Radical Integration

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Jacobs' Gary Lapera discusses innovation at global scale

GARY LAPERA

Global Solutions Director, Jacobs

DesignIntelligence (DI): Before we talk about change, can you ground us as to your role and purview within Jacobs? Global solutions director is one of those job titles with many potential interpretations. Is your focus on technology, projects, certain markets?

Gary Lapera (GL): My focus is on all the above and more. The global solutions director is part of our solutions & technology group, a leadership team tasked with driving innovation, connectivity, growth and strategy across all business lines.

DI: When we think of radical innovation applied at the scale of your organization — approximately 55,000 people across 40 countries — there is great potential. How are you leveraging your scale for impact in your mission for innovation?

GL: Our focus is on radical integration rather than radical innovation. In 2020, our built environment sector, which includes architecture, engineering, cities and places, and interiors/insights pivoted to a future-forward strategy to address the reality that conventional delivery of services and problem-solving is no longer meeting the challenges for the built environment. Our global market director, Monte Wilson, created a plan that challenged the Jacobs design community to build upon our strength — to invent and curate the practice of the future — to build on a platform of radical integration.

The vision is a global practice that is uniquely Jacobs. That sets the direction for the industry. It illustrates the power of an integrated approach that is home to the very best and brightest design thinkers, disruptors, technologists, strategists, visionaries and storytellers.

When I became the global solutions director for architecture, I created a playbook that aligned its core tenets with that built environment vision. One of my 2021 initiatives is to expand architecture's sphere of influence across all our business lines. At our core, we are problem-solvers. If we think beyond mortar and bricks, the design arena for architects expands exponentially. The move from a service to a solutions-based consultancy begins with architects who drive:

- Dynamic collaboration across markets.

- Meaningful inclusion.

- Engagement with exemplars and disruptors across the broadest spectrum of thought leadership.

- Nimble design and delivery platforms.

Think of the process as "creative collectivity" — an open forum for ideation.

DI: You have talked about your investigation of how you deliver what you call the "Big J," defined as consistent performance and provision of Jacobs services and solutions at a global level. You mentioned an interesting case study: your recent project for an RFP advertised as wastewater treatment project. You see it as much more. Can you elaborate?

GL: The RFP was for a feasibility study for the consolidation of several existing facilities into a central plant. Most people's reaction was: WOW, this is a mega-wastewater project. That's true, in part, but the essence of the problem was to reconsider the transformational role of infrastructure. For Jacobs, as a global leader in water,

we didn't have to pivot to a new strategy to address the RFP. Our integrated teams had delivered other successful programs with similar considerations and were developing market drivers that focused on the impact of infrastructure on our quality of life. Consider the metrics of the investment: For every dollar spent on infrastructure, there is a 5% to 25% return to the economy. How do we envision projects that trend to the 25% ROI? We must move past the notion of these benefits as simply collateral results of a public spend and look at solutions that are directly influenced by ROI across multiple factors — including social equity.

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The World Economic Forum[1] has provided guidance on the subject in their document Infrastructure 4.0: "Infrastructure is more than just a series of assets. It is a system of systems that links the built environment, the natural world and the human experience. Done right, infrastructure investment has the potential to help us build a more sustainable, equitable and prosperous world."

DI: How did your RFP response embrace radical integration?

GL: Our team was built from the community and with global thought leadership. Our submission wasn't just an RFP response, it was a vision for a comprehensive, equitable, sustainable approach to infrastructure. The technical narrative was aspirational and actionable — its clarity of purpose resulted in a selection without an interview. The team, including our gifted subconsultants, worked brilliantly together, in part because everyone believed in the mission. The team engaged in meaningful dialogue, debated the merits of the feasibility framework and eventually coalesced into a project-specific studio over the course of the RFP submittal. Our strategy was to deliver a bespoke solution and harness the thought leadership in support of the mission. We were driven to deliver the "Big J" to drive an impactful solution. (See diagram).

DI: How are you bringing multidisciplinary expertise to bear? Innovating in your design process? How do you start? Who's at the table? How and when are technology leveraged — and how does it differ from the processes we learned in school? Share some of the unique aspects of the team and how you're going about approaching it.

