VIEW POINT

BOTS AND OEMS: STRIKING THE RIGHT PARTNERSHIPS

Infosys®
Navigate your next

The challenges faced by Original Equipment Manufacturers

Current technology trends and rapid innovation have forced OEMs (Original Equipment Manufacturers) to rethink their business strategies. The manufacturing value chain is being disrupted by new technologies and consumer behaviors. Besides navigating these changes, manufacturers are grappling with cost pressures, inconsistent sales across different business models, and the need to make large investments in R&D and innovation.

To stay competitive in a difficult market and relevant to customers, OEMs are:

- Consolidating vendors
- Standardizing global processes
- Consolidating business verticals
- Driving enterprise-level agile transformation
- Sharing platforms, technologies and production facilities
- Engaging in strategic partnerships, such as joint ventures, mergers & acquisitions, and equity or non-equity alliances

Leveraging strategic technology partnerships

Since organic growth takes time and money, OEMs are investing in startups, utilizing their technology to gain first-mover advantage.

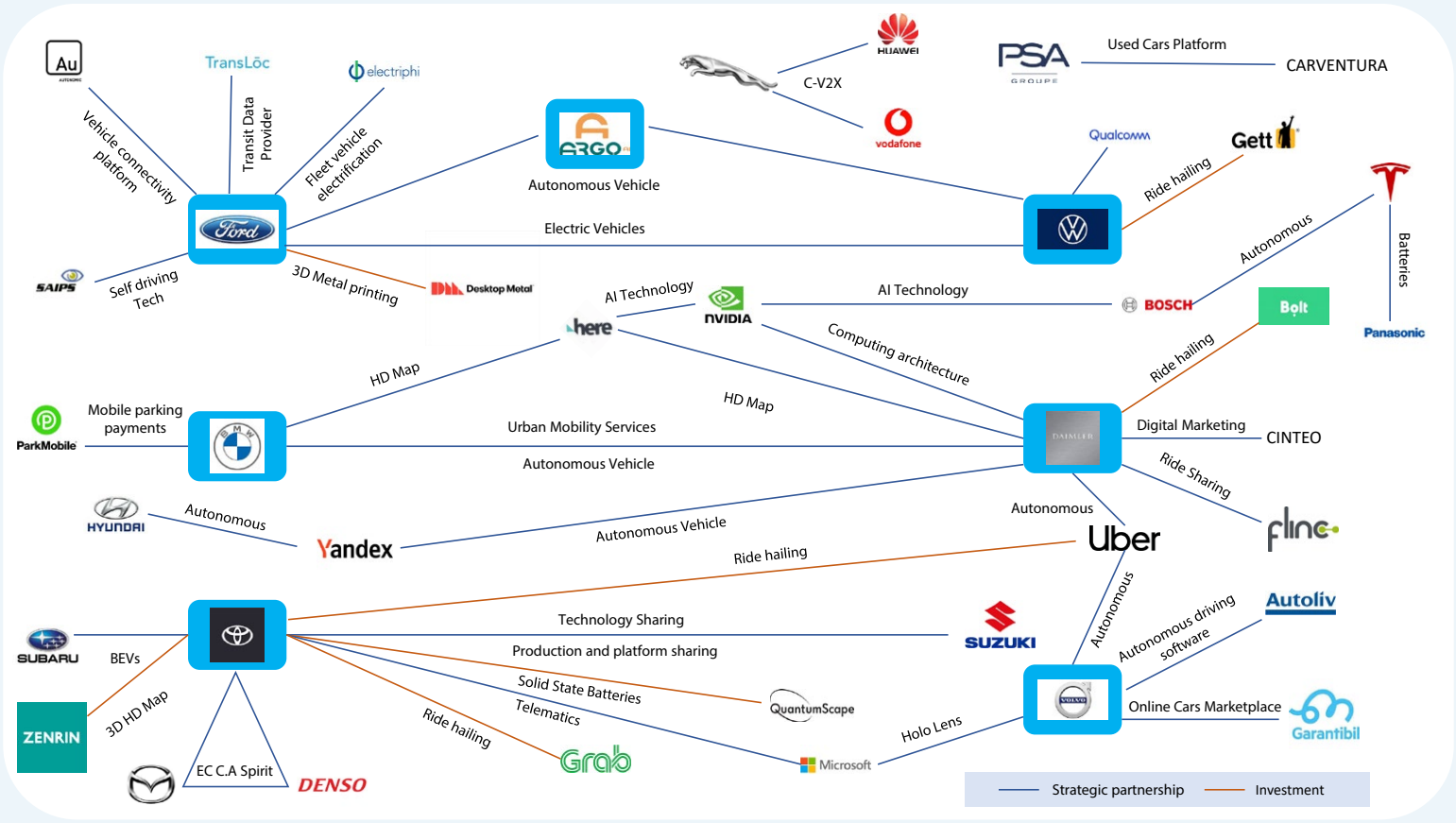
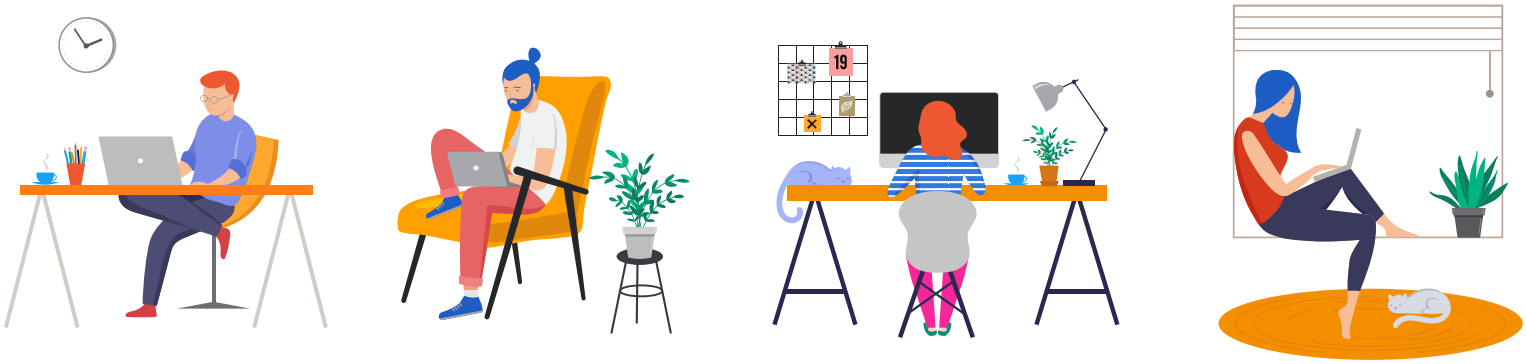


