

# Designing Aeromedical Fit Out Integrations for Challenging Patient Transfers

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- To demonstrate the considerations and approach to the design and development of a medical fit out that facilitates the most challenging patient transfers.
  - Neonatal
  - Bariatric
  - Intensive Care (IABP and ECMO)

# Background

- Total Aerospace Solutions (TAS) established end 2001
- Principal Engineers and Directors - Neil Alexander and Mark Buick
- 14 Personnel
- Hawker de Havilland, Hawker Pacific, TAS
- Core Business – Special Mission Modifications – Aeromedical Integrations
- CAR35 (CASR21M), CAR30, APMA, 3 x Facilities

# TAS Aeromedical Fit Out

## Aircraft in Service

- 4 B200s with RFDS South Eastern Section
- 3 B200s with RFDS Queensland Section
- First of 5 aircraft for the ASNSW under contract to the RFDS South Eastern Section.



# Designing for Capability Growth

Capability Growth

```
graph TD; A[Capability Growth] --- B[Response to Demand  
Eg: Bariatric]; A --- C[Identified Future Requirements  
Eg: Future Equipment Changes - ECMO]; A --- D[Opportunity Growth  
ie: The nature of the design creates opportunities  
Eg: Equipment Loading and Unloading];
```

Response to Demand  
Eg: Bariatric

Identified Future Requirements  
Eg: Future Equipment Changes - ECMO

Opportunity Growth  
ie: The nature of the design creates opportunities  
Eg: Equipment Loading and Unloading

# Design Features

- Modularity
- Compatibility
- Interoperability
- Flexibility

# Desired Outcomes

- Less Infrastructure required for the Integration of Equipment = less weight, less logistics, less maintenance
- Effort required in transferring difficult patients is reduced to allow concentration on clinical care
- Allows for more intuition by the operator – each equipment integration does not require a new approach.

