Radical Integration: Project Aspects
author diagram
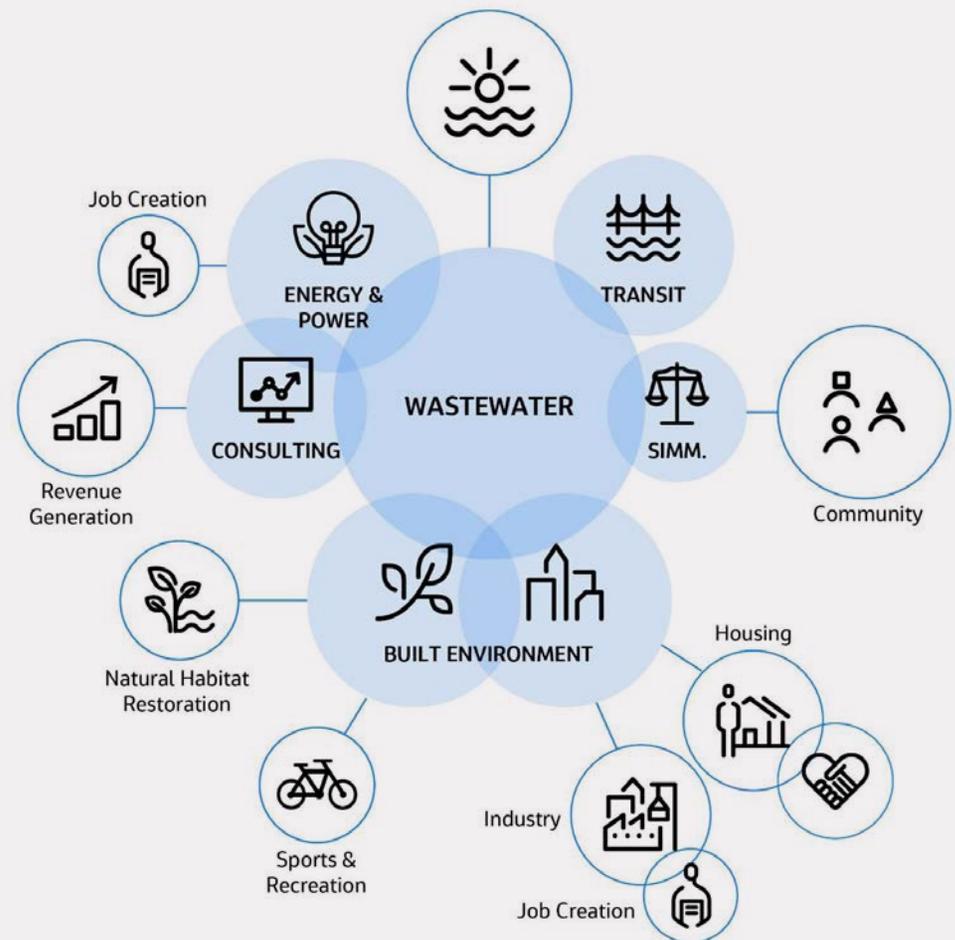
[1]Joseph Losavio and Oliver Tsai, Infrastructure 4.0: Achieving Better Outcomes with Technology and Systems Thinking, World Economic Forum (May 2021), https://www.weforum.org/whitepapers/infrastructure-4-0-achieving-better-outcomes-with-technology-and-systems-thinking.

GL: Let's start with why multidisciplinary design. In a recent McKinsey article, The Business Value of Design, the authors make two compelling points. The first is to measure and drive design performance with the same rigor as revenue and costs. The second is to make user-centric design everyone's responsibility. The article builds the case for leveraging the power of design to impact our physical world but also the bottom line. While some would argue profitability and design are incongruous, I believe an approach that values design leads to better resource allocation and ultimately, better design.

I start by determining if the problem has been defined properly and is viable. The next step is setting the table: framing the problem, engaging internal and external colleagues to weigh in on the path forward and creating a bespoke team aligned to the mission. The collaborators are always as unique as the assignment.

They say authentic solutions come from many voices. Architecture is enhanced by dialogue with a broader community beyond A&E. A rich design narrative that's comprehensive, non-biased and looks beyond stylistic conceits will yield a better building, a better master plan, a better infrastructure — and will have enduring value because it was conceived as a positive response to a human condition.

