

# TRAILBLAZERS TALK

Ravi Kumar S.,  
President, Infosys,  
in conversation with  
George R. Oliver, Chairman  
& CEO, Johnson Controls  
and Nancy Berce, CIO,  
Johnson Controls

Link to conversation: <http://bit.ly/2KBTc8Y>

**Ravi Kumar S. (RK):** Hello everyone, my name is Ravi Kumar, president at Infosys, Welcome to the next edition of Trailblazers. Trailblazers, as most of you know, is a video series about individuals who are making a significant impact, change leaders, disruptors of industries and those bringing about actual change in the communities in which they live. Today, I have two distinguished guests at our beautiful Innovation Center in Indianapolis, George Oliver, CEO and chair of Johnson Controls and Nancy Berce, CIO of Johnson Controls.

George has been with Johnson Controls for a couple of years as the CEO and chair. Before that, he was the CEO of Tyco and on the board of Tyco, where he was responsible for the integration of Tyco and Johnson Controls. Prior to that, he worked for almost 20 years in the GE Group of Companies. He was the CEO of Water and Process Technologies and then the CEO of GE Engine Services.

Nancy has worked for many years at Abbott Laboratories, as the Vice President for technology and business services and the CIO. This is a new stint for her at Johnson Controls.

Thank you so much for spending time with us today. I am very optimistic about what we can do should our companies collaborate.

I want to tee up with you George with the first question. The world is getting smarter. The physical and digital worlds are intersecting at a rapid pace. Smart spaces, smart buildings, smart campuses, and Johnson Controls is leading the way in some of these areas. Tell us a little about how you are powering this change with new age digital technologies?

**George R Oliver (GRO):** Ravi, I want to thank you and the team for a fantastic day, you know sharing our vision on how we're taking our buildings business forward and the work we're doing together to ultimately create value for our shared customers. And, so, I would start by saying that when we did the merger of Tyco and Johnson Controls it was with a vision that we had an incredible portfolio of technologies and capabilities that historically have gone to market separately whether it be building controls or electronic security or electronic fire and we had a vision that we could put all of those capabilities together in a more integrated platform and more important create capability to be able to extract all of the data from the sensing that occurs with those systems that positions us to be able to create outcomes in a building, and, as you know, we're not only a leader in HVAC equipment, which today is roughly half of our portfolio. We're about a twenty-five billion-dollar buildings business, But the other half is our ability to be able to lead in building management systems and, so, now with these combined capabilities, flattening the architecture, creating data capabilities, to be able to now extract the data and more important now apply AI analytics on that data to create outcomes within smart buildings and even beyond it can be smart cities. And, so, we're making incredible progress, you know, from a technology standpoint we're working outside in, working with customers that we share their vision and what they're ultimately trying to accomplish with their businesses and where they see the opportunity to leverage the technology that's available today and with our go-to-market and being able to take not only what we do today, but to build on top of that significant, right? Significant capability to create more value is really what's positioning us to win with the customer base that we serve.

**RK:** And just to add to that train of thought. Do you see the buying pattern among your customers changing because of the services you're delivering to them?

**GRO:** You know, what I've seen is let's face it right? There's multiple customers within the customers that we serve today because there's a lot of things that we do whether it be selling HVAC equipment or selling a security system or selling a fire system what I've seen over the last year or two an acceleration that there's now a sense that with connectivity with data is so much more that can be accomplished and, so, what I see happening within our customer base that it's being led top-down that there's an understanding now of what the possible can be with connectivity with technology deployment with the use of data and because of that we're working much more strategically with our customers, and, so what I would say is the answer is, yes. You know, that you get into a much more strategic stronger strategic partnership with our customers that ultimately we ideate, we co-create and then we ultimately deliver capabilities that achieve their vision.

**RK:** Thank you, George. Nancy, over to you. Since I began interacting with you, you have been mentioning about the significant transformation you're been doing on the IT stack and the tech stack of Johnson Controls so as to keep them agile and progressive. Tell us a little bit about what's going on in the transformation of the tech stack so as to keep Johnson Controls agile in business.

