Warranty management has an important role to play in transforming the automotive industry and the way in which it delivers value to the end consumer. This Technology Spotlight explores how warranty management can be a key differentiator in the automotive manufacturing industry and its transformation in the digital age.

Closing the Loop on Warranty for the Digital Age

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Introduction

Recent research from IDC highlights that for manufacturers, especially in the automotive sector, the most significant IT investment initiatives are to increase productivity, increase revenue, reduce costs, and optimize business processes. For example, the auto OEM is in a new world. Selling a car is no longer about luxury status symbols for the customers, instant gratification is the expectation, and the industry is being pressured by the "gig" economy. New generations of buyers may not value the permanence of a vehicle as much as previous generations did. Given the transformation occurring, IDC Manufacturing Insights is seeing an increased shift to selling services and experiences, not solely products. This Technology Spotlight explores the role of how warranty management can be a key differentiator in the automotive manufacturing industry and its transformation in the digital age. We believe this will equally apply to many verticals with a high warranty payout.

AT A GLANCE

KEY STATS

In a recent IDC survey, auto OEMs indicated that the following technologies will have the most impact on their business over the next five years:

- Business analytics — 37.6%
- Cloud services — 32.5%
- Big data — 23.3%
- Robotics — 21.1%
- Mobile applications — 20.8%
- Internet of Things — 17.2%

Definitions

The following terms are used in the customer service and customer support space specific to managing warranties and claims:

» **Service life-cycle management (SLM)** is the process of servicing a product through its lifetime. This includes customer support, service requests, service planning, service execution and field service, spare parts management, warranty management, and recalls.

» **Warranty management** refers to the stages of the warranty process including registration, claim capture, claims validation, early failure detection, fraud detection, recalls, parts returns, adjudication, extended warranty service, and reserve optimization.

» **Servitization** refers to the delivery of the product as a service, which includes selling usage, uptime, and power by the hour.

» **Internet of Things (IoT)** is a network of uniquely identifiable endpoints (or "things") that autonomously connect bidirectionally using IP connectivity.

» **Digital transformation (DX)** is the process of transforming decision making with technology and is at the heart of business strategies for companies of all sizes. DX is a board-level initiative that leverages 3rd Platform technologies such as mobile, social, cloud, and big data/analytics as well as innovation accelerators that include augmented/virtual reality, artificial intelligence (AI), robotics, 3D printing, and the IoT.

Reimagine Warranty Management in the Digital Age

The automotive industry is in the throes of DX. But this transformation is not solely impacting the way auto manufacturers design and build cars and trucks with new advancements in technology. Digital is the foundation for a profound change that is impacting the way manufacturers provide service to customers. In IDC's 2017 *Vertical IT and Communications Survey*, 48.2% of auto manufacturers stated that they are well under way with or at least in the early stages of DX.

Despite the evolution and transformation occurring among auto OEMs and in the manufacturing industry as whole, not all aspects are moving as fast as others.

» Servitization has enabled manufacturers to extend their revenue streams beyond just products to include service offerings. As a result, auto OEMs need to establish business models around service and look to continuously improve service quality.

» Warranty management, especially, has often been viewed as a reaction to an issue or a product failure, and it hasn't seen the same level of transformation as other parts of the business.

Four Key Drivers for Warranty Management in the Digital Age

Today, manufacturers have an opportunity to take a new approach to warranty management to:

» Drive customer experience (CX)

» Deliver value in the service life cycle

» Transform operations

» Reduce costs

Manufacturers must reimagine warranty management and its ability to enhance the customer relationship in this digital age, which will require setting new priorities and value models.