Technology supports the design process, but it's not a replacement for fundamental human design skills: the ability to think abstractly, the rigor to edit and refine, the sense of context and character. There is an intersection between technology, team structure and architecture. The successful balance of all three leads to transformative engagement and harnesses the synergies and resources to deliver a great design.

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These models build the case for a "system of systems" approach.

DI: In your quest to innovate in design process, what kind of cutting-edge techniques are you using to reform and reshape your own process of innovation? Are they technology-centric, process-centric, people-centric? What is the root of the change?

GL: At Jacobs it's always people-centric. Inclusion, while not a technique, is a driver that is bringing diversity of thought, experience and perspective to our practice. Our cutting-edge techniques are more who than what. We're expanding our design considerations criteria to include social equity, environmental and socio-economic sustainability, systems connectivity and a celebration of the interdependence of the natural and built environment. Technology and process are vital elements of our business platform. We excel at both because we use and develop them in service of a solution. My focus on both relates to radical integration. For technology, I'm interested in generative design programs that cross disciplines and can create conceptual models with metrics that address integrated issues. These range from ROI to social equity and advanced technical solutions. These models build the case for a "system of systems" approach. For process, that means streamlining design and delivery — and more effective and efficient allocation of resources and capital.

DI: You mentioned real innovation usually begins with problem definition. So often we end up solving the wrong problem, largely because that's what the owner asked us to do. Are you making any inroads challenging RFPs or redefining problem statements to effect dramatic on-project innovation?

To change the frame of reference to yield more of a systems-thinking, longer-term approach?

GL: We're launching a new initiative called Foreseeable™, which brings a way of thinking and a system of solutions that enable differentiated outcomes for the built environment: transformational places — next generation sustainability — financed delivery integration.

I am collaborating with Jim Lew on financed delivery integration. It is a large-scale integrated delivery enterprise agency, which creates complex building programs by defining, designing, delivering and operating projects as integrated value-optimized asset platforms.

DI: Some of your successes and failures in that space would be illustrative.

GL: How much time do you have? Since there's a limit to the length of this article, I'll just say my failures both outnumber and have fueled my most meaningful successes.

DI: Honesty appreciated. As a leader responsible for innovation, what are your biggest challenges? What do we need to know to engage more effectively?

GL: The biggest challenge is building consensus. The lack of predictive analytics for an idea that is forward-leaning and cannot be validated by examples of previous success is a high hurdle to overcome. My advice:

- Be transparent and exact with risk/reward metrics.

- It's better to move on than back down.

- Early adapters matter if they share and invest in the vision.

DI: Since we're shooting for radical change, can you dream for a minute? What's your personal vision 10 years from now — for Jacobs and the industry?

GL: My vision for Jacobs is an empowered architectural community that is driving solutions beyond buildings. James Moore, the global solutions director for cities and places, has defined that vision eloquently: "We design the human habitat." My vision for the industry is a tectonic shift in how we practice architecture.

DI: A closing thought for fellow innovators? One thing they should focus on to be effective.

GL: A good idea is inspiring; a great idea is immediately actionable.

As Global Solutions Director — Architecture, Gary Lapera, FAIA, leads Jacobs' network of over 1,000 architects and designers to foster a design-focused culture, drive strategic growth and lead industry transformation. He has led large cross-discipline teams for complex building and infrastructure projects and embraces how buildings improve the lives of those who use them and the livelihood of those who build and develop them.

Lapera is responsible for leading, growing and connecting Jacobs' buildings expertise with a solutions-based focus at the intersection of strategy, design, sustainability, project delivery and technology. He is also responsible for leading seven technology areas including design-centered solutions teams in architecture and sustainable design along with client/market centered solutions teams in aviation, healthcare, science and research, higher education, and transit facilities.

A major focus of his work is the development of the Next-GEN Infrastructure platform, which aligns commercial development strategies with critical government infrastructure projects, creating greater public benefit, more effective capital spends and greater connectivity between public and private markets. He received his Master of Architecture degree from Harvard University and Bachelor of Architecture degree from Cornell University. In 2014, he was elevated to the College of Fellows of the American Institute of Architects.