


 A large, modern building with a blue glass facade and a geometric design, situated in a green area with palm trees and a pool.

Infosys campus in the Electronic City area of Bangalore

Get the ecosystem right and connectivity can go global, says Infosys

Megan Lampinen talks to Sanjay Jalona about making connected car technology possible for all markets

In the world's developed automotive markets, connected car technology is an essential and assumed part of all new vehicle programmes. Car connectivity is now also becoming increasingly important in emerging markets. Indeed, Indian company Infosys believes that connectivity is possible for all markets, provided the right ecosystem is in place.

Megatrends spoke with Sanjay Jalona, Executive Vice President, Global Head, High-Tech & Manufacturing and Engineering Services at Infosys, on the global rollout of connectivity. Jalona

oversees one of the largest and the fastest growing segments at Infosys, the Manufacturing and Engineering Services business. The business has grown to US\$1.8bn and now accounts for 23% of total company revenues.

How is Infosys involved in connected cars?

Connected cars are something with which Infosys has been associated for a long time and at various levels. We provide a range of services, including



telematics strategy, embedded software and design, engineering services, complex event processing, building algorithms, Big Data implementations, Cloud implementations and analytics insights. We also provide enterprise integration and validation services. In addition, we invest in research and development as part of our Center of Excellence for the Internet of Things, and Infosys Labs to help our clients implement complex use cases and programmes.

Can you please provide some examples of your company's involvement in connected car technology developments?

We recently partnered with Toyota on a Driver Awareness Research Vehicle (DARV) project. We used a combination of Microsoft Kinect, Microsoft Surface tablets and Pebble smart watches for a number of use cases on driver distraction avoidance. We have built an ecosystem of partnerships with Bosch Software Innovations, PTC, Oracle, SAP, Tableau, DigiLogic, Gemalto and Pega to enable our connected car solutions.


 A blue Toyota minivan with white and red graphics. The side of the vehicle features the text 'D.A.R.V. DRIVER AWARENESS RESEARCH VEHICLE' and 'Infosys Research Center'.

Toyota Driver Awareness Research Vehicle



Android Auto

How is the adoption of in-car connectivity progressing in the world's major markets?

Car connectivity can be tethered, integrated or embedded. Tethered refers to connectivity through the smartphone. When we talk about integrated, the car's dashboard screen acts like an extension of the smartphone's screen, such as CarPlay and Android Auto. In embedded systems, a SIM card is embedded within the car's communication module. Embedded gives OEMs the flexibility to differentiate from their competitors.

In your experience, which is proving most popular?

Our perspective, based on what we have observed in North America and Europe, is that luxury brands will opt for embedded SIM cards, which offer strong brand differentiators in terms of unique features. For the lower-end car segments, customers will have the option to go either for the tethered option or integrated options.

Safety or convenience – what is the stronger force in driving connectivity developments?

I think both. Safety is paramount, and there can be no compromise on safety. Given that, we are talking about mobility in a vehicle under unknown conditions, such as road, weather and the movement of other vehicles. It is clear that safety trumps convenience. However humans, by nature, are always in search of convenience and it is a key criterion for customers to choose a vehicle.

Do you think the introduction of semi and fully autonomous driving might change this?

No. With the drive towards autonomous vehicles, the focus is on making vehicles safer for humans. This is the ultimate goal towards which the industry is being driven. Convenience comes along with technological advances and if it helps OEMs to differentiate their products, why not? However, the convenience features are more easily replicated,

while safety features provide a long-term differentiation.

What role will government support play in furthering in-car connectivity?

Governments will play an important part in the transition and acceptance of connected car services. We can see this happening in Europe with eCall. In North America, NHTSA is already leading a number of safety innovations around vehicle-to-vehicle connectivity and autonomous emergency braking.

Do you think connected vehicle technology will eventually be a possibility for all regions?

Yes, but in the long term. The existence of the ecosystem is of great importance, and this ecosystem consists of different stakeholders – governments, customers, automotive OEMs, vendors or partners, and third party service providers.

We see the governments in Europe and the US taking proactive measures and introducing bold initiatives to make connected cars a reality. They are enabling companies to experiment and are changing laws to accommodate new technology advances. They are even investing in major programmes, along with industry and academia, to further the cause of a safer future on the road. Other regions may take similar steps but may take longer to realise them.

How does the cost of this technology impact its adoption?

With advancements in manufacturing and a widening usage base, the technology costs are dropping quickly as well, so it would not be too long before these become the basic norm in more markets around the globe.



Apple CarPlay in the new Mercedes-Benz C-Class