Transforming the construction & operation enterprise with Wipro

It's no secret that technology is revolutionizing literally every aspect of modern life. It is no different for the Engineering, Construction & Operations (EC&O) sector. According to the World Economic Forum, "Wherever the new technologies have properly permeated this fragmented EC&O industry, the outlook is an almost 20% reduction in total lifecycle costs of a project, as well as substantial improvements in completion time, quality and safety." Recognizing this, the EC&O sector is undergoing a revolutionary transformation—exploring new ways to improve the efficiency, accuracy, and transparency of their key business processes, and to improve overall performance. The B2B clients of EC&Os are rated better on the digitalization index as indicated by the McKinsey Global Index (MGI) survey. This could be attributed, in part, to the fact that the end-occupiers of the infrastructure they build are digitally oriented millennials. This trend presents an enormous opportunity for the EC&O sector to adopt digital transformation and strongly pursue innovation and new market expansion as the key growth strategies.

To address the needs of global construction infrastructure developers and service providers, Wipro has a dedicated industry vertical practice—Engineering, Construction & Operations (EC&O)—focused on the domains of:

- **Engineering & construction** covering the Architecture, Engineering & Construction (AEC) and Engineering, Procurement & Construction (EPC) sectors
- **Operations & facilities management** covering the facilities management, real estate & integrated infrastructure support services
- **Airports**

EC&O clients partner with Wipro to gain disruptive innovation and quantum productivity improvements in a digital, data and experience-driven environment to meet the emerging needs of social change and improved human experience. Our deep industry knowledge integrated with our digital services provides clients the ability to lead the industry with technologies, solutions and practices—and to "be and build digital." The EC&O sector leverage our expertise in 5D Building Information Modelling (BIM), which converges time and cost data into 3D architectural models for better visualization and control of their projects. This helps faster and simpler adoption of next-gen technologies such as IoT, Big Data, Augmented Reality (AR), Computer Vision, Human Machine Interface and Artificial Intelligence (AI) across the value chain of design, build and operate. The potential to impact resource productivity, asset longevity, supply chain collaboration, smart data, document digitalization and workforce safety is significant.

Wipro's Engineering, Construction & Operations business unit, with **a dedicated team of 1500+** has the experience of working with **30+ global clients**, bringing in extensive industry and digital knowledge. Our subject matter experts work to deliver value and differentiation to organizations across the EC&O sector. We have **partnerships with industry-aligned solution providers** such as Autodesk (for engineering & design), Hexagon (for BIM), Maximo (for asset management), SAP (for real estate management), Oracle (for scheduling, cost control-enabled project-centric solutions and real estate), Tririga (for facilities management), Workday (for workforce management), Microsoft (for digital collaboration), ESRI (for map-based solutions), Cisco (for smart buildings), TIBCO (for airports analytics) and ULTRA (for airport operations).

Wipro's EC&O offerings

Our EC&O offerings integrate the three key enablers of "new ways of working," solutions/IP assets and the partner ecosystem (see overview below):

