Yes, it’s time to move away from old ways of working. Sure, you still need CAD, but the traditional workflows need a make-over. There is no better time than now to consider how BIM can help make more money for your company, giving you the ability to anticipate, assess and act more confidently from start to finish for quality project deliverables, efficient use of time and resources and improved collaboration with your stakeholders (happy teams, happy clients).

Here are 5 things you can do to move your teams into the 21st century.
Integrate your project work

Vertical and horizontal projects don’t have to happen in a vacuum

Airport and rail projects have both building and civil components that need to work together – you can’t design one without considering the other. In the same way, you don’t design a bridge without considering the surrounding earthworks and roads. Air and rail projects are complex by their nature and include civil, geotechnical, structural, electrical, architectural disciplines and must include considerations for their surrounding terrain and their connection to the surrounding community. Each project varies, but the components can be complex – from site work, rail beds, bridges, tunnels, and platforms to the architectural, structural, electrical, and mechanical elements of each station/building on the project. Disconnected workflows, large amounts of data to consume and share, and sizeable teams – you can no longer afford to think of these parts of the project in silos.

Autodesk provides a solution that integrates horizontal and vertical components to create a more holistic BIM approach to optimize the outcomes of any transportation project type. Create a more collaborative environment where each engineering discipline process and system is more effectively sharing project information.

• Complex multi-disciplinary teams are collaborating and working off the same data (that’s right, civil & structural engineers and architects out there, we are talking to you!)

• Leverage innovative design tools to better connect your horizontal and vertical designs.
Embrace opportunities offered by advancing technology

Do more with large data sets, incorporate emerging technologies into your current workflows, whether it’s rapid data acquisitions to build a real world context model or taking advantage of cloud computing to tie analysis to your designs in real time.

Extend your design processes beyond business as usual, whether you need to make better use of that LiDAR point cloud, utilizing drones to access previously hard to reach areas, or running design checks in real time via the cloud. Revolutionize how you make use of those billions of points obtained via laser scanning with semi-automated classification and feature extraction. Take advantage of cloud computing to evaluate design alternatives and conduct complex analysis, all in context of the full project and in real time. Take advantage of new types of data and new ways of collecting data such as semi-automated point cloud classification, terrain modeling, & data extraction, as well as for post construction inspection.

Accelerate customer innovation by making software readily accessible, enabling them to quickly and easily simulate, visualize, and collaborate on more design options. This enables you to increase the number of compelling visualizations for internal and customer presentations.

- Test the performance of multiple design options as an integrated part of the design workflow with access to cloud enabled analysis and simulation capabilities such as watershed analysis, corridor optimization, and profile optimization and bridge analytics.

Harness the power of many through robust collaboration capabilities that enable extended teams to work together more smoothly.

- Increased collaboration including document and model control (Frost & Sullivan found that companies had a 400% ROI when investing in collaboration technology)

- Enables a distributed project workforce, reduced project costs by not having to co-locate workforce

- Enhanced rapid deployment of technology resulting in lower cost of ownership

- Transition towards a consumption based business model, which enables a Cap-Ex Free operating model
Get to detailed design faster

**Stop wasting an engineer’s time on preliminary engineering**

Shore up the front-end of a plan without getting design teams too heavily involved.

• To create models of existing conditions quickly, you don’t have to be a GIS expert to use GIS data.

• Isolating horizontal and vertical doesn’t give you the best result. Why wait until the end of the process to bring valuable information into the design? Seeing all aspects of the project in one place matters. Integrate buildings, roads, bridges and more at the beginning to help make the best choices earlier.

• Create roads, drainage and bridge concepts which are intelligent and useful throughout the design process – no need to start over at hand-off.

• Run quick analysis to optimize the design and improve how the road, bridge, or drainage system may perform once built.

Stop thinking rendering is a specialty

**Give your teams the right tool for each part of the job**

You invest in people, technology and process improvement all with the goal of project and business success. If there is a more efficient way of performing project tasks, shouldn’t you consider making changing? If you continue to render projects in a time-consuming and resource intensive way, that’s taking away from the bottom line.

Yes, there is a better way. Improve your rendering process with quicker, less intensive workflows. Minimize the time and strain on systems and maybe even the number of work-horse workstations you need to purchase and maintain.

• Tell the story from the engineer’s perspective with fast, quick and true to the design renderings can help you communicate design ideas and concepts for proposal response or getting to 30% complete with Autodesk InfraWorks® 360 software.

• Tell the detailed story of the project with fast quick, and beautiful, near-photorealistic renderings – tools used by movie-makers with Autodesk 3ds Max software.

• Collaborate for constructability issues and clashes across engineering groups, for operability issues with the owner; and for virtual construction with contractors with fast, quick and multi-disciplinary renderings with Autodesk Navisworks® Manage.
Future proof your business

Put your trust in Autodesk, a company that invests in developing, training, and nurturing designers of the future

Autodesk is always looking for new ways to empower customers, developing the broadest portfolio of 3D software for global markets, and helping designers and engineers embrace tomorrow’s design challenges and turn them into opportunities for competitive advantage.

Millions of professionals all over the world are using Autodesk’s unparalleled portfolio of products to solve their design, business, and environmental challenges, while millions more are unlocking their creative potential with applications that help turn their most innovative ideas into reality.

• 11.8+ million users take advantage of:
• The broadest and deepest product portfolio in the design business
• Support of 4,032 development partners around the world
• Upcoming workforce from 1.2 million students trained annually
• EDU stat: 94.5 million (FY14) or 157.7 million – cumulative through FY14 students have access to Autodesk technology
• 176,514 schools in 211 countries
• Our consumer applications touch 1 million people every day
• Autodesk gains 90 new consumer users every minute

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