**Q3. Which Research & Development initiatives should the company bet on, and how aggressively should it invest to build new capabilities?**

The automotive industry has five disruptive challenges wherein Ford has tapped into connectivity software and autonomous vehicles hence given the current market, Ford should regressively invest their resources in R&D to focus on customer-driven innovation, building new functional and technical capabilities which can expand their constrained vision from adjusting to competitors to outperforming them by innovating out-of-the-box. As a result, through new upskilled capabilities, they can target consumers’ needs and compete with the competitors and the uncertainties in the ever-changing automotive industry (Gundling, 2018).

The first initiative must be directed at AI with cybersecurity as using data to build relevant algorithms for efficiency and security can create a competitive advantage. Evidently, 70% of consumers are expecting newer digitalised capabilities and the collaboration of AI with autonomous systems is estimated to grow by 50 to 60% from 2016 to 2025 with annual growth of 10% in cybersecurity (McKinsey, 2018). Along with AI, it is imperative to research in cybersecurity to establish consumer trust in Ford as illegitimate data access in autonomous vehicles can lead to system failures and accidents, so the right cybersecurity strategy can help younger customers to overcome their fear and older consumers to rely on the product’s competence. Moreover, Ford’s system software must be kept a monopoly to slow down the potential competitors and substitutes. Hence, working towards AI with cybersecurity through creative research is critical to retain customers and increase competitiveness in the market.

The second initiative is efficient internal data monetization to predict and innovate based on current consumer data and total addressable market analysis. The competitors are focusing on different aspects of disruption like safety, entertainment, cost and convenience however, they are either using past data or not utilising full potential of the current consumer data. To enhance the consumer experience, Ford has already initiated semi-autonomous safety assist features like automatic parking, pedestrian detection, along with various tests in snow and desert areas (Gundling, 2018). Additionally, Ford can collect primary data through the semi-automotive services to gauge where the value lies for the consumers and the new customer requirements. Therefore, Ford can act with agility and add value at the right time through unique innovations in their product to catalyse their need in the market. Since customer behaviours and demand change rapidly due to the variety of products available, constructive research can guide Ford towards feasible collaborations with huge companies like Apple or smaller companies like Mighty AI to establish a stable ‘backbone’ of technological competencies at a global level.

Implementing this "two-speed” R&D strategy (James, 2021), Ford can run two parallel initiatives where one will be slow, future-oriented research in AI and cyber-security whilst second will be a fast and proactive approach in delivering customer service through internal data monetization. Ford must invest in R&D intensively to actively leverage future trends and innovate in a direction where they can benefit from first mover advantage and provide relevant products in the changing automotive industry. Recently, their production reach plummeted especially in China so R&D can be a medium to predict R&D-to-product and time-to-market conversions for value-added decisions on introducing the technological elements lacking in the market, successively increasing their demand, and justifying their costs. In this way, Ford can focus on the current and upcoming challenges for the company, resonating with Field’s slogan ‘One foot in today, one foot in tomorrow’. While achieving everyday performance and goodwill, Ford can maintain accessibility and digitalise the end-to-end product life cycle to drive innovation and create barriers to competition.

**References**

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