

Wipro's EngineeringNXT Auto Summit: Never Been Better

CIMdata Commentary

Key takeaways:

- *Wipro's event demonstrated their commitment to the automotive industry by showing recent successes and thought leadership regarding transportation and mobility issues.*
- *Event participation by top-tier technology providers and partners including Microsoft, Bosch, and KPMG, in support of both products and infrastructure, gave attendees a clear view of how broad the industry issues are and the impact of potential solutions.*
- *Wipro solutions, including the ITI PLM-related products and crowdsourcing platform Topcoder, were showcased as special capabilities Wipro has available to help the automotive OEMs, suppliers, and infrastructure providers get their products and solutions to market.*

CIMdata attended the EngineeringNXT Auto Summit at Wipro's offices in Troy, Michigan on December 12, 2019. The format included presentations and a panel discussion to discuss industry issues, followed by a showcase of Wipro's solutions to current and upcoming automotive related challenges and opportunities. The attendees included more than 50 representatives from local OEMs, system and component suppliers, as well as consulting firms and software providers. Mr. Ethan D. Baker, the Mayor of Troy, attended and expressed his appreciation for the support that Wipro gives the automotive industry and the Troy community. It's always heartening to see support given to local communities by large multi-national companies and Wipro's support of First Book as a part the Wipro Cares program is certainly great to see. First Book is a nonprofit social enterprise that provides new books, learning materials, and other essentials to children in need in the United States and Canada.

Travel and/or other expenses related to this commentary were provided by Wipro.

Mr. Dharam Sheoran, Head of Automotive Vertical at Wipro, set the tone and context for the summit. While electric propulsion gets the most press, Mr. Sheoran laid out the key themes that are challenging the industry and society today that will take the next few decades to resolve:

- Connected—Cars, cloud, and infotainment
- Autonomous—Vehicles that think
- Shared Mobility—Future of in-city transit
- Electric—Cleaner, quieter, and safer
- Smart Manufacturing—IoT, 5G, and the future of industry

Wipro created their own autonomous electric vehicle prototype, the Wipod, that demonstrates their capabilities in these key areas. CIMdata follows many PLM-related service providers and believes those that actually use the technologies they support to create physical products are better positioned to help their industrial clients because of their depth of experience.

Mr. Sheoran also reviewed several recent acquisitions and new technology-related services focused on better supporting customers, including:

- Designit—Brand experience development

- Appirio—Salesforce and Workday deployment support
- Topcoder—On-demand digital talent platform
- Wipro Ventures—Strategic investments
- Wipro Holmes—Wipro's organically developed artificial intelligence platform
- International TechneGroup Incorporated (ITI)—Digital engineering and manufacturing solutions company

The acquisitions show that Wipro is willing to make significant investments to acquire great technology and brands to better meet their customers' needs. Many SIs that focus only on using in-house resources end up not being competitive. CIMdata has worked with ITI for many years and supports their solution roadmap and we look forward to seeing the impact of the investment and support Wipro is providing.

Mr. Raj Paul, Regional Automotive Business Leader for Microsoft, gave a presentation entitled "The Future of Automotive, a Microsoft Perspective." Mr. Paul talked about Microsoft's auto industry involvement from early infotainment systems to today's broad product and service portfolio, much of it based on the Microsoft Azure cloud platform. From software development tool chains for product creation to data services for shared mobility, Microsoft is providing services globally at all levels of the auto industry. Perhaps the most exciting statement from CIMdata's point of view was regarding data ownership. Microsoft believes the customer owns their data and Microsoft will not monetize it. That is a big deal when so many providers are monetizing their customers data without giving them the choice to opt out.

"EngineeringNXT—Enabling Auto innovation at scale" was presented by Mr. Rajkumar Madhavan, Wipro's GM and Head of Automotive, Aerospace and Defense, US. According to Mr. Madhavan, Wipro takes a holistic view of transportation and mobility. Mr. Rajkumar cited a key statistic: the average person spends 30 days per year commuting. A multitude of issues arise, well beyond the usual safety issues to include how future commuters might better use this time. To address this breadth of issues, Wipro uses five building blocks to tailor solution stacks including:

- Connected Products
- Software
- Wireless
- Data Platforms
- Industry 4.0

The overall guiding principle Wipro uses in tailoring solution stacks is experience maximization. It's easy to see how the building blocks shown in Figure 1 can minimize the time spent commuting through development of infrastructure and smart city-type projects and how autonomous vehicles can enable more productivity when people do need to commute.

