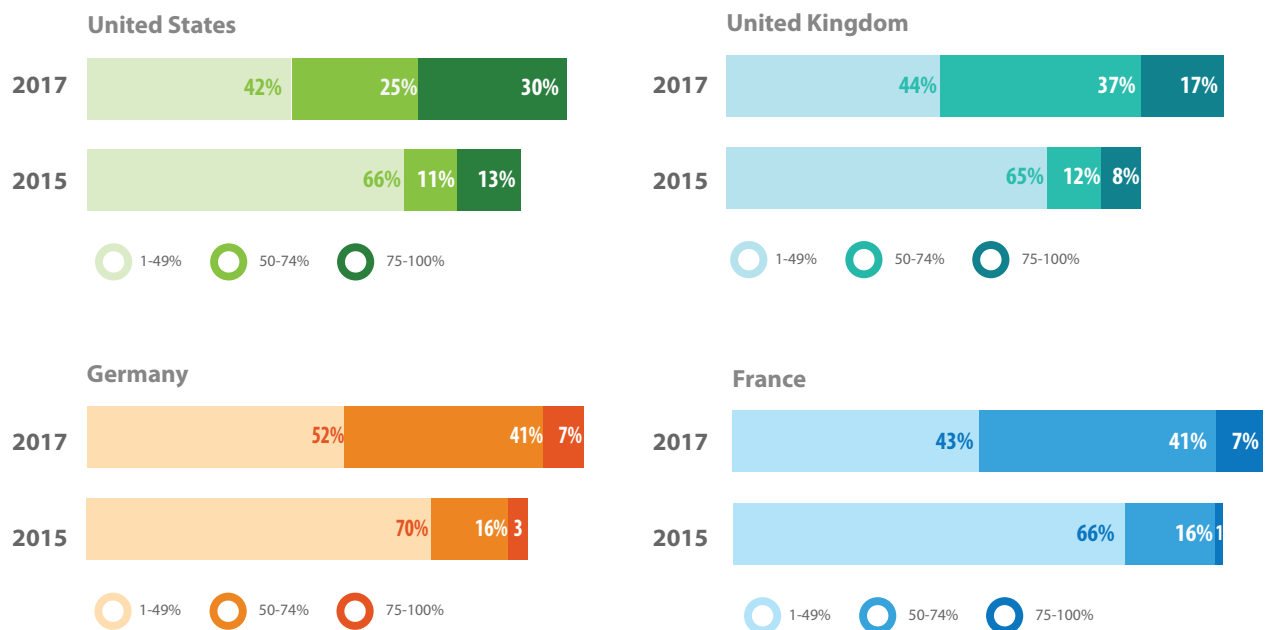
Despite the fact that many of the respondents – especially those in France, Germany and the UK – are relatively new to the use of BIM, nearly two thirds (65 percent) believe that they experience a positive ROI from their BIM use, and more than one quarter (28 percent) believe that ROI is 25 percent or greater.



BIM Implementation

The report shows that commitment to BIM is skyrocketing among firms who use it, with 52% now reporting they deploy it on over half their projects, versus only 20% of them implementing it at that high level just two years ago.

This is the percentage of projects where BIM was implemented and the change in number of projects implemented (by country) from 2015 to 2017.



The information included in the infographic comes from the consolidated and by-country results of the survey. Some data may vary slightly from results shown in the full report depending on the respondents included or excluded, or the way in which the data is presented. Both are accurate.

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