Key Benefits

Key benefits that auto manufacturers can reap from a transition to a more robust warranty management solution include:

» An enhanced customer experience enabled by transparency into the warranty claims process and faster issue resolution

» Continuous improvement in products and services as a result of early detection of failures and a data flow from the point of service to the product design team

» Increased profitability from the reduction of fraud while establishing an opportunity to unearth new products and services derived from insight into customer behavior and usage trends

The Challenge: Why the Time for Complacency Is Over

Even with this clear business case for reimagining warranty management, many auto OEMs are:

» Paralyzed by the status quo. Change is difficult and manufacturers need to see the urgency in front of them. If they don't change, competitors and other market players will pass them by.

» Dismissing investment in automation or an upgrade to their current solution as unnecessary leaves auto manufacturers vulnerable to falling behind as the digital world transforms around them.

Each aspect of the service experience must be reevaluated to ensure that it not only is more efficient but also provides accretive value to the customer. The time for complacency is over. Manufacturers must look to warranty management to differentiate their service business and add value to the service life cycle.

To thrive, manufacturers must leverage a warranty management solution that addresses key requirements to:

» Analyze volumes of data and create actionable recommendations

» Enable proactive issue resolution and notify stakeholders of pending issues

» Automate the entire warranty process to ensure efficiency and expedience

Service Excellence at the Forefront of Value Creation

Warranty management is no longer viewed solely as the cost of selling products in the automotive industry. Many factors are making it imperative that auto OEMs explore the transformation of warranty management. Key factors include the following:

» **Manufacturers need to respond more quickly to product quality issues and complaints.**

   o Customer expectations for improved service continue to rise, and delays on processing claims are no longer acceptable. In IDC's *Manufacturing Insights 2017 Product and Service Innovation Survey*, the top driver for manufacturers to improve service was the need for a faster response to product quality issues and customer complaints. The ability to quickly identify an issue (preferably before it becomes a failure), notify the customer about the issue, and resolve the issue is becoming more important for manufacturers. Customers not only have increasing demands and expectations; they also have more options. This is a perfect storm that manufacturers must confront head-on.

» **Data is integral, and it must be shared with the right stakeholders in the process.**

   o A need exists for a collaborative work environment and closed loop of service. Silos of data and action have a large negative impact on improvement and excellence. The sharing of data is integral as organizations look to improve efficiency, time to market, and enhanced quality. IDC believes data captured from warranty claims must be provided to the engineering and design teams to improve current and future products. Less than half of manufacturers (43.7%) surveyed by IDC have a

closed-loop process in place between product design/formulation, manufacturing, and in-market service and product usage for their service life-cycle management applications, including warranty.

» **There is a need to unearth failures faster and solve complaints quicker.**

o Proactive service is the future of customer experience. Failures will occur. But in the digital age, more products and vehicles have intelligence, which helps warn of a pending failure and allows the service organization to be more proactive in support. Auto OEMs want to unearth product failures faster, respond to those failures, and resolve customer complaints. The future, however, is in the ability of the auto manufacturer to leverage real-time warranty data to proactively interact with and advise customers to improve their experience.

» **Connected products and vehicles will improve the claims life cycle.**

o Connected products and vehicles are growing in importance. Currently, 79.3% of auto OEMs have budget allocated for an IoT solution. In IDC's *2017 Global IoT Survey*, auto manufacturers highlighted three key factors that influenced their decisions to create an IoT strategy or make an investment: improve business productivity/efficiency internally, reduce operations costs, and improve productivity/efficiency for customers. The desire to design and manufacture products, namely vehicles, which leverage technology to deliver value in new ways to customers will transform the auto industry and the way in which manufacturers interact with customers. Furthermore, connected products and vehicles will enable better validation of claims and visibility into product performance and usage in real time and not just when the vehicle is brought into the shop for repairs.

» **Business models are changing.**

o Today, manufacturers are selling service and service value, not just products. Servitization is impacting many industries. As more products become commodities, manufacturers need to find new ways other than pricing to differentiate themselves from their competition.

Considering Tech Mahindra's WarrantEAZE

Tech Mahindra's manufacturing group works with clients to innovate around the warranty management and service life cycle. The company understands that the customer experience is the future of how manufacturers will excel and differentiate, and it is the focus of the company's technologies and capabilities.