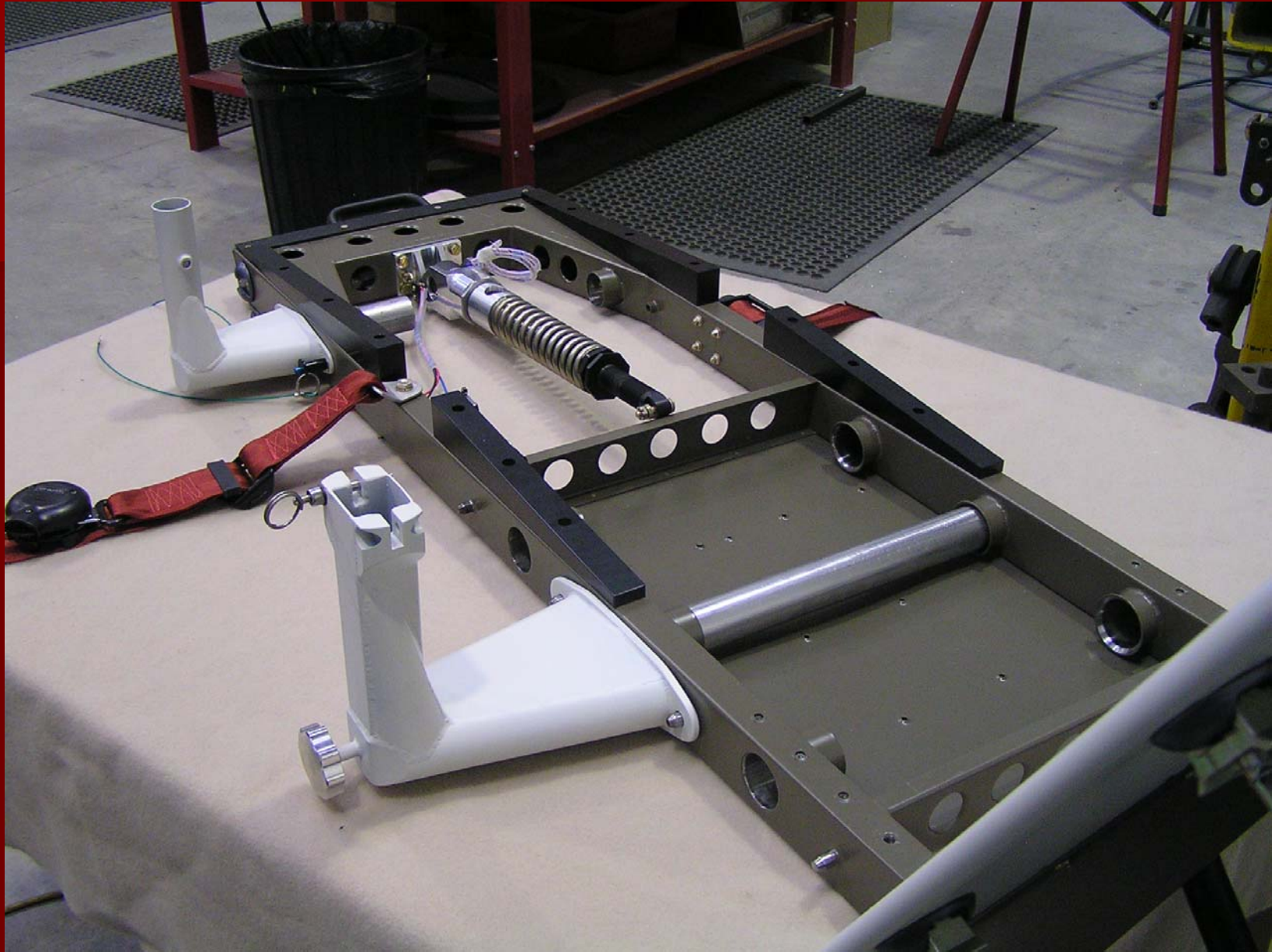




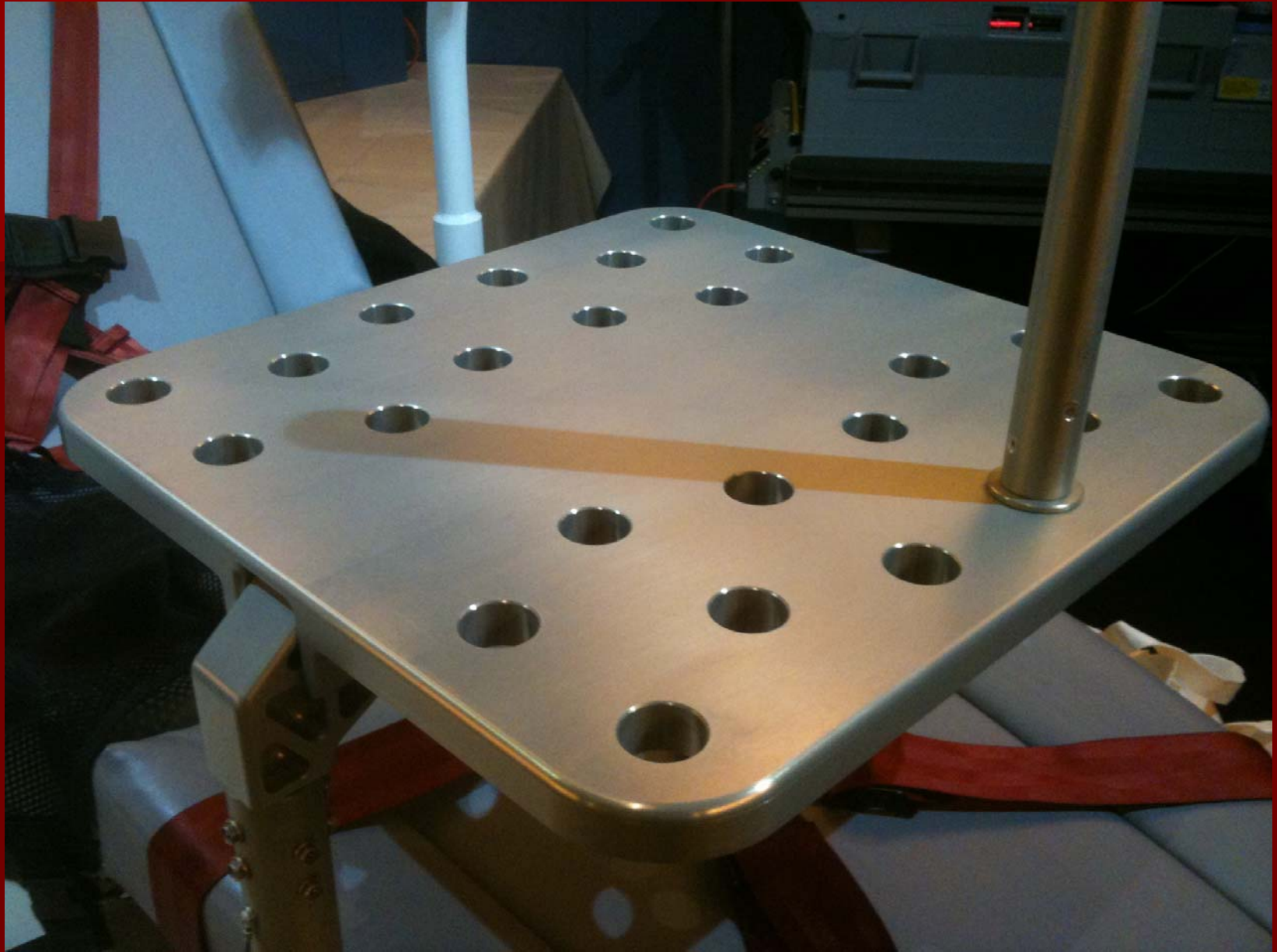