**Nancy Berce (NB):** Yeah, just very excited to be here and I think when you listen to George's vision and our vision of what we can bring to an offer to our customers the foundation of that starts with technology and if you look at what I offer not only to Johnson Controls but how I am viewed, how I view our customers. I'm the buyer and when you look at everything that has to be digitized it starts with infrastructure and it's really important to look at where technology's going and make sure that is upgradeable and workable to enable all of these new digital capabilities you know when you look at smart spaces and you look at how digital and physical forms come together. It fosters collaboration through all of that infrastructure and technologies so we're very focused on how we upgrade our foundation. We're very focused on how do we drive efficiencies and how do we build that platform to make those things usable and to feed into this whole vision of a smart workplace for not only ourselves but also for our customers.

**RK:** Thank You, Nancy. So George, one of the things I know Johnson Controls is doing is that it is adopting a systems approach to hardware, software, and connected services to reduce its carbon footprint... and that's a huge CEO agenda for many large corporations. Tell us how that is going and how Johnson Controls is orchestrating this?

**GRO:** Sure, so, when you think about what we're doing is Johnson Controls from a sustainability and being able to really advance the even the social network that ultimately achieves that.. we're very much committed with the resources that we're deploying it starts with... when you look at HVAC equipment it is the largest user of energy across infrastructure, you know, across the world and so, as we continue to advance our technology within our equipment, HVAC equipment, there's significant opportunity to reduce that energy consumption and there's new products that we're bringing into the market today that are twenty-thirty percent more efficient, that's only one part of the puzzle. The second is the building controls which is then optimizing what we do not only with the HVAC equipment but then everything else that happens within the building and so making sure that you understand the energy loads, you know, during the 24 hours and optimizing those loads and being able to create the right amount of comfort but, with the least amount of energy and then within a building just optimizing all of the utilities whether it be water consumption, energy consumption, space utilization optimization of all of the other building systems beyond just HVAC is what we do with our controls and so for us not only is it what we're doing internally ourselves within our own four walls that every year we're delivering you know a significant improvement in sustainability with reduced energy consumption with reduced water consumption, but then being able to bring the solutions to our customers that ultimately achieve their goals around sustainability and then as we think about what we do across the globe we have a hundred and ten thousand employees across the globe and one of our core values is what do we do in the local communities that also deliver a similar type impact because not only taking the expertise that we have in the space that we compete but being able to leverage that expertise much more broadly in the communities that we work and most of our people we have I think over a million hours of volunteerism around the topic and not only through education but also through volunteering with local organizations that ultimately focused on achieving similar type results.

**RK:** Great, and do you see this approach changing when infrastructure needs to be retrofit versus new development, because most times I do get this feeling that it's much more expensive and difficult to retrofit infrastructure.

**GRO:** So, we do when we look at our business for sure that with the technology available today that, you know any new build can be... it can be, right from the start... be built much more efficient in the capabilities that can be deployed. that all being said when you look at the current infrastructure, there's a significant opportunity to upgrade that infrastructure there's equipment that's consuming significantly more energy than what today's equipment consumes, there's building systems that aren't integrated so, therefore, the building isn't optimized

and the building is operated or maintained and so we can normally go into an as-built or a current building and always find opportunities to be able to take that current as-built and be able to upgrade whether it be upgrading the equipment... deploy some of the new software tools and capabilities that then allows us to be able to take that and bring it to a whole new level of performance that, you know, delivers on sustainability goals and that delivers on being able to drive operational improvement within that particular vertical that customer competes in, but I'd say that there's tremendous opportunity to do both.

**RK:** Thank you so much. Nancy, this is something we discussed today and I have also been reflecting on all these articles I wrote in the Forbes a few days ago about the future of work. Organizations are going to move from private human capital to private human capital plus public human capital which is the gig economy. This will give enterprises scale and agility and enable people to do creative work and engage in problem finding. On this journey I think consulting system integration services like the Johnson Controls ecosystem is going to play a significant role. I know we spoke about this and how our partnership could evolve to create a consortium of sorts with the power of Johnson Controls behind it, how do you see this panning out in the system integration space, the consulting space, and the services space which include companies like Infosys?