BIM-led integrated project & operations

BIM++ for 5D project execution and 6D for operations for an integrated platform that can help drive visibility and minimize risk
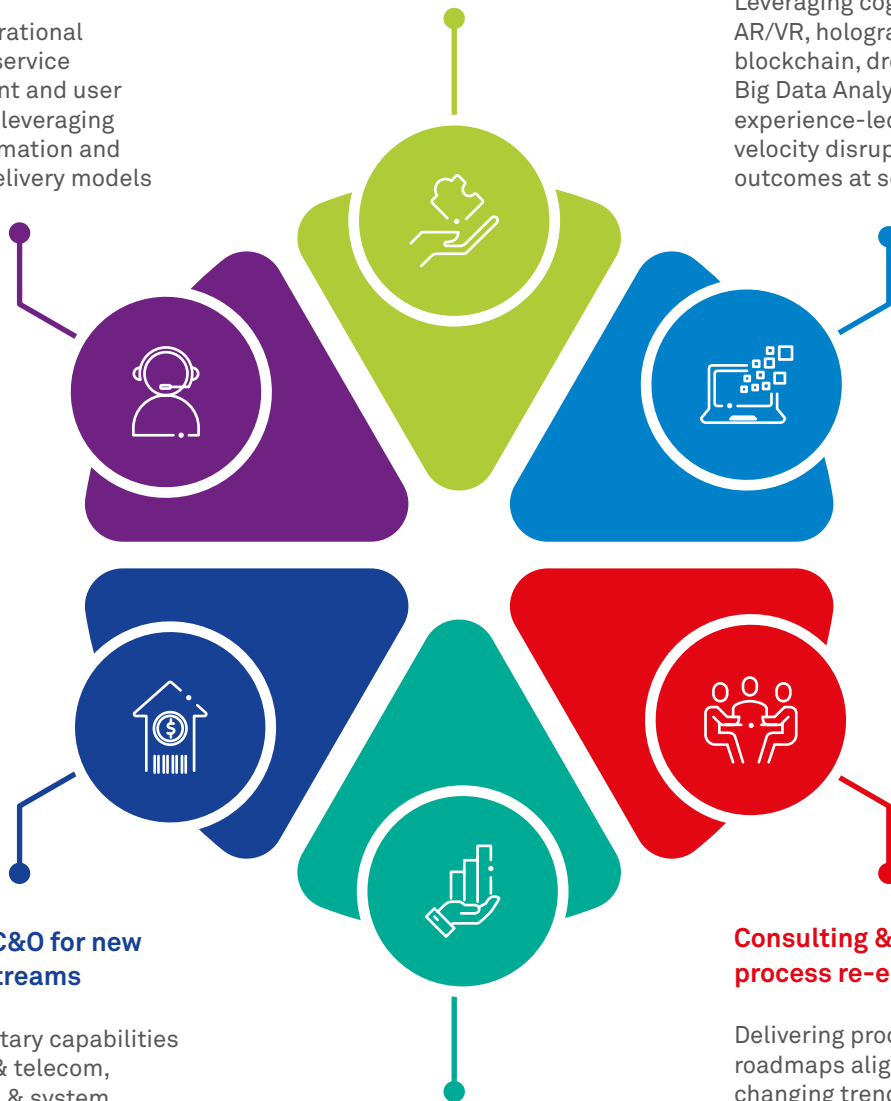
IT & business process outsourcing

Deliver operational efficiency, service improvement and user experience leveraging hyper-automation and next-gen delivery models

Digital EC&O through connected ecosystem

Leveraging cognitive, AR/VR, holograph, IoT, blockchain, drones, Big Data Analytics for experience-led high velocity disruptive outcomes at scale

Partner EC&O for new revenue streams

Complimentary capabilities through IT & telecom, automation & system integration for their capital projects

Consulting & business process re-engineering

Delivering process roadmaps aligned to changing trends across project planning, execution, human resource, supply chain & financial management

Real estate & facilities management

Next-gen solutions for improved resource productivity, asset longevity & occupancy maximization
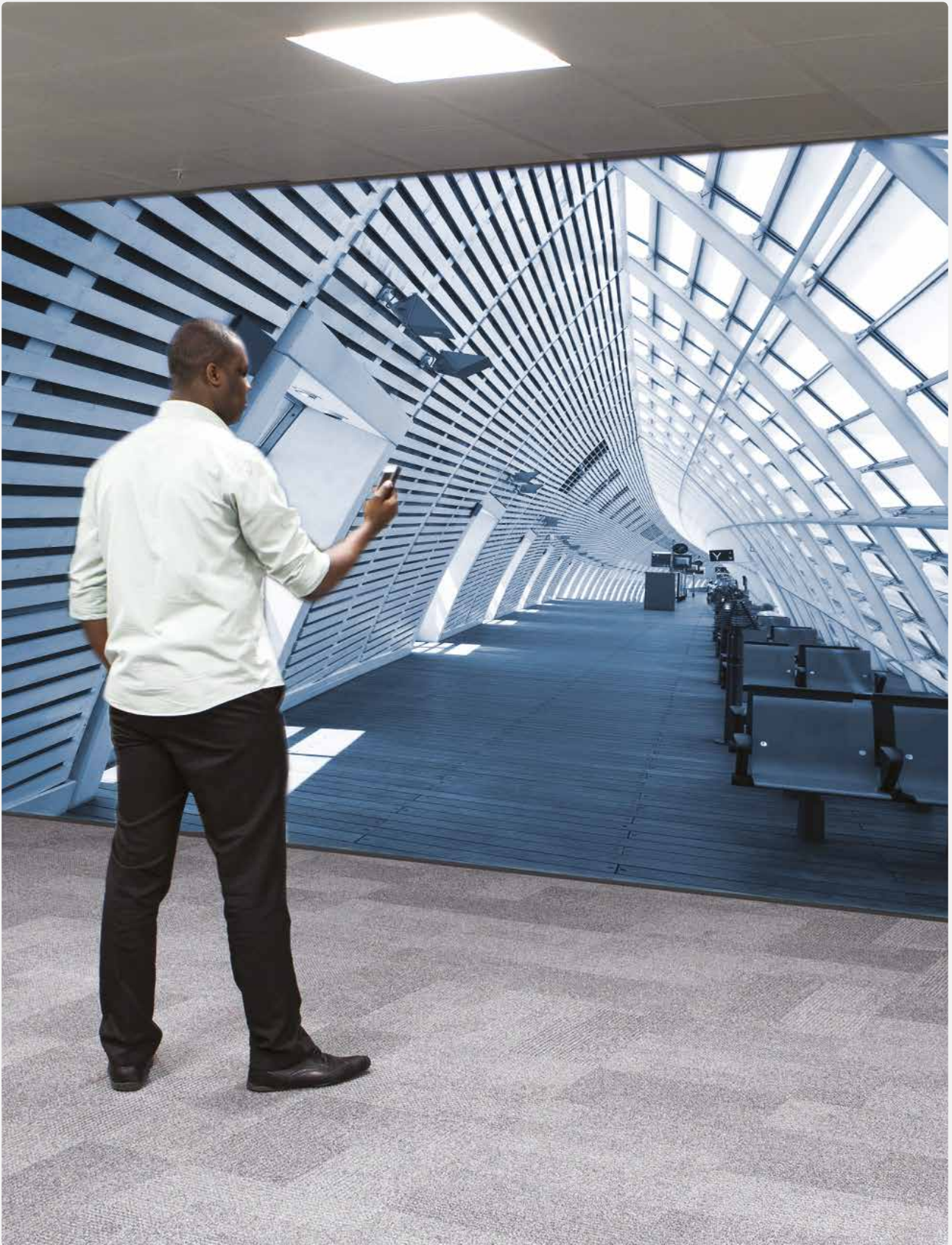
BIM-led integrated project and operations

