

ELEVATED CUSTOMER EXPERIENCE THROUGH INTEGRATED INSIGHTS FROM DIGITAL SOLUTIONS

CONTEXT

Carrier Transicold is part of Carrier Corporation under United Technologies Corp (UTC). They are a leading global provider of high-technology heating, ventilation, air-conditioning and refrigeration (HVAC) solutions. Headquartered in Singapore, the container business of Carrier Transicold operates in the space of maritime cold chain logistics, with manufacturing in Singapore and China, engineering centres in the US and Singapore, sales offices in US, Europe, Asia Pacific and more than 400 associated service centres globally.

The Carrier Transicold business specialises in preserving temperature-controlled cargoes to keep the quality of perishables like fresh and frozen food and pharmaceutical products using refrigeration and associated technology. The business is a segment leader selling container refrigeration units to the largest shipping lines in the world, some of which own more than 100,000 refrigeration units from Carrier Transicold that need to be tracked.

The refrigeration units are sold either through direct sales to shipping companies that transport cargo using container ships, or through leasing companies where they, in turn, rent the units to shipping companies. The company also provides after sales service such as warranty, servicing of the units and parts sales. Parts sales are usually via email enquiry or through their service centre channel partners who may also sell their competitors' brands.

While Carrier Transicold is known for quality and low total cost of ownership the business sees an opportunity to nurture brand stickiness and loyalty from its shipping and leasing customers as well as service centre service partners. In terms of after sales services, Carrier Transicold sees increasing competition of parts sales from the OEM market, especially after warranty coverage has lapsed.

Already, the company has developed a range of digital solutions that leverage on data capture and analytics to support the individual applications business needs.

Carrier Transicold is looking for solutions that can elevate the customer experience of their current digital solutions offerings by turning the user data and content data into information assets, to provide enhanced insights that can fuel for more enriching personalised experiences.

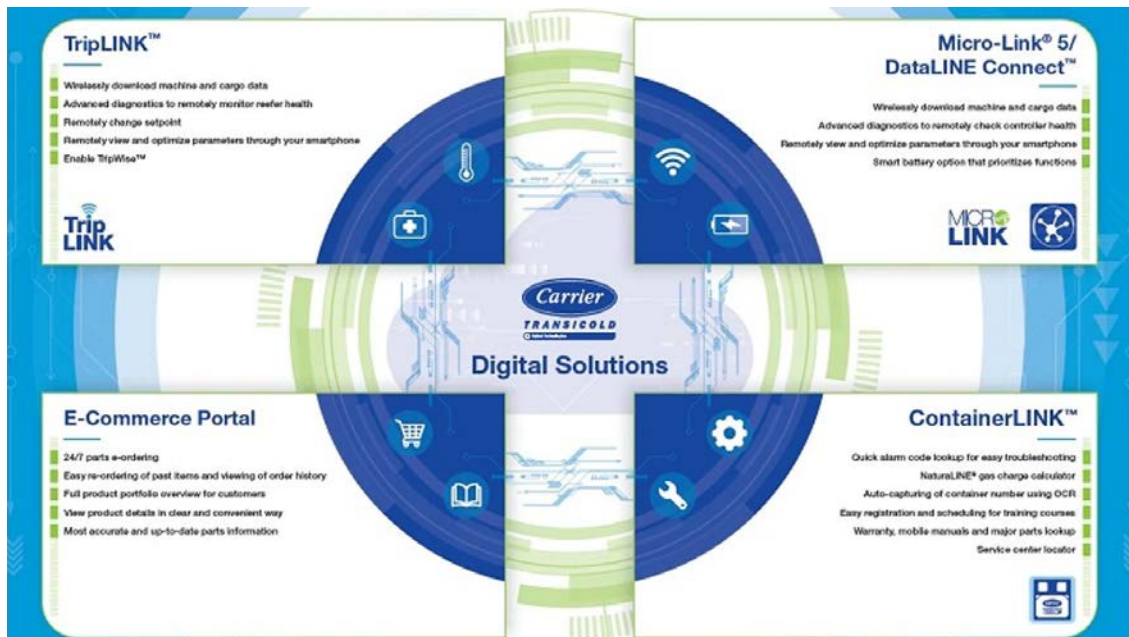


Fig 1: Existing stand-alone suites of Digital Solutions

PROBLEM STATEMENT

How can we elevate our customers' digital experience in a seamless and personalised manner by providing valuable integrated insights across Carrier's suite of digital solutions?

