Automotive Center of Excellence

Bringing the tools of digital transformation to the automotive sector
Welcome to DXC Technology’s Automotive Center of Excellence.

Whether it’s embracing innovative driver-assistance systems, electrification or the adoption of new business models, the automotive industry has been going through a monumental transformation. At DXC’s Automotive Center of Excellence (COE) we are working closely with our partners to solve these complex challenges for auto makers.

There are three key competencies on which we base our COE expertise.

First, Automotive Analytics and Data Management capabilities and solutions that can be employed for a more efficient R&D, a deeper understanding of customer needs and better management of after sales through professional management and analytics of data lakes based on Hadoop platforms.

Second, we help DXC’s clients set up new Digital Factory lines or plants using the latest Industry 4.0 concepts, all of which contribute to increasing efficiency, stability and collaboration. From software development (DevOps) to implementation of standard products we can provide deep automatization knowledge for the automotive industry.

Third, we focus on Agile Development and Operations services which support clients’ software applications needs from the formation of the idea and strategy through prototyping, testing and production, as well as maintenance and continuous improvement through DevOps Methodology and hybrid cloud environments.

The three pillars are supplemented by DXC’s expertise in Consultancy Services and our Automotive Eco Partner Network, which includes both strategic partner alliances with leading technology companies and collaboration with start-ups to enhance innovation. Building on DXC Digital Transformation capabilities we use the Automotive COE to focus on our automotive clients’ needs in their current transformation from car producers to providers of mobility solutions. This brochure explores this transformation by providing a more detailed look into DXC’s Automotive Center of Excellence and its focus areas.

I hope you enjoy reading,
DXC Technology’s Automotive Center of Excellence

Bringing the tools of digital transformation to the automotive sector
Creating a framework for digital transformation

Auto manufacturers want to adapt and become fully digital organizations, but they often need guidance — a framework for working more like a software company that constantly updates and improves versus an automaker that produces a car, sells it and moves on to the next batch of cars on the assembly line.

The move to digital has been profound, as many premium vehicles today have more than 50 computers and more lines of software code than a jet fighter. Electric and hybrid vehicles, autonomous driving and connected cars are on the rise, and automakers are embracing new business models to satisfy the mobility needs of their customers.

Auto manufacturers must find ways to build products that can function in these new transportation models — whether car/ride share and mobility solutions such as car2go, MAVEN and Lyft, or intermodal transportation systems where people may take a bus, next drive 50 to 100 miles and then take a train to their final destination.

At DXC Technology’s Automotive Center of Excellence (COE), we are working to solve these complex challenges for automakers by helping them define and implement their strategic roadmaps to become digital organizations.

DXC’s COE expertise is based on three key competencies: Automotive Analytics, Digital Factory, and Agile Development and Operations. We also rely on our diverse partner ecosystem, which includes large corporations as well as innovative startups.

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Automotive Analytics

DXC has developed special expertise in creating analytics and data management solutions specifically in the following areas: research and development (R&D) testing for autonomous cars, field duration tests, connected car, supply chain and sales processes for the automotive aftermarket. These solutions are developed with agile methods, and leverage new big data and artificial intelligence frameworks, concepts and technologies. Even more important, our agile philosophy allows us to integrate the solutions as fast as possible into the existing enterprise processes to generate immediate value from the data.

Many of our customers are the R&D departments of automotive companies working on the next generations of cars.

When R&D departments of automotive companies run tests on the new autonomous vehicles, they create massive amounts of data — information that has to be analyzed and formatted for analytics.

One test car can generate nearly one petabyte of data. Before a car reaches its final development stage, it also has to undergo field durability tests. For one client that performs field tests in China, Finland and South Africa, DXC analyzes and delivers the data locally so the regional teams can have faster access to the latest information. This information is also accessible to the client’s other engineers around the globe.

For the automotive aftermarket, we can apply machine learning algorithms to run analytics that provide, for example, the best pricing and demand forecasts for spare parts. We can analyze unstructured shop feedback during repairs to identify unknown quality issues. Our experts advise and build new architecture concepts to onboard, manage and analyze the growing data volume of the connected car fleets in a secure and scalable hybrid architecture. We are also working with our OEM clients’ teams to provide analytics for their production plants.

Digital Factory

DXC helps its customers implement IT systems for new production lines and plants or adapt existing IT to new models and production requirements.

Through solutions and capabilities we have developed, our clients can achieve their key plant objectives: efficiency, stability and decreased downtime. Our automotive consultants develop and operate a complete factory IT as a service (FaaS), as well as key functional parts of engineering, such as product life-cycle management (PLM) systems. Our experts also work with our clients to define their roadmap for becoming digital companies. For example, our Industry 4.0 platform provides a significant contribution toward achieving the vision of the connected factory.

DXC’s PLM offering consists of the computing services, licenses and support required to start development of a new product. We install the systems, implement processes and manage day-to-day operations via a Level 1/2/3 help desk. DXC’s provisioning of compute and storage from a variety of cloud options provides speed and flexibility, and we offer these services in a price per user/month model. Our FaaS model includes pricing for a series of services that includes the IT for the management information system, logistics, finance and human relations departments. Through FaaS, clients obtain a full view of what their IT costs will be when starting new product development or opening a new factory.

All of these systems can run based on Industry 4.0 standards, which are best practices for data center concepts, secure runtime environments, and integration between IT and operational technology (OT). The DXC Industry 4.0 platform can be built as a partial or factory-built turnkey solution available for both brownfield and greenfield plants.
DXC Agile Development and Operations services support our clients’ software applications needs from the formation of the idea and strategy through prototyping, testing and go-live, as well as maintenance and continuous improvement. We support this via proven methodologies, technologies and highly dynamic processes that reflect the increased speed of the market and the industry’s migration to becoming fully digital enterprises.