We deliver an integrated project management and control platform that can be enabled on cloud by integrating the key modules across ERP, projects, schedule management, cost management, estimation, bidding, CRM, BI & analytics overlaid with BIM to enable 5D BIM (time and cost integration into 3D models) and 6D BIM (asset management integration into 3D models). These deliver transparency, standardization and collaboration across multiple stakeholders in the value chain. Our services ensure better control through end-to-end project visibility, monitoring and tracking to ensure on-time and on-budget project execution.

5D Building Information Model

Holographic technology for BIM design collaboration

For a leading Canadian EPC, we implemented a core construction management solution for front office processes like cost management, schedule management, etc. and integrated procurement/supply chain/material management into their core ERP systems.

Digital EC&O through connected ecosystem

We partner with clients to ideate, incubate and deliver digital interventions through cognitive, Virtual Reality (VR), cloud-hosted software platforms, digital collaborations, analytics and IoT to help clients "be digital" and "build digital." Our offerings and solutions enable AI-driven operations, analytics-based asset/project/workforce management, 5D and 6D BIM-based design, construction and facility operations, IoT-enabled O&M/facility management, drones-based physical inspection/construction site monitoring, AR/VR-enabled training/collaboration/service resolution and mobility for field force productivity. These solutions bring in much needed agility in operations through user-centric experiences and deliver overall business productivity gains of around 8–10%—which adds up to a significant quantum of savings in capital-intensive projects. We are also incubating use cases around holographic technology and blockchain in our innovation labs.

Drones enabling project progress

AR-enabled smart helmet for Connected Workforce

We have delivered a significant reduction in time of 12% spent on indirect work (traveling between base stations for reporting, tool waiting time, etc.) by implementing user-design-led field force mobility for a large engineering services company in Australia.

For a new-generation real estate company in UK, we set up the BIM function and platform by integrating it with other enterprise systems to deliver an end-to-end project design-construction-operations capability.

A Dutch global enterprise partnered with Wipro to deploy drone-based solutions to deliver significant productivity improvements in video-based flare inspection of high-rise chimneys augmented by intelligent algorithms. By preventing manual inspection in high heat and volatility areas, the solution also improved worker safety.

Consulting and business process re-engineering

We combine our significant EC&O industry domain capabilities with deep business process knowledge to drive transformations across the technology and process space. Our industry experts work closely with the client business/IT teams to identify and develop future technology and process roadmaps aligned to the strategic objectives of the client. We design, re-engineer and implement front office (bidding, project initiation, project execution, closure) and back office (finance, HR, payroll, procurement, supply chain) processes. We also offer niche process consulting services in the areas of legal, contracting and marketing.

For a Middle East-based engineering and PMC company, we did a complete process design and platform implementation across the back office (ERP, HCM, SCM, cash management, fixed assets, procurement, learning management and project analytics) and front office (projects, schedule management, cost management, project costing, project billing).