The highlight of the day was the panel discussion focused on the topic of "The emerging landscape of Automotive Engineering". The panel moderated by Mr. Sheoran included:

- Mr. Stefan Beurkle—VP Sales, Bosch Car Multimedia
- Mr. Prashant Kelker—Partner and Lead, North America, at ISG
- Ms. Sue Nara—Director, KPMG
- Mr. Rajkumar Madhavan—GM and Head of Automotive, Aerospace and Defense, US, Wipro

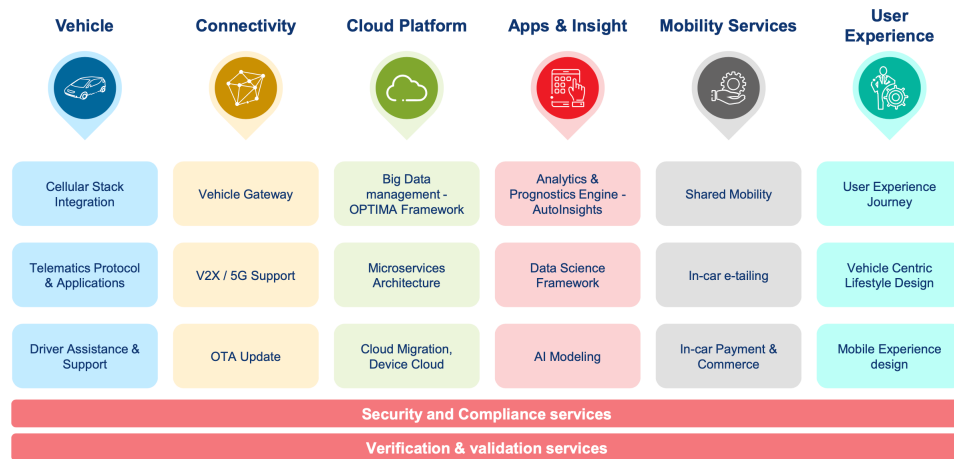


Figure 1—The Wipro Transportation & Mobility NXT-gen Vehicle Experience
(Courtesy of Wipro)

Mr. Beurkle noted that his major concerns with autonomous connected vehicles revolve around security, safety, and the criticality of system architecture. He also noted Bosch is using Agile development methodologies and mused that due to the tough milestones, they are not working on minimum viable products, but minimum “liable” products (i.e., as in liability, focused on safety), an interesting observation. Mr. Kelker noted the difficulty in planning for autonomous operations and sees solutions moving to “noticing” (deriving solutions in real-time based on observations) rather than executing pre-planned actions. The leading-edge solutions are incorporating more data sources so they can adapt as data changes. Mr. Madhavan noted that many OEMs are trying to follow the Tesla model and vertically integrate for autonomy, but his view was it’s too expensive and commercial platforms and open infrastructure are needed to be successful at scale.

Overall the panel discussion was spirited and information and insight dense. Each unique viewpoint added to the topic of the emerging automotive engineering landscape giving attendees a great perspective.

The day ended with a tour of the Solution and Point of View (PoV) showcase. CIMdata focused on the details of ITI, Product Value Chain Digitalization, and Topcoder. ITI’s focus on CAD and PLM data interoperability is a crown jewel within Wipro’s PLM consulting practice. The tools and skills ITI brings to Wipro significantly enhance their data platform strategy and ITI’s customers get improved access to enterprise consulting and technology. As importantly, they also get the confidence that the ITI products will be supported long into the future.

Product Value Chain Digitalization is Wipro’s take on end-to-end integration across a company and its supply chain as shown in Figure 2. CIMdata has previously reviewed this concept in detail in a previous commentary.¹ CIMdata views Wipro’s efforts on [ALM/PLM integration](#)² as a differentiator and the demonstration showed how Wipro’s investments improve management across the lifecycle.