**NB:** Yeah, I think it's actually going to help grow and expand and bring together the two spaces. When you look at what Johnson Controls brings to the table, we start from a building system solution and we're evolving up that tech stack to use newer technologies to exploit those outcomes for our customers. When you look at the services the traditional IT services organizations, we start at the business systems area and when you look at the ultimate value proposition... of how you create new outcomes for smart buildings and smart spaces where you have this gig economy where they want to foster collaboration they want to be able to personalize their work space it's really the art of how you bring those two together and so when I look at the partnership with Infosys both on the commercial side our long-standing partnership on the IT side... that whole 360 view creates a whole level of knowledge and expertise that I think can help both of us share a common vision around changing this industry and disrupting this industry because when you look at these areas it's about scale and speed and if you look at some of the positions we have in the market space how we're working up that of that stack on the technology and if you look at the services that Infosys brings together we just have a huge opportunity to work as one I think the second piece is, we share a common desire to change how we work and we have a lot of methodologies around how we work with our customers to define outcomes through design thinking... you share that same vision and actually, you guys have really focused on changing that whole culture globally if we can bring those two together and as we bring those two together it just will bring forward an accelerated pace of how we can bring value to our customer... and that to me is what I think is quite unique for Infosys and JCI as well as unique to what we do in the industry.

**RK:** Absolutely. In fact, I do believe that the Johnson Controls ecosystem can power workplaces for efficiency, safety, and hyper-productivity. The future of workplaces and the workforce is also going to determine how organizations behave, so, I do believe it's a very powerful way of driving transformation in large corporations. And, George, I remember you mentioning the Johnson Controls digital world, I love that idea of a multi-generational platform, where you plug in different aspects of smart spaces and make it multi-generational because the foundation doesn't change. That is fascinating because I've never heard about this from anybody in your industry. Tell us a little bit about it.

**GRO:** Well, this came out of the integration when we put the digital platforms together we realized a key, you know, one of the biggest value creatives was going to be the data that we collected from the multiple systems and then being able to use that data and new business models that create new outcomes for the customers that we serve and recognize that we have a footprint across every vertical whether it be you know stadiums or commercial buildings or universities or healthcare we have incredible capabilities across those verticals and what we've learned is that the foundation of what we do with our integrated platform and then the ability to be able to house all of the data use the digital vault to be able to through not only our systems but also other connected and...

**RK:** These could be heterogeneous landscapes as well?

**GRO:**...it's the use of that full data set that is critical to being able to create the outcomes that we're trying to solve in the key verticals that we're working with our customers and so we've got a lot of IP, you know, that we've built around that as we've developed that capability and it's the foundational architecture is... it's a Microservices that with the pieces that ultimately come together you know that you can continue to connect and then multi-generational, they just continue to expand and get better because of the capabilities that we can connect to our platform and ultimately collect the data and so, this combined with the ability to create artificial intelligence and machine learning depending on, you know, the data that we're utilizing or the problem that we're trying to solve for our customers gives us and it puts us in an incredible position, right, to be able to capitalize on them. This is what I would say, that new space is being created because of all this connectivity and (quote) smart buildings and, I do agree with Nancy that when you look at this ecosystem that you know the game is changing that it's because of the not only customer back... what is it that they're looking to achieve from a smart building and it's typically around people, assets, space... right... and we have censoring around all of that that's deployed in a building. Then the ability to be able to utilize that data to improve, right, to improve utilization of space, to improve productivity of the workforce, to be able to work smarter right, within the workforce to be able to improve the utilization of assets... that is what you can achieve with the full data set that we collect and so as we think about the ecosystem that's been developing we have core capability... that we believe in a building is it's got us in a leadership position but we also recognize that there is other parts of that ecosystem whether it be technology, go-to-market, other influences, you know, from a consulting standpoint that ultimately work with customers to define what it is that they're looking to achieve and then making sure that we're all aligned with our combined capabilities that create that success, you know, for the customers that we serve and so we're working today with a number of enterprise customers and the key verticals that we work within. We're working with partners like Infosys and others, Microsoft, we just, you know, discussed this week the opportunity that we have with BEA which is going to be a leader in the space that they're in and in the Emirates around, you know, waste management and the ability to operate, you know, with the smartest building and in Emirates... we're going to be part of that working with Microsoft, so, we see an incredible opportunity not only to create a lot of value for our customers but then to work in a very constructive manner with partners, and how we ultimately deliver on those outcomes.

**RK:** Well said. Actually I do believe that even as digital technologies virtualize the world, value is amplified at the intersection or on the edge of the physical and digital... and companies like Johnson Controls can play a big role at that intersection. And on that note, thank you again for talking to us, thanks so much for the partnership and I look forward to working with you.

**NB:** Thank you, Ravi

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