Figure 1: Technology partnership map of top automotive OEMs



Every strategic partnership addresses a void created by the disruption caused by new technology or consumer behavior. Fig 1 lists various partnerships and investment alliances of the world's leading automotive OEMs in areas such as self-driving technology, maps, online car marketplaces, telematics, electric vehicles, etc.

Finding the right partner

While OEMs expect these alliances to help them beat disruption, identifying a partner can be time-consuming and risky. Typically, there are risks involved in:

Technology selection

Technology and investment should be in sync with market trends and the projected value realization.

Product selection

There needs to be a viable product roadmap to ensure market acceptance.

Time to market

Maturity of technology should be weighed against time to adoption, prior to investment or integration.

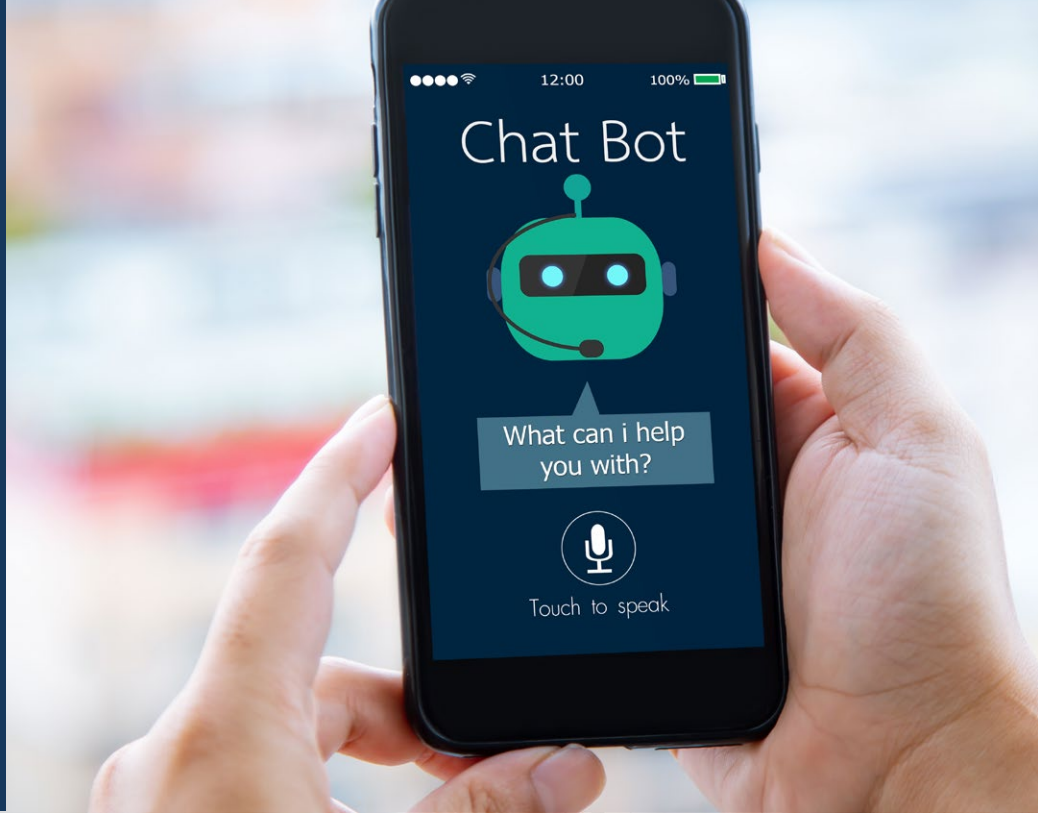
Fortunately, there are customized solutions that mitigate these risks by helping OEMs find suitable partners. A potential solution framework, built on four pillars, namely, Capture, Discover, Track and Validate, is discussed here:

Capture

Build an automated bot with the technology the OEM is interested in. The bot can share insights automatically based on the feedback from the product design phase, cost optimization exercise, or manually configuration for any other processes. This bot may be used to discover relevant companies or display sectoral trends. It would also filter the huge amount of data being consumed by the analytical platform. Figure 1 shows several technology partnerships in the bot space (both automated feedback-based and user-defined), ranging from vehicle connectivity platforms and 3D metal printing to digital marketing and solid-state batteries.

Discover

Using the bot, OEMs must explore various data sources to identify companies, investment ideas, market trends, and leaders. The data sources could include ownership information, SEC filing and earnings, employee count and distribution, funding data, transaction data, search trends, stock data and financial statements, product reviews, search engine marketing data, consensus estimates, employee ratings and reviews, and more. This may be achieved by building appropriate foundations for data and analytics fabricated with suitable information structures and processes using:



A data lake

This consists of raw (structured and unstructured), transformed, enriched, and analytics data.

A data grid

This works across cloud and on-premise environments to provide seamless and secure access to data, thereby breaking physical boundaries.

Integration services

The grid needs to be metadata-driven and employ integration and virtualization techniques to make all data available and accessible.

For example, if the bot is for '3D metal printing', during this phase, the solution should list all the major and upcoming trends in parts manufacturing, the companies working on such technology with their overall performance data, as well as market reviews about the product and its acceptance. This stage is helpful for collecting various options to enable informed decision-making.

Track

At the end of the 'Discover' phase, the solution starts tracking selected data for each discovered entity in real-time and captures events for future analysis. This phase could be configured to run for a limited time. Manual intervention is possible, and companies and trends can be added or deleted. This phase is very important since it captures the market reaction in real-time.

Validate

The data of OEMs and their prospective partners is analyzed based on improvement areas, including growth and cost reduction. This step is important to configure a dashboard to validate performance. The 'Track' phase will continue to run in parallel, simulating the real-time scenario with different options (JV, investment, etc.). Here, the idea is to link the OEMs' product portfolios and performance to market capabilities and trends.

The dashboard tests the investment with capability mapping and product launches. KPIs are used to enhance decision-making.

Listed below are some of the use cases that can be addressed with the above approach

- Increasing production capacity by sharing facilities
- Launching products and achieving scalability
- Reducing cost by sharing technology
- Suggesting parts replacement during the design phase
- Reducing R&D cost and ensuring early adoption of technology by investing in tech companies

The solution can also help simulate various strategic partnership scenarios.