A consulting and business process re-engineering and design project was executed for a US-based design, engineering and project management company across finance, supply chain/procurement, projects, construction management and BI.

Real estate and facilities management

Our real estate & facilities management offerings include:

• Omni-channel platform to tap and qualify prospect base, process enquiries and assign it to appropriate field team to ensure closure

• Digital transformation of property & facilities management leveraging a platform like Tririga for which we own the overall development roadmap

• IoT-enabled Connected Building & facilities ecosystem that connects building assets, supply chain, utilities and workforce to deliver predictive property operations enabled by actionable insights, thus ensuring high asset longevity, resource productivity and enhanced occupier experience

• Integration of property sales & leasing contracts with customized accelerators to enable a unified view of occupancy vs. vacancy analysis

A large US-based global real-estate company partnered with Wipro to create a design-led digital strategy roadmap to identify opportunities that enhance their property management advisory services.

A UK-based facilitates management (FM) company partnered with Wipro to digitize its multiple FM solutions landscape into one standardized solution covering customer service, work-order management, field force mobility and predictive analytics.

Partner for new revenue streams

Wipro assists EC&O companies in taking bigger turnkey projects by including IT/telecom, smart applications and IT systems integration in new building and plant infrastructure contracts. This enables clients to increase their wallet share in large infrastructure projects and create a market differentiation through a more integrated suite of offerings.

A major Australia-based construction company partnered with Wipro for metro and motorway tunnel projects where Wipro provided the services around the entire IT suite.

IT and business process outsourcing

We leverage Wipro's core competencies in IT and business processes to drive significant cost optimization, operational effectiveness and superior user experience for our clients. We help "modernize their core" by creating a foundation platform to enable future growth and adoption of digital technologies. The cost savings delivered release cash from operations which can be used to fund transformations and innovations.

We leverage our platforms and hyper automation tools like Wipro HOLMES™ and BASE)))™ to drive high levels of integration, automation, agility, standardization and predictability in IT and business operations. Our integrated delivery across applications, infrastructure, security, cloud, end-user computing and business processes enables increased availability of business services and superior performance of IT and processes.
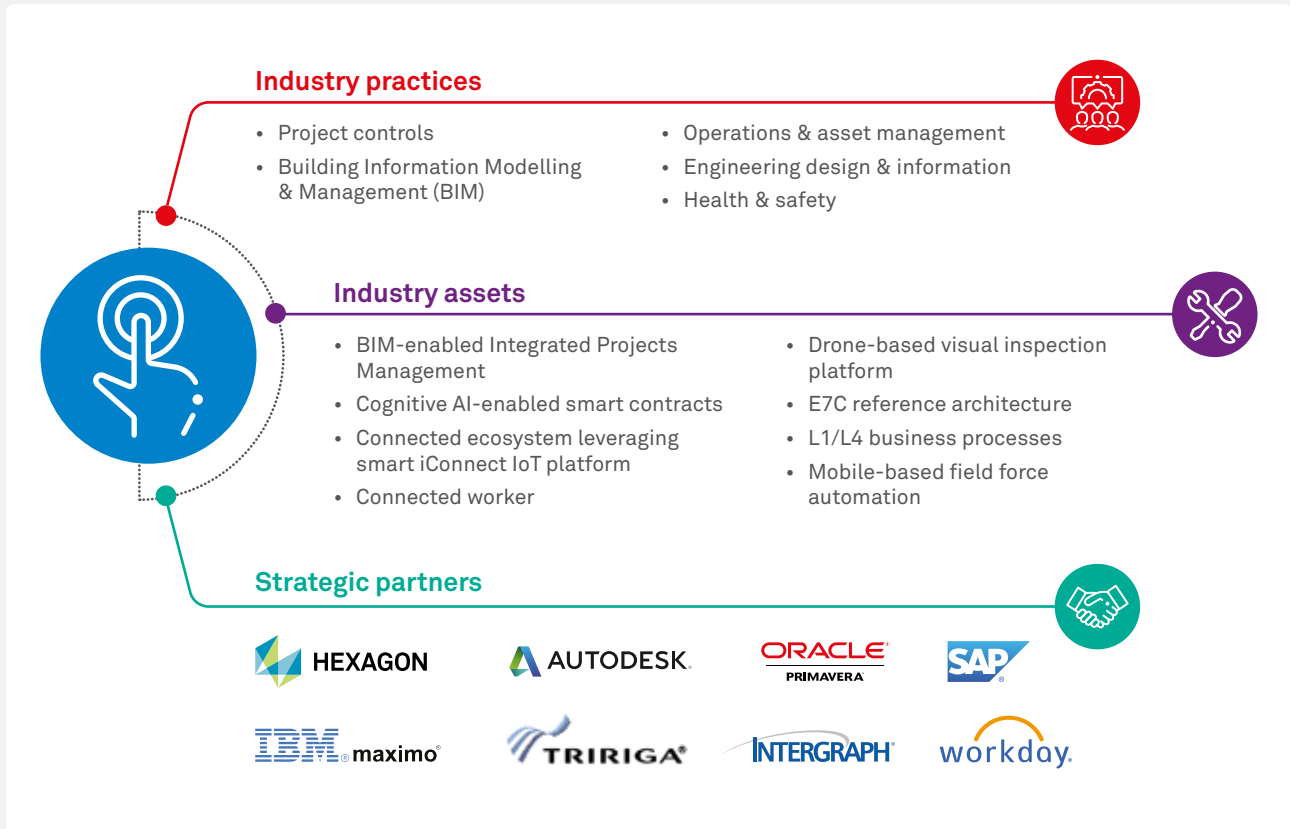
We delivered 30% savings for a UK-based construction and facility management services company through the integrated delivery of IT and BPO services.

