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Greenwashing? Not Here: Autodesk's New Sustainability Consulting Practice

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Learning Objectives

- Learn about sustainability-related issues facing Autodesk customers.
- Learn about the consulting services offered by the Sustainability Consulting Practice.
- Learn about contacting Autodesk to use Sustainability Consulting Practice expertise.
- Have a clear understanding of Autodesk's internal and external sustainability strategy.

Description

This year, Autodesk is expanding its impact. We've made significant progress toward our own internal sustainability goals, achieving net-zero emissions across our business and value chain, pledging a 50% reduction in our scope 1 and 2 emissions by 2031, and investing in change makers through the Autodesk Foundation. However, we know that the real change happens when our customers shift their businesses to sustainability. Our new Sustainability Consulting Practice is designed to do just that. We've assembled a small and nimble team of sustainability experts across the globe to help solve our customers' most pressing issues related to energy, materials, health, resilience, work, and prosperity. In this session, you'll learn about this new team, how they will work with customers, and how their expertise will position your company to be a leader in key impact areas.

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Speakers

Jonathan Rowe
Senior Manager, Sustainability Practice
Jonathan's career in sustainability has spanned architecture, engineering, consulting, education, software development, and digital marketing. Over the past 5.5 years he led a data center sustainability program for Facebook, where he built a team focused on elevating energy & water efficiency, promoting zero waste, reducing greenhouse gas emissions in Facebook's construction supply chain, and ensuring all projects earned LEED Gold certification.

Before Facebook, Jonathan spent five years with Autodesk developing sustainability software for the AEC industry. He partnered with one of our customers, KieranTimberlake, to create Tally, one of the most widely adopted sustainability tools by large architecture firms in North America.

Some of Jonathan's passions outside work are practicing yoga, enjoying San Francisco's vibrant music scene, playing piano, and traveling the world.

Amy Egerter
AMER Principal Sustainability Consultant

Amy Egerter comes to Autodesk with deep and diverse experience in sustainability spanning research and development, architecture, engineering, and product development. Her most recent work involved creating and operationalizing a statewide retrofit program in California that developed prefabricated retrofit packages to bring multifamily housing to zero carbon performance. Before Rocky Mountain Institute, Amy worked at Atelier Ten, a high performance building design consultancy, with mainly commercial and institutional clients.

Outside of work, Amy is an avid runner, hiker, and gardener. She also enjoys spending time with her friends, family, two cats, snake, and puppy.

Carol Battle
APAC Principal Sustainability Consultant

Carol is passionate about helping our customers reduce carbon emissions. She brings a balanced and collaborative approach, leaning heavily on her training in business management and communications, to deliver outcome-based initiatives with customers.

Prior to joining Autodesk eight years ago, Carol worked in sustainability strategy consulting at SKM and Arup in the AEC sector and with climate change not-for-profit Climate Positive, where she focused on carbon management and climate change services for major capital projects and governments.

Carol is based in Melbourne, Australia where you can find her in green spaces with her family, listening to live music or tinkering on side hustles.