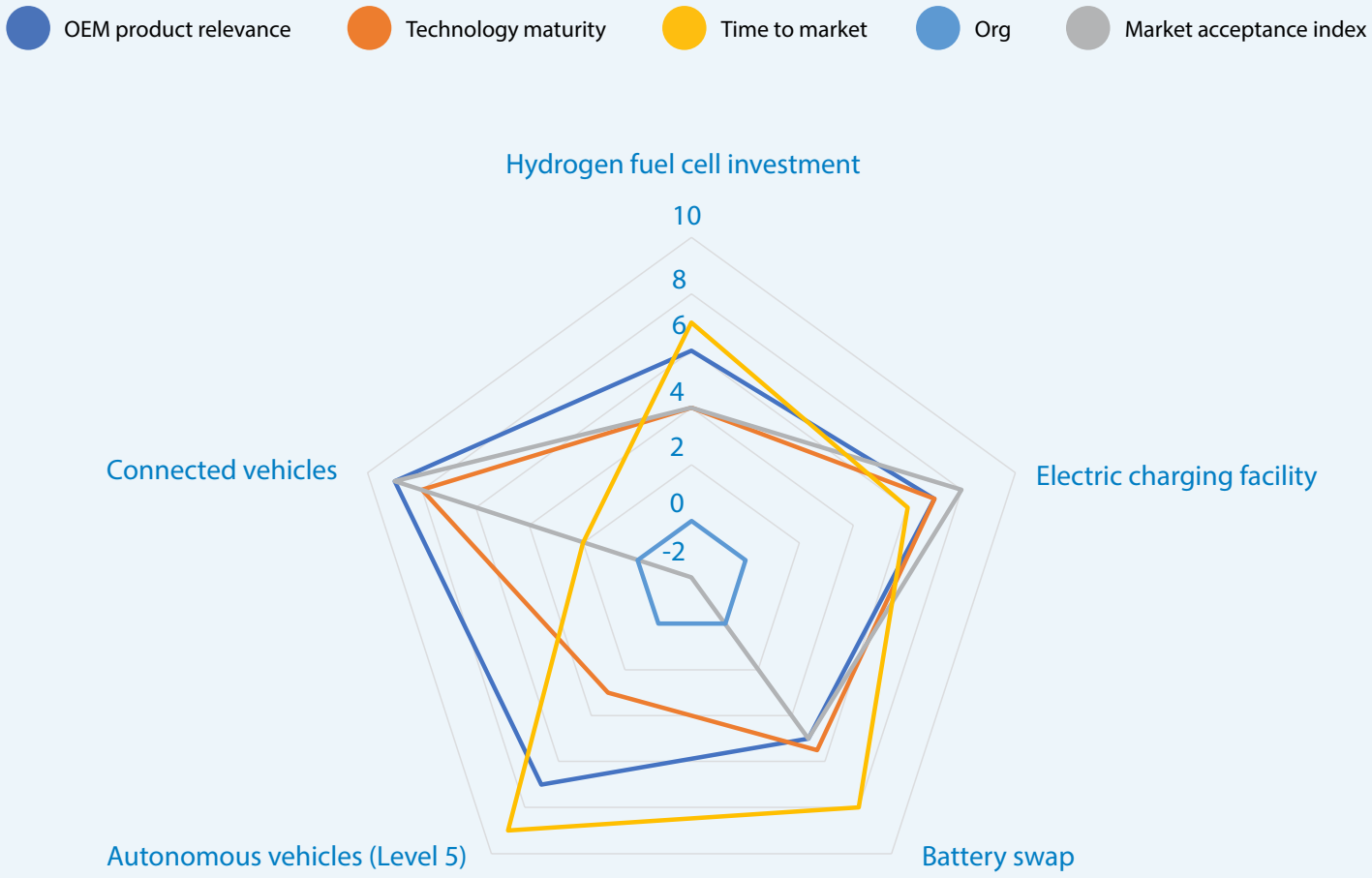


Figure 2: Illustration of a sample framework

Figure 2 showcases a sample framework with five different bots: hydrogen fuel cell, connected vehicle, autonomous vehicle, electric charging, and battery swap.

The solution suggests five prospective partners after considering important levers, such as technology maturity, time to market, OEM product relevance, and market acceptance index. This framework serves as an input for the 'Analyze and Validate' phase. Later, the dashboard simulates the partnership and investment scenario to make an informed decision.