We completely transformed a traditional IT service model for a large Australia-based construction leader to an on-demand catalogue-based managed services model as part of their total IT outsourcing to Wipro, driving significant improvements in operational performance, agility and cost savings to the tune of 40%.

EC&O-aligned capabilities

Our EC&O industry capabilities bring together our investments in domain-aligned practices, solutions and accelerators and partner ecosystem. This strengthens our ability to integrate and deploy solutions at velocity for tomorrow's EC&O enterprise.

Industry practices

- Project controls
- Building Information Modelling & Management (BIM)
- Operations & asset management
- Engineering design & information
- Health & safety

Industry assets

- BIM-enabled Integrated Projects Management
- Cognitive AI-enabled smart contracts
- Connected ecosystem leveraging smart iConnect IoT platform
- Connected worker
- Drone-based visual inspection platform
- E7C reference architecture
- L1/L4 business processes
- Mobile-based field force automation

Strategic partners

HEXAGON AUTODESK. ORACLE PRIMAVERA SAP

IBM maximo TRIRIGA INTERGRAPH workday.

Augmenting our capabilities through a differentiated working model

We have invested in and built a high-performance ecosystem enabling us to deliver market-leading differentiated services to our clients. We **create a digital culture and deliver digital assurance through "new ways of working,"** through a suite of solutions/IPs to accelerate project execution and a partner ecosystem to integrate and deploy solutions at velocity.

Wipro today is an innovation-led enterprise transformation partner, built for today's digital challenges. Wiproites are today transforming themselves to deliver **Agile and DevOps** based Digital Assurance.

Designit a wipro company cooper APPIRIO a wipro company topcoder

wipro holmes wipro ventures

- Our acquisition of **DesignIT and Cooper** (leading strategic design firms) through which we deliver human-centric persona-based service design transformation that helps us focus on the things that matter—insights, interactions, integrations, and innovations that make extraordinary things happen for brands, businesses and their customers.

- **Topcoder**, our crowdsourcing community which is the largest in the world—brings together the established and gig economies to help tackle clients' strategic but unsolved challenges.

- **Appirio Cloud Services** delivers world-class solutions for front- and back-office processes, without the burden of infrastructure, helping achieve scale and reliability.

- **Wipro HOLMES™**, our Artificial Intelligence (AI) platform, helps enterprises hyper-automate processes, redefine operations and reimagine their customer journeys.

- **Wipro Ventures**, makes strategic investments in start-ups in the areas of Cybersecurity, Functional Test Automation and Mobile Experience Management.

Our **Silicon Valley Innovation Centre** in Mountain View, California, Technovation Center in Bangalore, India, and our Digital Pods located globally, help us showcase our next-generation technologies and solutions—and also enable co-innovation platforms to build new disruptive solutions with our customers.

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Wipro Limited (NYSE: WIT, BSE: 507685, NSE: WIPRO) is a leading global information technology, consulting and business process services company. We harness the power of cognitive computing, hyper-automation, robotics, cloud, analytics and emerging technologies to help our clients adapt to the digital world and make them successful. A company recognized globally for its comprehensive portfolio of services, strong commitment to sustainability and good corporate citizenship, we have over 175,000 dedicated employees serving clients across six continents. Together, we discover ideas and connect the dots to build a better and a bold new future.

For more information, please write to us at **info@wipro.com**