Operating at scale was the topic of Mr. Madhavan’s presentation and Topcoder, their recently acquired on-demand digital talent offering, supports crowdsourcing. Topcoder is a key enabler that helps Wipro get their clients at scale faster. One of the biggest concerns CIMdata hears

¹ <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/12838-wipro-s-product-process-and-factory-digital-twins-commentary>

² <https://www.cimdata.com/en/industry-summary-articles/item/6156-wipro-unites-software-development-with-plm-a-cimdata-commentary>

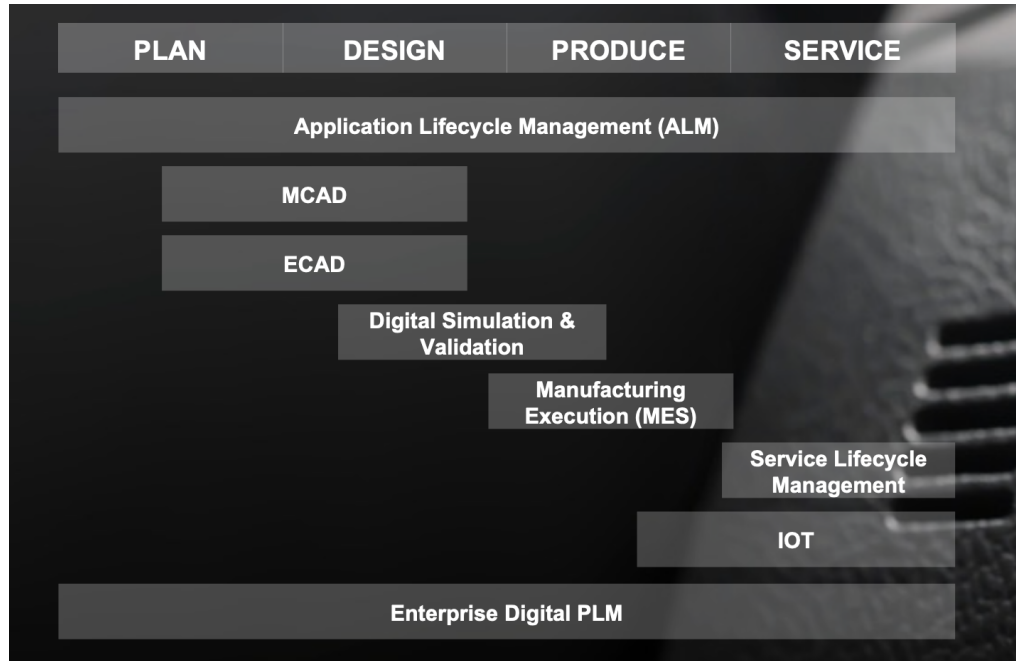


Figure 2—Wipro's Enterprise Digital PLM & Digital Thread Model
(Courtesy of Wipro)

from clients and in the business news is the skills shortage across product lifecycle disciplines, which is particularly acute in software development. With more than 1.5 million registered members Topcoder acts as a marketplace to bring developers and customers together and provides process support to bring projects to completion. A big risk with crowdsourcing is to ensure that the code generated by the crowd does not infringe on someone else's intellectual property (IP). There are many stories of IP-related lawsuits, including the Waymo-Uber issue within the autonomous space. Wipro noted that Topcoder has been operating since 2001 and this has not been an issue. The quality processes they put in place minimize risk and, if there is an issue, Wipro guarantees the solution and indemnifies the customer.

Conclusion

Wipro invited CIMdata to this event so we could better understand where Wipro is moving to support automotive engineering. The idea that we are in the early stages of a major transformation to transportation and mobility was strongly reinforced. Electric cars are just a single element within this new societal experience. Wipro understands that taking a holistic approach is important and that many participants have different roles to play and will jockey for position. Eventually the transportation and mobility environment will become a commodity but that is in the distant future. Right now, innovation velocity is high and accelerating, and getting products and services to scale will determine winners and losers. Based on what CIMdata saw and heard from Wipro, thought leaders in attendance, and from conversations with attendees at the event, the outlook for our transportation and mobility future has never been better.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research,

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