Justin Taylor
EMEA Principal Sustainability Consultant

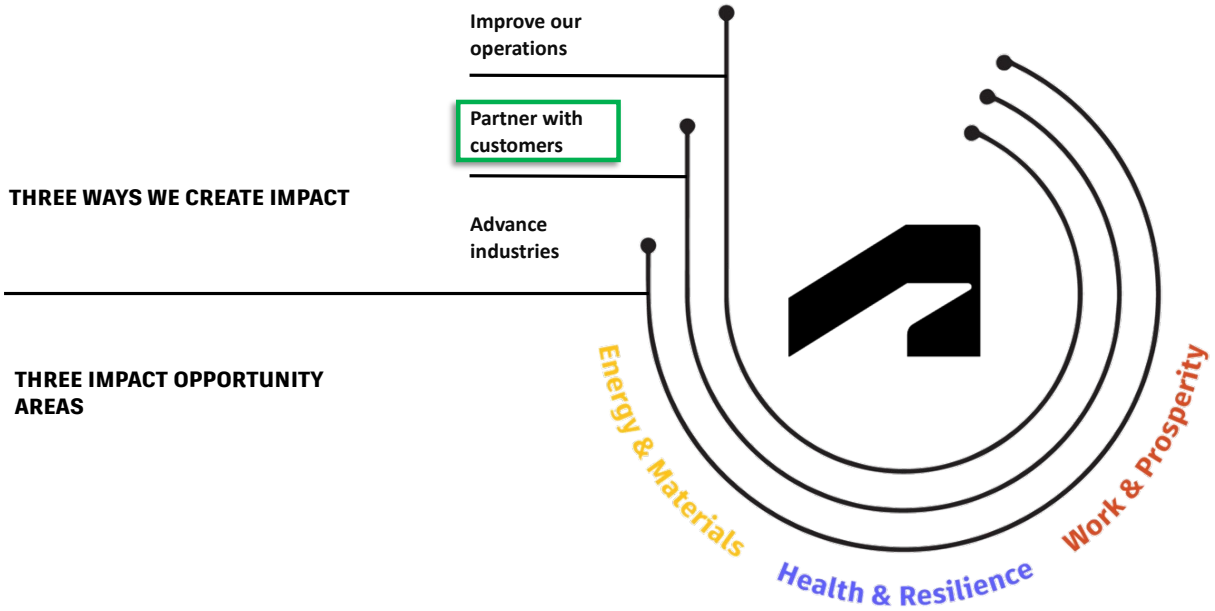
Justin has more than 30 years of experience working with Autodesk solutions across the globe and helping AEC firms digitize their workflows. With expertise in reality capture for refurb & retrofit, low-carbon design & material circularity, and healthy buildings, Justin is super excited to support customers as they strive to meet their Net Zero goals.

Outside of work Justin enjoys spending time with his family and his hyper-active Cocker Spaniel, Diego, in the great outdoors, exploring the countryside and the UK's historical sites of interest. He is also a bookworm, amateur bonsai grower, and trying to become a better guitar player.

Autodesk's internal and external sustainability strategy

Autodesk's impact strategy focuses on three main impact areas at three scales of impact.

- **Impact areas:**
  - **Energy & Materials**: Enabling better energy and materials choices, reducing carbon emissions and waste.
  - **Health & Resilience**: Accelerating the design and make of products and places that are safer, healthier, and more resilient.
  - **Work & Prosperity**: Advancing equity and access, and facilitating the acquisition of in-demand skills of the future – thereby driving toward more meaningful work and prosperity.
- **Impact scales:**
  - **We improve our own operations** – with sustainable business practices and activating our diverse employees to make a positive impact at work.
  - **We partner with our customers to drive to towards more sustainable, resilient, and equitable outcomes** – by empowering innovators to harness data, automation, and insights to optimize the impact of design and make decisions.
  - **We advance our industries in this direction** - through cross-sector collaboration, policy advocacy, and by catalyzing innovation between and beyond our industries.This work is done both by the Autodesk Foundation and through our everyday business.



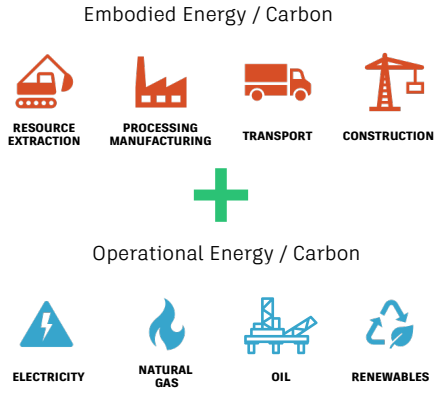
Autodesk's Impact Strategy and Areas of Impact

- More information about Autodesk's Impact Strategy and achievements can be found in our **annual Impact Report: [Autodesk Impact Report | Autodesk Sustainability]**

- **Autodesk Consulting** is focused on developing innovative solutions in 5 key areas, including sustainability. To meet these innovation needs, the Sustainability Consulting Practice was started in December 2021.

