

How Can Design and Digital Transformation **Help Us Confront Climate Change?**

Jeff DiBattista, DIALOG and Notarius



In 2050, there will be nearly 10 billion human beings on Earth¹. We will need to relocate, feed, and provide shelter to everyone while having the least impact on the environment. It is a colossal challenge.

According to Jeff DiBattista, engineer and managing partner of the award-winning North American design practice DIALOG, one of the solutions to this rapid population growth lies in a holistic approach to design. Urgent action is needed, and DIALOG is doing it convincingly. The firm is proposing a 105-storey zero-carbon tower project in the heart of Toronto and is participating in the design of a parking lot/solar farm that will produce enough electricity to power an entire university campus!

DIALOG: Connecting communities, ecology, and heritage

Working at one of the most successful architectural, engineering, interior design and planning firms in Canada, people at DIALOG are passionate about design and believe it can, and should, improve the well-being of our communities and the environment we all share in a meaningful way.

And when you meet Jeff, you quickly understand that DIALOG is not just the company's name, it is one of the company's pillars and is demonstrated in the professionals that work there.

"In my role as a leader at DIALOG, I get great satisfaction from helping people grow in their careers and by doing work that has a real impact in the world, specifically by improving communities and the environment."

DIALOG infrastructure projects ([view them here](#)) reinvent the landscape instead of dominating it. In Edmonton, for example, the firm is at the heart of the Valley Line LRT, a 27-kilometre light rail network connecting business, residential, and entertainment districts. While they provide designs for efficient transport infrastructure, DIALOG leaves its mark by offering green spaces that harmonize with both the landscape and the surrounding communities. As a result, the stations, elegantly

constructed in laminated wood, create welcoming and vibrant spaces for socializing.

What is clear to Jeff is how much of a role the engineering and architecture industry can play in our collective future.

"The world population is currently around 8 billion people and it's growing. At DIALOG, we have a huge responsibility of providing shelter, workplaces, places of education, places of well-being, and training centres for all of these people; we must do it in a way that protects and improves the environment."

To accomplish this, Jeff does not beat around the bush: **"We're going to have to imagine, design and deliver our work much more productively and efficiently than ever before."**



A holistic vision of design

To create projects capable of spanning time, Jeff and DIALOG have adopted a comprehensive view of design, as if each facet of a project were indivisible from the other. In this sense, they are aligning with the rest of the Canadian architectural community, which has called for a more holistic design approach in their manifesto on the climate crisis.²

“The entire world has been transformed by technology and in order to collect resources responsibly and efficiently, as well as to provide health and well-being to all, we must think of design holistically.”

When designing, the team at DIALOG takes into account the project’s cultural and social context, its energy autonomy, its primary function, its aesthetic appeal, and also addresses the question that is often posed within DIALOG: **“How can we enrich the life of the communities that will live with this building?”**



This way of doing things requires collaboration and many iterations because, in order to meet the expectations of all parties, changes occur at all stages of production. Adaptability, flexibility, and information availability become critical needs.

Digital transformation, a necessary metamorphosis

To meet the needs of contemporary architecture, the use of digital modelling is an enormous help in processing metadata and simulating environmental factors. Beyond the design, the authentication and signature processes must be efficient, fast, and flexible for all the professionals involved in the work chain.

“To be able to deliver digital design to a construction site, we need technology like the solutions that Notarius provides to digitally authenticate electronic documents.”

Indeed, Notarius’ solutions help the team at DIALOG to eliminate long, paper-based processes while optimizing team performance. Whether in their studios, at home, or even on the construction site, it is possible to check plans and sign them.

“Without the digital signature, digital work would be a broken chain. It is a vital link.”

In fact, even if DIALOG and Jeff prove that a fully digital work environment is much more profitable than a hybrid or paper-based environment, the firm comes up against an ecosystem that has not yet completely transformed.



“Right now, we remain in a state of metamorphosis where some industry players are using digital practices and others are not. We are still forced to take our 3D BIM models, reduce them, flatten them, and melt toner onto flattened dead trees.”

Jeff would like all actors to succeed in adopting digital practices in order to make their work more easily, but also to meet the urgent needs related to climate change and the growing world population.

“I think we need to complete this metamorphosis as quickly as possible in order to realize the opportunity that digital transformation offers for the architecture, engineering, and construction industries. We can drastically improve the efficiency of our industry if everyone works digitally.”

Today, DIALOG is much more competitive with digital solutions, and they encourage all players within the ecosystem to transition to a fully digital environment for the sake of their communities.

“All the ways of working must be transformed. Technology and digital transformation will be the path to get there.”

Influence the present, act for the future

Among all the projects DIALOG has completed, Jeff mentions one that particularly moved him: the 100 Street Funicular and Frederick G. Todd Lookout in Edmonton. For Jeff, the project embodies what he stands for and his vision for the future.

“This is a truly special place in Edmonton where all people, regardless of their level of mobility, can access this magnificent valley of the North Saskatchewan River. It has greatly improved the quality of life for the people of Edmonton and visitors alike.”

He quite rightly hopes that designers will operate more and more using this approach, but he also foresees that the coming challenges will require heightened efficiency and more than constant technological integration.

“Technology will improve our industry for those who are prepared for it. Those who are not prepared will experience significant disruptions. I also think that we will be forced even more to confront the challenges of protecting the environment not only due to climate change itself, but also because of the adoption of new laws. Meeting these challenges will require excellence in both engineering and design.”

At Notarius, we love to see clients like DIALOG realize their vision and provide sustainable solutions for generations to come. We’re just one link in the chain but being able to help them improve communities and fight climate change is a privilege.

¹ UN, “La Population [Population]” on the website un.org, 2019 [online], <https://www.un.org/fr/sections/issues-depth/population/index.html> (Page consulted on May 5, 2021)

² Canadian architects and members of the RAIC Committee on Regenerative Environment, “Manifestos on the Climate Crisis” on the website ca.architectsdeclare.com, November 1, 2020 [online], <https://ca.architectsdeclare.com/> (Page consulted on May 6, 2021)



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