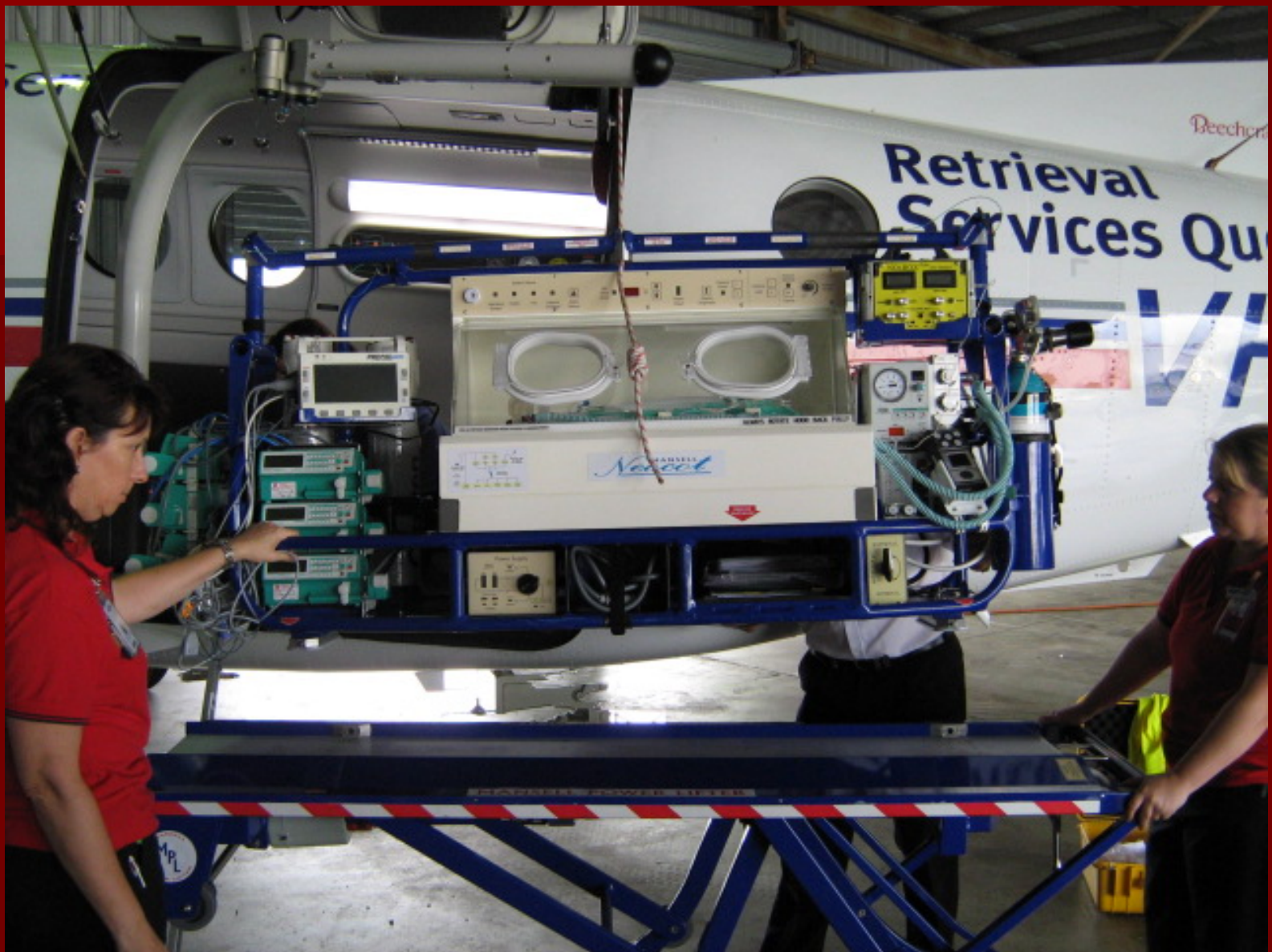


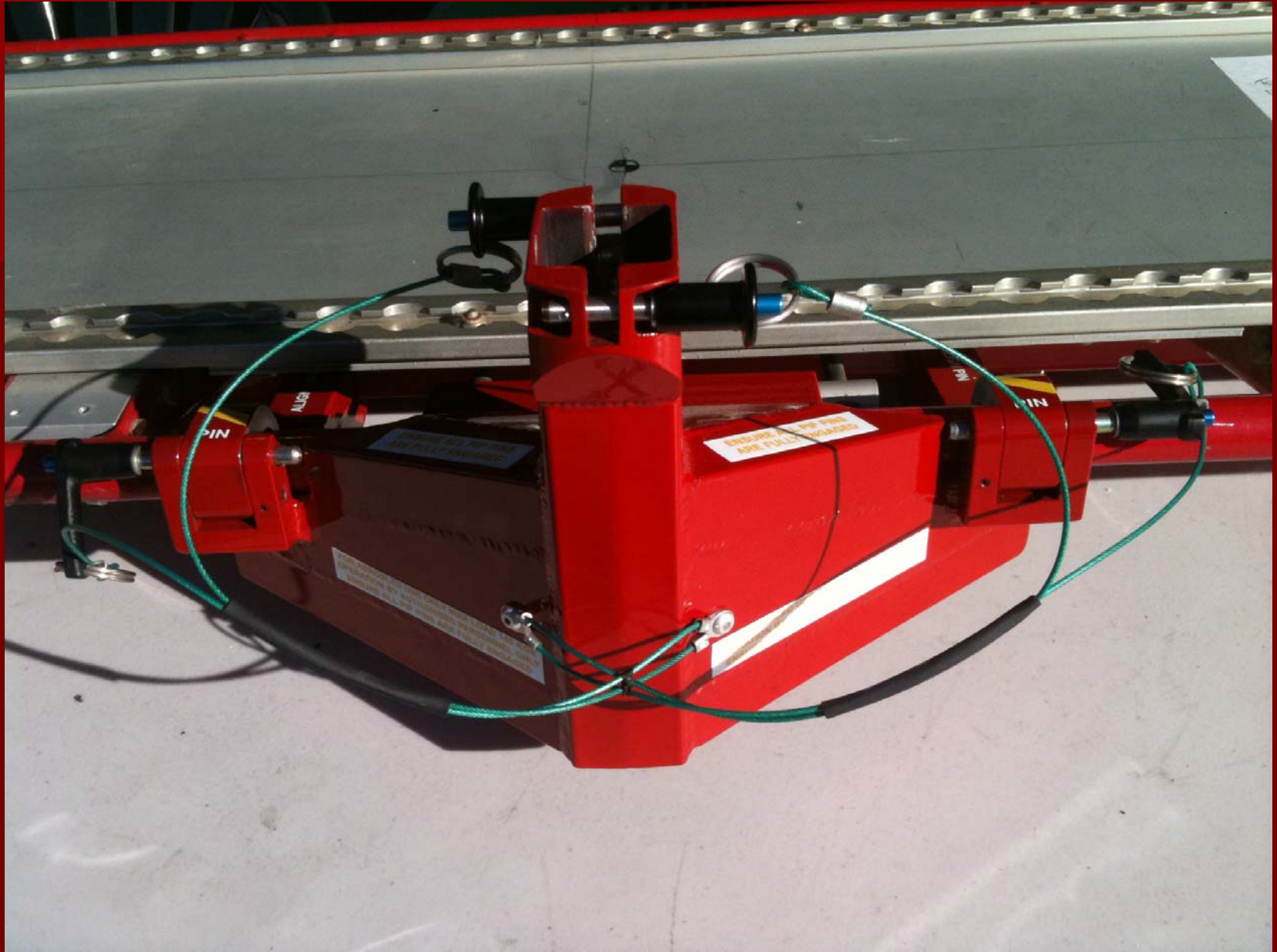