DXC accomplishes this by using the appropriate platforms and cloud-native application services that best fit the client’s needs, including public cloud options such as Azure or AWS, or our own DXC Virtual Private Cloud, with on-premises or hybrid options.

DXC offers this end-to-end or by component, whichever fits the customer’s requirements. For customers to make the best decisions possible, we recommend a five-phase approach that works for either new or existing projects. Our product development approach is based on a close collaboration between the customer and DXC.

1. Pre-Discovery Phase: In the initial phase, the overall strategy and direction of the program are sketched out, and strategic priorities are clearly defined. These outcomes describe the envisioned target environment. Throughout the journey, new learning from the project will deliver information to adjust the initial target picture.

2. Discovery Phase: The target audiences are segmented and observed to establish clear persona profiles. The customer’s requirements are analyzed with respect to the project concept. Pains and gains are analyzed, and a new value proposition is defined in an iterative process. At the end of this phase, test scenarios are defined and designed that lead to the requirements of a minimally viable product (MVP). Potential technology partners are also selected to cut both the early prototyping cost and later development costs.

3. Alpha Phase: During this phase, the MVPs are developed, third-party technologies become integrated, and tests are set up and executed. The goal is to test quickly, fail at low-cost, and learn from the failures made in the design to improve the solution.

4. Beta Phase: When we enter the beta phase, the first version of the product is developed, life-data sources are connected and the product is hardened. We then hand over the new software to operations for the first time, define a run organization and garner first operational results. End-to-end functional tests, deployment tests and security tests are performed, and first beta users are observed in the user-acceptance test. Improvement ideas are written into the backlog.

5. Live Phase: The product is further iterated, maintained and optimized. We consider this the continuous improvement process, so the end of one live phase marks the beginning of the next live phase. New learning and functionalities to improve the product are also planned.
Industry Consulting

We help our customers to mobilize the links between IT systems and concrete business goals, and in doing so, solve business problems via intelligent use of proven DXC technology.

Our ambition is to orchestrate the solution components of the digital world to the highest value of our customers. We see three strategic options for digitalization in the automotive industries:

• Creating new business models. DXC works with automakers to transition them into digital companies. In the past, automakers built products from assembly line to assembly line, and from marketing year to marketing year. We innovate and accelerate the journey to the digital company that offers mobility services rather than products.

• Designing new customer experiences. DXC works closely with clients to design mobile applications that put automotive customers in contact with the drivers. We build mobile interfaces that integrate back-end IT systems with the connected car. It could be something as simple as the vehicle operator using the automaker’s website for a support issue, to delivering marketing and new-product information to drivers.

DXC’s Consulting Group focuses on taking automakers as well as automotive suppliers through their digital transformation journeys.

Innovation/ Partnerships

DXC has forged partnerships with many leading technology companies. Strategic Partners such as SAP, Amazon Web Services, Microsoft and ServiceNow represent our deepest, most comprehensive partner relationships. Our joint business objectives, mutual investments, co-development and ability to scale help our clients harness the power of technology to transform their business. Each partner also shares our drive to continuously exceed expectations, as well as the ability to deliver globally.

DXC also collaborates with a growing number of Solution Partners, such as Citrix, Hortonworks, VMware, Dropbox and Symantec, among many others, to create comprehensive and complete business transformation solutions.

One of our main innovation partnerships is Startup Autobahn, Europe’s largest innovation platform in the automotive industry. Startup Autobahn fosters the collaboration between startups and corporations in order to create new digital solutions, customer experiences or business models. Today, along with DXC, members include Daimler, Porsche, BASF, ZF, DPDHL and many more.

Within Startup Autobahn, DXC tests cutting edge technologies for future automotive digital solutions and has the environment to jointly prototype new innovation ideas together with startups and our clients. For example, DXC partners with the TelAviv-based startup GuardKnox to build a solution allowing fleet owners to monitor cyber security incidences across the entire fleet. Furthermore, DXC developed a service connecting several platforms to enable automation of an entire manufacturing supply chain. Partners in this project were Klöckner, the Berlin-based startup Kreatize and other corporate members of Startup Autobahn.
Taking the next step

Transforming into a digital company takes a commitment from top management, as well as the right people and technologies. Going digital does not mean, and should not result in, chaos. There are ways to accomplish digital transformation in an orderly fashion that lets the workforce adjust along the way. Leverage the vast capabilities of DXC’s Automotive COE to take your company to the next level, whether you are designing next year’s flashy new models or breaking ground on a new greenfield plant. The Automotive Team at DXC has the experience and technical skills to help your company and products successfully transition into a digital world.

Meet the DXC Technology’s Automotive Center of Excellence team

Learn more at www.dxc.technology/auto
Contact us at automotive@dxc.com

About DXC Technology

As the world’s leading independent, end-to-end IT services company, DXC Technology (NYSE: DXC) leads digital transformations for clients by modernizing and integrating their mainstream IT, and by deploying digital solutions at scale to produce better business outcomes. The company’s technology independence, global talent, and extensive partner network enable 6,000 private and public-sector clients in 70 countries to thrive on change. DXC is a recognized leader in corporate responsibility. For more information, visit dxctechnology and explore THRIVE, DXC’s digital destination for changemakers and innovators. For more information, visit www.dxc.technology.

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