WHAT ARE WE LOOKING FOR

- A prototype solution for an innovative way to enhance the customer experience from 2 perspectives:
 - **Broad:** An integrated solution that can pull together insights from all (or several) Carrier digital solutions that will provide a dashboard-like overview to a customer who needs to manage a large fleet of assets. The solution should demonstrate how services and information can come together to provide further value to the customer that motivates them to return only to Carrier Transcold for further business, including warranty and maintenance servicing support

- **Narrow:** Improving the customer experiences of TripLINK telematics platform, Micro-Link 5 controller, E-commerce Portal for parts and ContainerLINK app individually by providing more insights by leveraging data analytics (*Please refer to Annex A*)

Solvers are free to choose if they want to take a broad or a narrow approach by just focusing on one of the solutions. Solvers are also encouraged to enhance and align with the current digital offerings or to recommend custom solutions that provide a better customer experience for Carrier Transicold's customers.

There are no restrictions on the geographic location of the problem solvers who may choose to apply to this challenge. However, the prototype needs to be demonstrated in Singapore, and within 6 to 9 months.

POSSIBLE USE CASES

Possible use cases may be:

- 1 **Broad:** A solution that pulls together relevant insights and services from TripLINK and e-Commerce Portal may provide the customer with greater convenient and service availability assurance. The solution can identify the top 5% of all assets that will require maintenance and provide a countdown clock to show when component parts need to be replaced. The solution can also propose the ports at which the asset can be serviced, or parts replaced based on availability and convenience, and schedule for service directly. This will provide both insights and actionable follow-ups which are important to customers' business operations, allowing the customer to minimise asset downtime.
- 2 **Narrow:** A solution that enhances any one of the specific incumbent digital solutions. As an example, an enhanced TripLINK platform may provide deep insights to the machine health and operating conditions of their assets, which can inform the customer on how to better utilise and manage their fleet. The solution can recommend the appropriate level of attention needed to maintain overall fleet machine health, such as the most common cause of failure for assets servicing specific routes or customers (for leasing companies). This can enable asset owners to have better predictability of their assets' lifespan and overall fleet operation. The solution can also recommend minor maintenance/fixes which can be carried out by ship engineers. This can further maintain and improve overall asset health and serviceability, allowing the customer to minimise asset downtime.

WHAT'S IN IT FOR YOU

- SGD 25,000 of prize money for each winner of this challenge (see Award Model)
- Selected Finalists with promising ideas will be considered for acquisition or licensed joint IP. Carrier also has Incubator and Venture teams (Carrier Incubator & Carrier Ventures) that allow potential partnerships to incubate or receive capital injections if they present great commercial potential, the right skillset and culture and values aligned with Carrier's
- Additionally, for solvers from institutes of higher learning, Carrier may choose to offer selected outstanding individuals employment opportunities to come on board a global organization and work with a world class, cosmopolitan team across geographies and cultures.

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?
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AWARD MODEL

30% of the prize money will be awarded to the winner at the start of the prototype development process, with the remainder 70% to be awarded during the prototype development process, based on milestones agreed between Carrier and the Solver.

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

DEADLINE

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

Annex A

1. Introduction of Carrier Transicold in ensuring Sustainability in the Cold Chain. This includes various Business Units (Truck & Trailer, Container, Commercial Refrigeration) (https://www.youtube.com/watch?v=JbzUWFswydo&list=PL2LMt9GTJfnC5AMnPAN E5ajfZA_qIb9dF&index=2)
2. An innovation of Carrier Transicold in Container Business Unit for EverFresh, an innovation to extend the freshness of perishable fruits during transportation. (<https://www.youtube.com/watch?v=PVgbteojmYo&list=PL2LMt9GTJfnBwLZ75bysw FEny-Gm-ahKg>)
3. Carrier Transicold's launch of Digital solution suite last year. (<https://www.youtube.com/watch?v=SwEXEE3tV6I>)