The solution dashboard is envisioned below

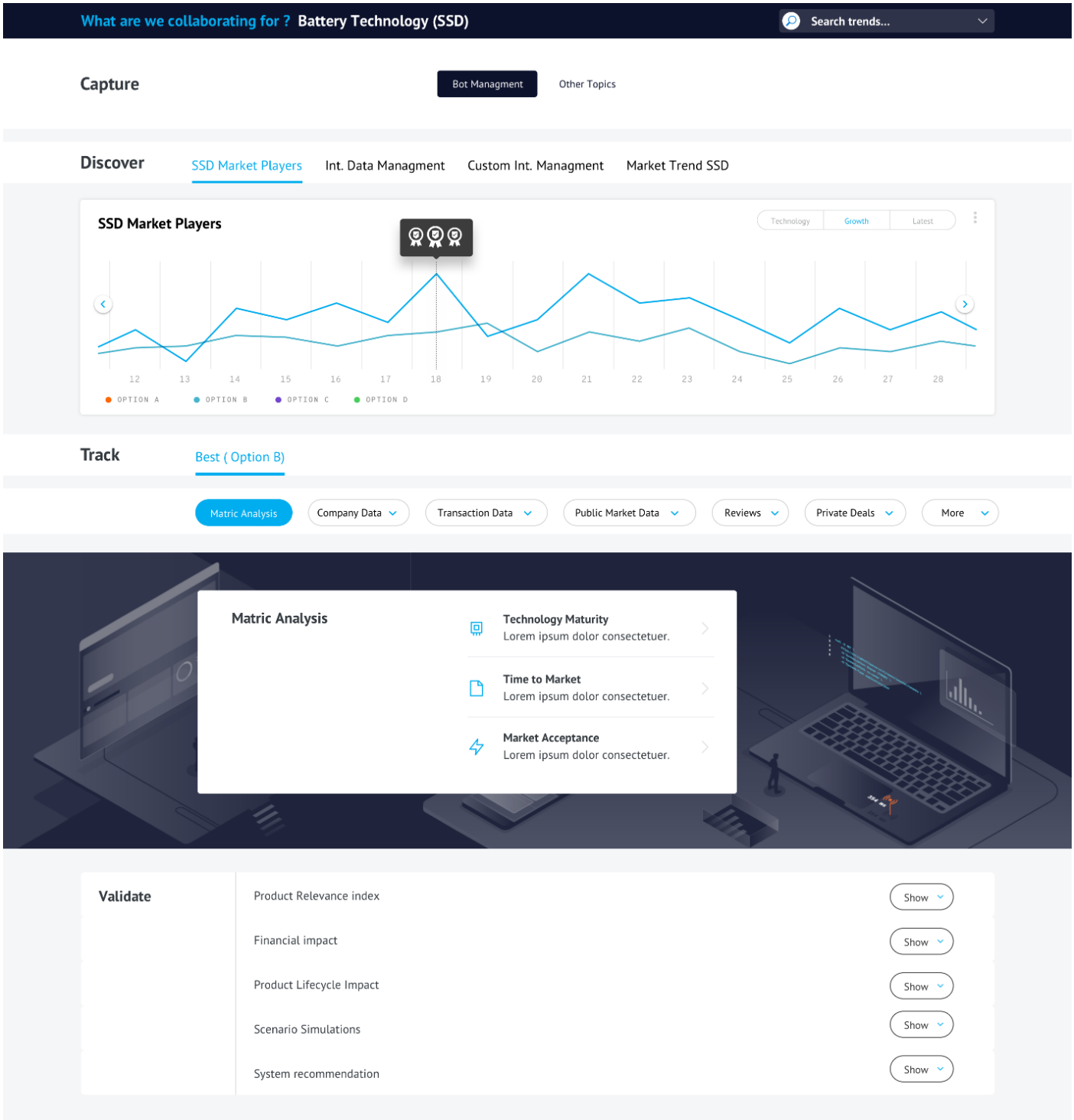


Figure 3: Solution dashboard

The above dashboard helps manage an OEM's entire collaboration journey effectively and efficiently.

Conclusion

We are currently in an optimal space of digital transformation and this solution would help OEMs to strategize their investments in sync with their vision. The execution of the strategic partnership process, cultural sensitivity and collaboration require a dedicated team and effort to achieve results. It's worth mentioning that few collaborations have witnessed organizational restructuring and new brand positioning.

The solution could be further developed to include valuation and market capitalization as well. The whole idea is to strategically enhance OEMs' outlook as per trends and customer preferences and provide a roadmap with the next best actions at an organizational level.

Author

Nishant Karn, *Lead Consultant*

Nishant has 12+ years of experience in manufacturing and consulting. He has managed end-to-end operations of an automotive dealership. He has also been involved in large digital transformation programs, product development, and multiple market rollouts.

Reviewers

Kavoori Srinivas Indeevar, *Industry Principal*

Indeevar is an Industry Principal Consultant and leads the automotive and aero domain consulting practice at Infosys. With more than 24 years of experience, he has led several IT projects and business process transformation projects, with some of the leading companies in the manufacturing and automotive industries. Indeevar has helped his clients through successful design and launch of applications across the automotive value chain.

Anup Thantry, *Principal Consultant*

Anup Thantry is a Principal Consultant with Domain Consulting Group at Infosys, with more than 19 years of consulting and program management experience in the automotive and manufacturing industries. Anup helps clients digitally transform their business through innovative digital solutions.

For more information, contact askus@infosys.com

Navigate your next