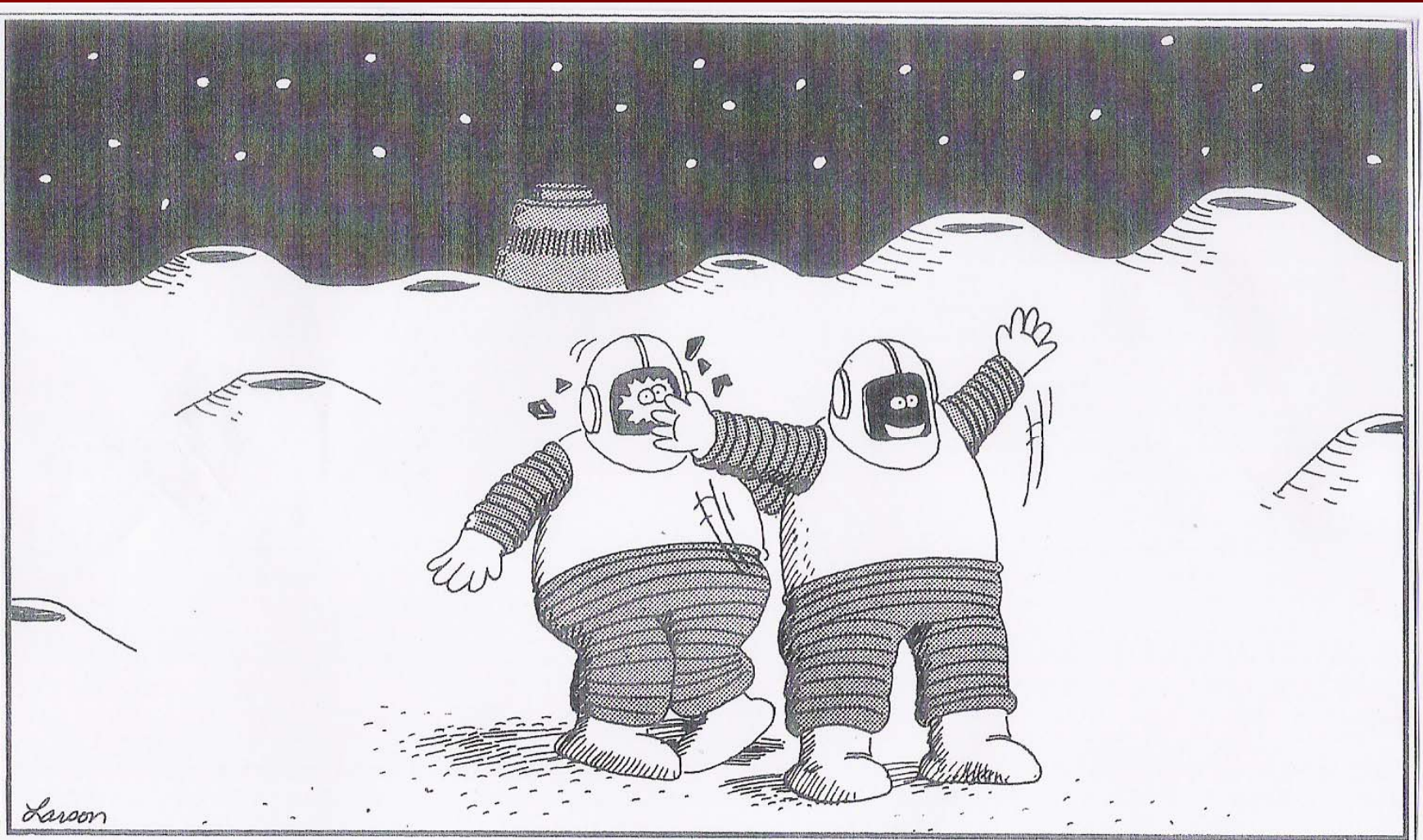






# CONCLUSION

- A Big Picture Approach to Design is Required to Minimise the Burden of Transferring “HIGH LOGISTICS” Patients.



"We've made it, Warren! ... The moon!"