# Study Finds Autodesk Building Lifecycle Management Offers New Revenue Opportunities for Entrepreneurial Firms, Driving Future Process Innovation

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Counsel House Research Finds Autodesk a Leader and Well-Positioned to Guide Building Industry Technology Transformation

AUTODESK UNIVERSITY, LAS VEGAS, Dec. 3 /PRNewswire-FirstCall/ -- Autodesk, Inc. (Nasdaq: ADSK), the world's leading design software and digital content company, announced today the results of an international qualitative research study on current global building industry trends and developments in information technology that confirm industry readiness for Autodesk's building lifecycle management vision. Conducted by Counsel House Research, a Division of Greenway Group, Inc., the in-depth interviews with decision-makers of 45 leading real estate, design, and construction organizations in the United States, Europe, and Asia show that Autodesk is in a choice position to lead the development of the next generation of building industry solutions.

(Photo: http://www.newscom.com/cgi-bin/prnh/20000518/SFTH083LOGO )

Building lifecycle management, which combines the power of building information modeling with online collaboration services to solve business problems across the building lifecycle, was perceived as a significant driver of future process improvements that will transform how buildings are designed, built, and managed. In turn, entrepreneurial firms can establish new revenue streams by seeking reimbursement for digital models from owners and offering new services such as move management, energy analysis, digitally integrated cost estimating, and renovation phase planning.

"There is a revolution on the horizon," said James Cramer, chairman and CEO of Greenway Group, Inc. "The changing dynamics of the global building industry are motivating real estate owners and principals of architecture, engineering, and construction firms to find new ways to achieve a competitive advantage. Many firms are now looking to Autodesk to provide leadership in demonstrating how they can best implement new data-driven technology paradigms in their organizations."

Motivating Factors for Process Innovation

Rising competitive pressures, greater demand for intelligent and integrated buildings, faster speed-to-market, and increased globalization are fueling adoption of new technology strategies that reduce inefficiencies, increase productivity, and enhance team collaboration. Process innovation, driven by advances in technology and better management, was found to be a distinguishing characteristic of the participating firms.

"As you design and construct a building today, it becomes a very complex assembly -- there is not one trivial exercise in the whole process," said a spokesperson from the General Services Administration. As building complexity has increased, however, project timelines have dramatically shortened. More and more clients are expecting faster results as benchmark expectations.

In response to shorter project timelines, new project delivery systems such as design-build are becoming more prevalent. Faster turnaround, stronger collaboration between designers and builders, and single point of responsibility were all cited as advantages to design-build. A large construction firm with headquarters in the Netherlands considered the early involvement of the construction team as a significant value of design-build. Building information modeling and online project collaboration services were both mentioned as technology developments that facilitate completion of fast-track design-build projects.

Learning from the Manufacturing Industry

The Council House Research study examined how the building industry could benefit from applying the power of information technology to building lifecycle management in a similar way to the efficiencies that the manufacturing sector has gained from implementing product lifecycle management. Study participants "found significant advantage to the idea of being able to share and manage continuous information spanning from the inception of the project's design through construction to future additions, and ongoing building maintenance." This approach would make concurrent information available on the use or performance of a building; its occupants and contents, including tenant and department assignments, and furniture and equipment inventory; and relevant financial data. It would also provide a digital record of building renovations to aid in future facility planning. This represents "total building lifecycle and cost management and would be a very positive step," said the owner's representative of the Hong Kong Housing Authority.

The technical components for applying technology to solve problems across the building lifecycle already exist and are gaining traction. The study found that building information modeling is "perceived as an important tool of change and competitive advantage for organizations transforming the A/E/C industry." Building information modeling provides benefits not only for post-construction facilities management, but also during the design process itself. Respondents stated that "integrated fully coordinated building information models help design team members produce higher quality work more quickly with fewer errors, while helping their clients better visualize their buildings." At the same time, Internet-based collaboration services have become "mainstream" and are considered, particularly by building owners, to be the source of significant "project management efficiencies" and "the biggest most impactful change in the industry."

While some participants maintained that current technology tools are not yet ready to fully support the building lifecycle management vision, the study concluded, however, that "entrenched thinking and behavior patterns" within the traditionally conservative building industry are the greatest impediment to its adoption. Many respondents believe that building owners will be "the primary drivers of change" since they can require the design and construction team to employ new building information modeling and building lifecycle management solutions.

According to an owner representative of a large, global hospitality and lodging organization, "the culture in the A/E/C industry has for a long time been fragmented and inefficient. The industry has lacked trust and been short on strategic collaborative thinking. We believe that this culture must become a remnant of the past. We see smart firms creating new value propositions that connect together and make sense of the pieces of the puzzle."

"Revolution and Achievement: New Practice and Business Models Emerge in the Study of Architecture, Design, and Real Estate," a summary analysis of the Council House Research Study conducted on behalf of the Design Futures Council and Autodesk, Inc., is available upon request.

About Greenway Group's Counsel House Research

Counsel House Research is one of the world's most trusted research firms. It is the research division of Greenway Group, Inc. Research projects are customized for clients in the areas of architecture, real estate, reader satisfaction surveys, university rankings, and construction industry trends research worldwide. Clients include leading professional firms, corporations, publications, and associations. Greenway Group's broad information databases and proprietary systems are used for scientific, projectable research as well as qualitative trends research. The Greenway Group also manages the Design Futures Council, publishes Design Intelligence, publishes The Almanac of Architecture and Design, and is one of the construction industry's prominent management consultancies. For more information on Greenway Group and Counsel House Research, see www.greenway.us. For more information about the Design Futures Council and Design Intelligence, see www.di.net.

About Autodesk

Autodesk is the world's leading design software and digital content company, offering customers progressive business solutions through powerful technology products and services. Autodesk helps customers in the building, manufacturing, infrastructure, digital media, and wireless data services fields increase the value of their digital design data and improve efficiencies across their entire project lifecycle management processes. For more information about the company, see http://www.autodesk.com. For more information on building information modeling and building lifecycle management, see http://www.autodesk.com/bim.



Contact: Carol Lettieri (415) 507-6908

Email: carol.lettieri@autodesk.com

SOURCE  Autodesk, Inc.
    -0-                             12/03/2003
    /CONTACT:  Carol Lettieri of Autodesk, +1-415-507-6908, or
carol.lettieri@autodesk.com/
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             AP Archive:  http://photoarchive.ap.org
             PRN Photo Desk, +1-888-776-6555 or +1-212-782-2840/
    /Web site:  http://www.autodesk.com/
    (ADSK)

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