Warrant*EAZE*

Tech Mahindra's Warrant*EAZE* solution, powered by Pega technology, is a prebuilt application that has a modular suite of capabilities for end-to-end global warranty management. Tech Mahindra's solution addresses warranty business execution gaps while optimizing the total cost of ownership (TCO) of existing investments and increasing the return on investment (ROI) for different organizations within the OEM.

Greenfield or Brownfield

The application could replace or seamlessly integrate with existing systems and technology infrastructure supporting various warranty business functions. Tech Mahindra is continuing to add functionality and capabilities to the solution to ensure it evolves with the needs of its customers and the auto OEM.

The Warrant*EAZE* solution manages the entire life cycle of the warranty operation and end-to-end service. The application could seamlessly integrate with or even replace the existing systems and technology infrastructure supporting various warranty business functions. The solution also enables users with the tools and insights to glean intelligence within warranty and move to a more predictive after-sales service. Capabilities include:

- » A path for the auto OEM to take advantage of machine learning (ML) capabilities to automatically tag keywords in the claims process (The solution also supports the claims team in identifying potential fraudulent claims faster.)

- » The use of AI to resolve pending issues proactively (This capability allows the OEM to identify patterns of product usage to suggest new products and services. The service team is also provided with insight into future service issues to enable proactive engagement with customers before a failure occurs.)

- » IoT capabilities that are enhanced to better aggregate data from the product and asset in real time

- » A closed-loop business process that incorporates data from the dealership, customer, field service, and warranty into an end-to-end business solution

Challenges

There is a clear opportunity for auto OEMs to revamp and bolster their warranty processes. However, the service function within the automotive industry often lacks innovation and innovative acumen. A mindset change is needed to spur OEMs into looking at warranty as an opportunity to enhance the customer experience and not just as a part of the cost of doing business. There is currently no urgency for many auto OEMs to make the investment. Change can be tough, and many auto OEMs have a homegrown or manual system in place that they feel is good enough. To make inroads, Tech Mahindra will need to educate OEMs about the future importance of warranty as a key to differentiation in service experience and value creation.

The automotive industry and manufacturers in general also have a somewhat disconnected or siloed organization where warranty, connected vehicle teams, customer service, and quality are all different entities. In this type of environment, IT purchases often result in each silo within the organization acting independently. This type of siloed culture also can seep into the relationship with the dealer where contextual data is not shared. Tech Mahindra's Warrant*EAZE* solution seamlessly connects data across systems, breaking down silos of data and information to allow for an integrated view into the customer, service, and product.

Drive Wins and Differentiation via Warranty

Implementing a warranty management solution or switching to a more robust warranty management solution that reimagines the role a warranty system plays in the service life cycle can produce myriad benefits for the OEM. These benefits fall into four main categories: improved customer experience, increased product quality, revenue opportunities, and cost containment.

» **Improved customer experience and satisfaction**

   o Warranty analytics establishes a clear view into the customer base. Having visibility into product usage allows the auto OEM to create customer end-user profiles. This level of intelligence through the warranty process allows the auto OEM to customize services and create a closer bond with the customer.

   o Automating the warranty process through a robust warranty solution enables the automatic validation of operating conditions, provides the ability to alert customers of potential violations, avoids delays in claims processing, and speeds time to resolution.

   o Real-time systems diagnostics allows for integration and proactive action aided by the IoT-connected warranty system.

» **Increased product quality**

   o Early failure identification allows service to work with the engineering team to redesign products. Without a closed-loop warranty solution, the engineers often lose sight of the product or vehicle as it leaves the shop floor, whether it is in the possession of the dealer or the customer. Providing the service, usage, and failure data to the engineers ensures they can create better products.

   o Identifying issues before they impact a broader customer base can enable the auto OEM to fix the issues in real time to avoid a massive recall and proactively notify customers to have the vehicle fixed prior to a failure.