Sustainability-related issues facing Autodesk customers

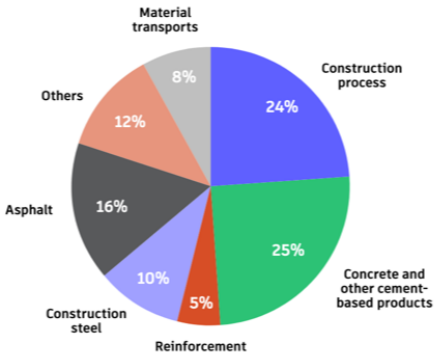
- Sustainability-related issues facing Autodesk customers can be categorized by the project phases in which they occur.
- Design
    - Design's role
        - The earlier in the design phase you set sustainability targets, the more likely you are to achieve them.
    - Total carbon
        - Total carbon is the sum of the embodied, operational, and end of life carbon emissions from a physical asset.



Total carbon contributors

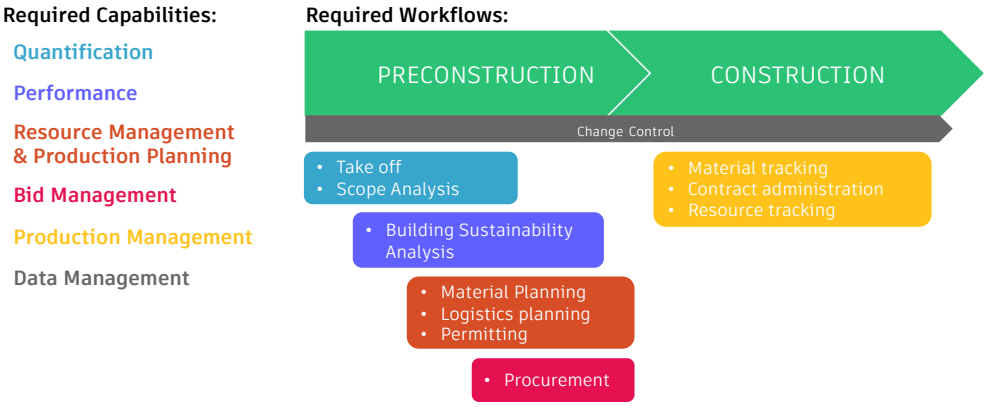
    - Operational energy efficicency
        - Daylight analysis, energy analysis, and solar analysis within Revit can help designers plan to reduce operational energy.
    - Low-embodied carbon materials
        - Once the amounts of materials have been reduced, using the lowest embodied carbon materials is key.
        - EC3, eTool, and OneClickLCA are all tools that can integrate with Autodesk software to analyze material options.
        - Autodesk has also worked with others to develop custom solutions fitting more specific business needs.
    - Circular design
        - The first principle of developing a circular economy is eliminating waste and pollution.
        - The second principle is circulating products and materials.
        - The third is regenerating nature.
        - Autodesk Consulting has worked with customers to create custom circularity dashboards.

- Build
  - Construction's impact



Emission profile for infrastructure construction projects

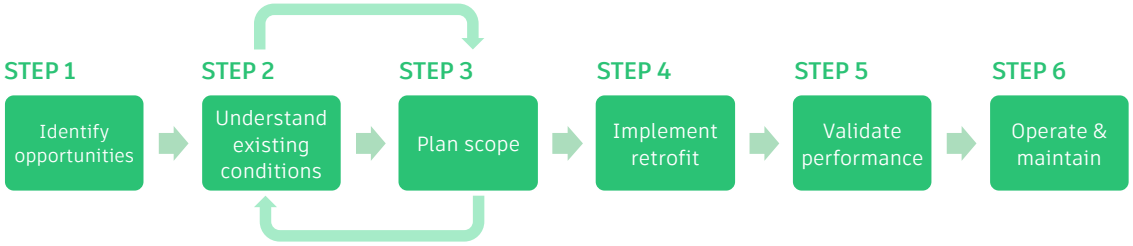
  - The construction phase of projects is responsible for a relatively small portion of the lifecycle emissions of the asset. However, it is the phase in which much of the potential value can be realised.
  - International standards are guiding and increasingly mandating reductions in infrastructure and building emissions.
  - Effectively implementing requirements or capturing competitive advantage requires an integrated mindset utilizing continuous improvement, collaboration, and commitment will be required to get to net zero infrastructure emissions as a sector.
  - Autodesk's work has identified a series of affected workflows and skillsets needed to realize this change:



Capabilites and workflows to get to net zero emissions

  - Construction activity tracking toolsets can help monitor and quantify the impact of construction waste, site transportation, equipment usage, air quality, and noise.
    - These can and have been implemented in Autodesk Build.
  - Micro factories and efficient pre-fabrication processes can reduce onsite waste and identify construction processes that can be powered by more efficient energy sources.

    - Depending on a companies current adoption and skillset level, different sustainability plays can be made.
        - Companies leveraging emerging techniques can either leverage an early mover advantage in response to emerging market requirements or develop new services based on existing market requirements.
        - Companies wishing to leverage established techniques can offer service extensions for emerging market requirements or efficiency opportunities to meet existing market requirements.
- Operate & Maintain
    - Why it's important
        - AEC represents ~40% of global GHG emissions.
        - Global building energy use needs to reduce by 30% by 2030 to meet Paris Agreement targets.
        - ~67% of the global building area that exists today will still exist in 2040.
        - We can't meet targets without addressing existing buildings! The retrofit rate needs to be 4-5x what it is today to meet climate targets.
    - Retrofit need
        - To meet climate targets and maintain our infrastructure, we must proactively invest in retrofits and renovations.
        - Much of this work lies in making retrofits and renovations easier to execute.
        - Retrofit phases:
            - ID opportunities – assess performance or maintenance issues uncovered through ongoing operations and maintenance.
            - Understand existing conditions – map existing systems, structures, and other physical asset characteristics to reduce unknowns in scope design. Autodesk tools include ReCap Pro, Revit, and partnership with PointFuse (or other scan to BIM software).
            - Plan scope – plan to meet performance targets with greater certainty using analytical tools and knowing what exists in the physical asset. Autodesk tools include Insight and Infraworks.
            - Implement retrofit – build what you design and manage it using the Autodesk Construction Cloud.
            - Validate performance – quantitatively demonstrate performance meets design.
            - Operate & maintain – tie in with ID opportunites phase by using Tandem digital twin.



Simplified retrofit process steps

- Digital twins
  - Digital twins are is a real-time virtual representations of real-world physical systems that serve as the digital counterpart for practical purposes, such as system simulation, integration, testing, monitoring, and maintenance.
  - Digital twins in Autodesk Tandem can be used for maintenance management, building management systems, space management, performance management, and business systems.
  - Autodesk Tandem is working on developing Predictive Twin capabilities to help building portfolio owners preemtively plan for retrofits and replacements.

Sustainability Consulting Practice Solutions & Services

Autodesk's Impact Strategy defines that we must work in partnership with our customers to advance a more sustainable and resilient world. Our Sustainability Consulting Practice's mission is to empower customers to harness data, automation, and insights to improve the impact of design and make decisions. Our key focus areas in our first year are:

- Embodied carbon for buildings and infrastructure
- Construction sustainability management
- Generative design for building material efficiency
- Existing building retrofit carbon analysis
- Digital twin for building & factory operations

We provide advisory and implementation services to:

- Assess and refine your current digital sustainability strategy
- Create a path to develop, integrate, and deploy sustainability solutions
- Develop and deploy customized sustainability solutions through sprints using public APIs
- Train key users and project teams on new solutions

Who to contact at Autodesk to use Sustainability Consulting Practice expertise

The Sustainability Consulting Practice is organized by geography. You should contact your existing account team first, and they will put you in contact with either Jonathan Rowe (global; Jonathan.rowe@autodesk.com), Amy Egerter (AMER; amy.egerter@autodesk.com), Justin Taylor (EMEA; justin.taylor@autodesk.com), or Carol Battle (APAC; carol.battle@autodesk.com).