

**HCL**

# P2AC

Accelerating  
Passenger to



Auxillary Cargo  
Aircraft Conversion



## Business Context

The aviation industry was the lifeline of economic activities before it hit a slump due to the COVID-19 pandemic. The demand fell sharply and it might take three years or more for the **aviation industry** to recover completely. At the same time, the demand for cargo flights has doubled and will continue to grow due to increased e-commerce sales and the need for freighters to transport COVID-19 vaccines when ready. However, the limited availability of freighters, and the high costs and time involved in passenger to cargo conversion resulted in unmet demand. This presents the aviation industry with an opportunity to minimize losses and recover revenues partially - by shifting from **passenger aircraft** to auxiliary cargo aircraft.



Data source: IATA, ICAO

## Our Solution

HCL's P2AC converts passenger aircrafts into a temporary cargo configuration and allows airlines to transport cargo in their passenger cabins after seats are removed. It provides a comprehensive coverage of auxiliary conversion with multiple cargo loading configurations for the highest possible payload of cargo in the cabin. The solution can be deployed at airline hangars.

## Features



HCL designed pallets and containers to suit passenger door loading and its locking mechanism



Variety of cargo loading configurations for different types and category of goods



Suited for short-medium term (2-3 years)



Interactive tab enabled e-learning video modules for each step in the process



Documentation for STC (supplemental type certification)

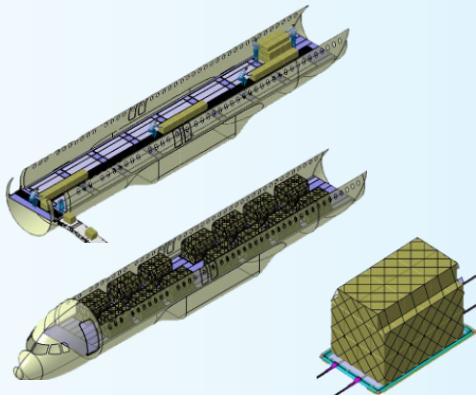


Can be availed as a turnkey end-to-end solution or as a discrete service



## Conversion Configurations

### Fixed Pallet Manual Loading



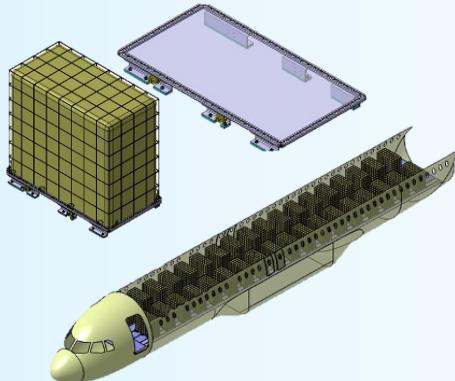
- Pallets are fixed on floor with HCL designed locking mechanism
- Cargo packs are moved securely inside the aircraft and placed on the pallets using glide mat (blanket) or trolley
- Packs are secured on pallets with standard restraining nets and procedures
- Standard parts (COTS) are selected based on cost and availability in the market

### Movable Pallet Prepacked Cargo

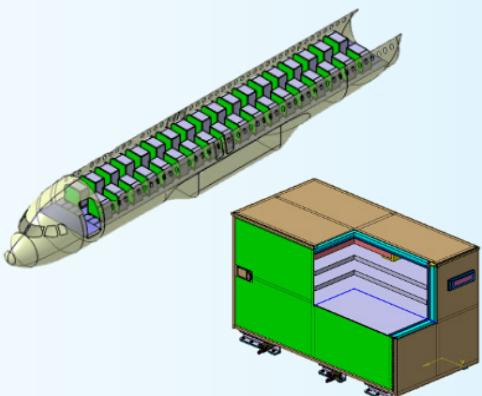
The cargo packs are pre-packed on customized pallets suitable to bring inside passenger door

Pre packed packs are brought on the aircraft door with the help of catering truck or high lift and are moved to the marked cargo position using hand pallet jack

Pallets are locked on to cabin floor seat track by HCL - designed locking mechanism with commercially available (COTS) hardware

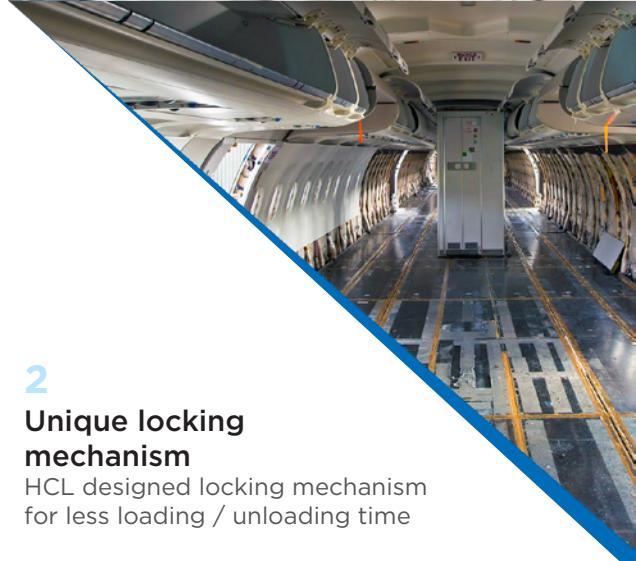


### Temperature Controlled Containers



- Adoption of thermal insulated containers with passive temperature controlled packaging
- Pre-cooled vaccines are loaded into insulated containers. Temperatures are maintained for at least 48 hours for **vaccine transportation**
- Containers are locked on to cabin floor seat track by HCL - designed locking mechanism with commercially available (COTS) hardware





## Solution Differentiators



- 1 Short lead-time**  
Shorter lead-time for conversion using COTS items / tools



- 2 Unique locking mechanism**  
HCL designed locking mechanism for less loading / unloading time



- 3 Higher payload capacity**  
Usage of pallets instead of loading on the seats, floor mat



- 4 Refrigerated vaccine containers**  
Temperature Controlled Containers for vaccine transportation



- 5 Temporary conversion at airline hangars**  
No MRO facility requirements



- 6 Quick and easy reconversion**  
Owing to minimal modifications

## HCL A&D Advantage

Engineering team with expertise across the A&D product lifecycle

Engineering and certification support for cabin reconfigurations

Flexible business models aligned to customer needs



30+ years of A&D engineering experience

Extensive experience in cabin interiors including IFEC and monuments

Complete turn-key technical publications management services



HCL Technologies (HCL) empowers global enterprises with technology for the next decade today. HCL's Mode 1-2-3 strategy, through its deep-domain industry expertise, customer-centricity and entrepreneurial culture of ideapreneurship™ enables businesses to transform into next-gen enterprises.

HCL offers its services and products through three lines of business - IT and Business Services (ITBS), Engineering and R&D Services (ERS), and Products & Platforms (P&P). ITBS enables global enterprises to transform their businesses through offerings in areas of Applications, Infrastructure, Digital Process Operations, and next generation digital transformation solutions. ERS offers engineering services and solutions in all aspects of product development and platform engineering while under P&P, HCL provides modernized software products to global clients for their technology and industry specific requirements. Through its cutting-edge co-innovation labs, global delivery capabilities, and broad global network, HCL delivers holistic services in various industry verticals, categorized under Financial Services, Manufacturing, Technology & Services, Telecom & Media, Retail & CPG, Life Sciences, and Healthcare and Public Services.

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