» **Revenue opportunities**

   o Near the end of a warranty or service contract, a customer can be proactively notified to renew.

   o Warranty data can be used to tailor or segment current and new products to the right customers or prospect base.
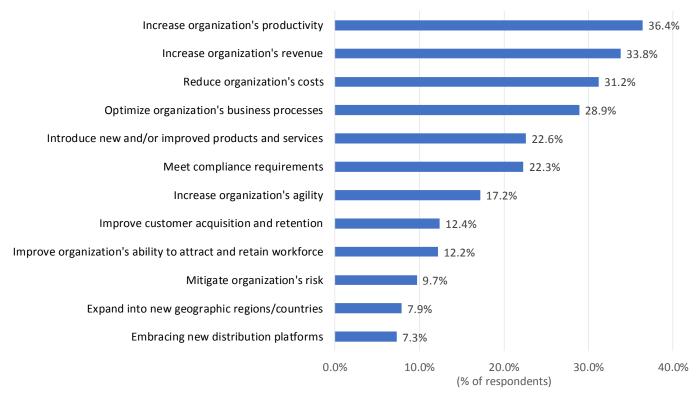
» **Cost containment**

   o Warranty reserve optimization provides increased accuracy in the potential scope of claims to be filed and allows the auto OEM to better prepare for recalls or failures, thus allocating the appropriate amount of resources to pay out claims in each time period.

   o Visibility into the actual cause of a failure and the use of big data analytics allows the auto OEM to model the root cause and better validate it, leading to a reduction in fraudulent claims.

Figure 1 highlights the benefits and drivers the auto OEM and other manufacturers look for as they invest in IT and technologies such as warranty management solutions.

FIGURE 1: *SIGNIFICANT IT INVESTMENTS*

Q.   *In 2017, which of the following initiatives for engineering-oriented organizations (i.e., automotive, aerospace, machinery) will be significant in driving IT investments?*

Initiative	% of respondents
Increase organization's productivity	36.4%
Increase organization's revenue	33.8%
Reduce organization's costs	31.2%
Optimize organization's business processes	28.9%
Introduce new and/or improved products and services	22.6%
Meet compliance requirements	22.3%
Increase organization's agility	17.2%
Improve customer acquisition and retention	12.4%
Improve organization's ability to attract and retain workforce	12.2%
Mitigate organization's risk	9.7%
Expand into new geographic regions/countries	7.9%
Embracing new distribution platforms	7.3%

n = 93

Source: IDC's Vertical IT and Communications Survey, 2017

Conclusion

IDC believes warranty management will have a major impact on helping transform automotive manufacturers. Silos of customer, product, and warranty data as well as disjointed applications and business processes must be connected to drive contextual business outcomes. Auto OEMs have an opportunity to retool their warranty for the digital age as they look for new ways to enhance value to their customers and differentiate with their service experience. Auto manufacturers and industrial equipment manufacturers must reimagine warranty management as an opportunity and avenue to improve the customer experience and the product. Solutions such as Tech Mahindra's Warrant*EAZE* can tap into an underserved market as service leaders look for the next edge in their digital transformation. Tech Mahindra will need to successfully navigate the challenges described in this paper, and if it can do so, the company has a significant opportunity for success.

Auto OEMs have an opportunity to retool their warranty for the digital age.

About the analyst:

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As Program Director, Service Innovation and Connected Products, Aly Pinder Jr. leads IDC research and analysis of the service and customer support market for the manufacturer, which includes topics such as field service, warranty operations, and service parts management and how these service areas impact the overall customer experience.

Mr. Pinder is also responsible for research that aids manufacturers as they evaluate innovative technologies like 3D printing for service operations, augmented and virtual reality in field support, and the use of IoT and advanced analytics for remotely monitoring and managing assets.

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