

UNDERSTANDING CUSTOMER ORDER BEHAVIOUR FOR BETTER CUSTOMER EXPERIENCE

CONTEXT

Infineon Technologies AG is a German semiconductor manufacturer founded in 1999. Their semiconductor products have a wide variety of various application areas and are sold across four different business divisions: Automotive (ATV), Industrial Power Control (IPC), Power & Sensor Systems (PSS), and Digital Security Solutions (DSS). Infineon's supply chain structure is complex with several manufacturing sites in Asia and inventory warehouses across Asia (China, Hong Kong, Singapore).

Customers can place an order through different ways, depending on the customer's technical capabilities. After placing the orders, customers will be given a delivery date for their demand based on their requested dates and Infineon's available supply. The order placement process is straightforward. However, due to various customers' ordering behaviour, some orders are placed with short lead time, while others are placed with sufficient lead time but often changed frequently.

One common request is for a change in delivery dates which could be entered manually into our systems or through digital methods such as a business-to-business platform or via Electronic Data Interchange ("EDI"). Such changes are then captured, and the Infineon system will provide new delivery dates based on the new demands. Delivery dates are often updated with the new supply plan due to the numerous change requests from customers. With every change in delivery date, the customers will be notified, typically through email or EDI, again depending on the customer's technical capabilities and preferences. In the event of increased supply fluctuations (due to order changes), affected customers could be notified several times a week. This negatively impacts the ordering and fulfilment experience as customers may have to revise their production schedules. In the longer term, it could also affect customer confidence.

Gaining greater insights into the customers' journey (including order generation, order change, customer management, and various pain-points in the process) is key to identifying solutions that can improve order management and hence provide better customer experience.

PROBLEM STATEMENT

How might we gain insights of the customer's ordering behavior to facilitate an improved order management with better customer experience?

WHAT ARE WE LOOKING FOR

A Proof-of-Concept of a solution to understand various customers' order behaviours and the corresponding fulfilment issues that may result in poor customer experience:

- Generate insights which empower Infineon's Customer Management Logistics to understand their customers' order patterns better, and manage their customers' orders to enhance customer experience
- Capture order placements and changes made by the customers and calculate the resulting change in the estimated delivery date, and the impact to customer
- Greatly reduce the analyst's workload through improved efficiency of patent spec study

Solution should:

- Be built with historical data (at least over the past year)
- Continually update itself with new orders and changes
- Incorporate insights from Infineon's relationship managers
 - Such holistic profile of the customers will allow our relationship managers to better understand their customers' order patterns and needs to improve their order and fulfilment experience

There are no restrictions on the geographic location of the problem solvers who may choose to apply to this challenge. However, the POC needs to be demonstrated in Singapore.

POSSIBLE USE CASES

1. Infineon Customer Logistics Manager (CLM) enters into the system to review on his customer's historical ordering pattern to help understand the behavior through the system, he realizes that the customer typically changes the orders frequently after placing it the first time with sufficient lead time but later makes changes asking for an earlier delivery dates or places short lead time orders. Using the data of Infineon's customers' ordering behaviour insights, the system can be used to educate and provide timely advice to their customers to improve their customers' fulfilment expectations.
2. Through the customers' ordering patterns, a scoring system for each customer and their order can be developed to allow the CLM managers to reflect on the business background of the customers and help prioritize and identify potential ordering behaviour that could lead to delayed order fulfilment, such as placement of large orders with very short lead time, or multiple order changes.

WHAT'S IN IT FOR YOU

- SGD 25,000 of prize money for each winner of this challenge (see Award Model)
- Understand B2B Challenges in a complex manufacturing supply chain, and working with complex data with high volatility
- Potential future engagement on other use cases
- Winner will be publicised by Infineon at the end of the challenge

EVALUATION CRITERIA

The solutions will be evaluated based on the criteria below:

Solution Fit	To what extent does the proposed solution address the problem statement effectively?
Solution Readiness	How ready is the proposed solution to go to the market? Is there any evidence to suggest capacity to scale?
Solution Advantage	If the solution is truly innovative, does it make use of new technologies in the market, and can it potentially generate new IP?
Company Profile	Does the product have user and revenue traction? Do the team members possess strong scientific/technical background?

AWARD MODEL

30% of the prize money will be awarded to each selected finalist at the start of the POC, with the remainder 70% to be awarded during the POC, based on milestones agreed between Infineon and the solver.

Note that a finalist who is selected to undertake the POC will be required to enter into an agreement with Infineon that will include more detailed conditions pertaining to the POC.

DEADLINE

All submissions must be made by **5 June 2020, 1600 hours (SGT/GMT +8)**. Infineon and IMDA may extend the deadline of the submission at their discretion. Late submissions will not be considered.