



# GAINING TRACTION

30<sup>th</sup> ULD CARE ANNUAL CONFERENCE

2017 - BUDAPEST

**Safe and Efficient ULD  
operations- an industry health  
check**





# Basics

- Any item of baggage or cargo being loaded to the aircraft shall fully comply with the aircraft weight and balance manual-WBM.





# Aircraft Loading Iceberg

Accidents ...

2

Fine Air Flt 101  
National Flt 102

Serious Incidents... ~ 1 per week

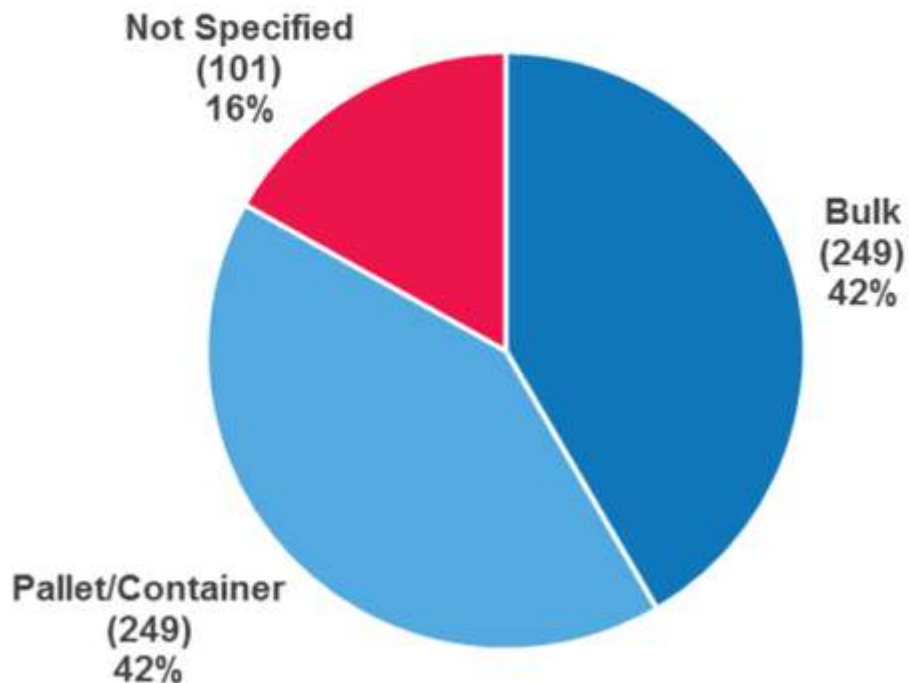
Aircraft Tip  
Aircraft Tail Scrape  
Load shifts  
Significant Loadsheet Error

Daily Operations... ~ 16 per day\*

Locks Not Raised  
Nets Not Secure  
Incorrect Loading Position  
Incorrect Weights of Cargo / baggage  
ULDs badly built  
Load sheet errors



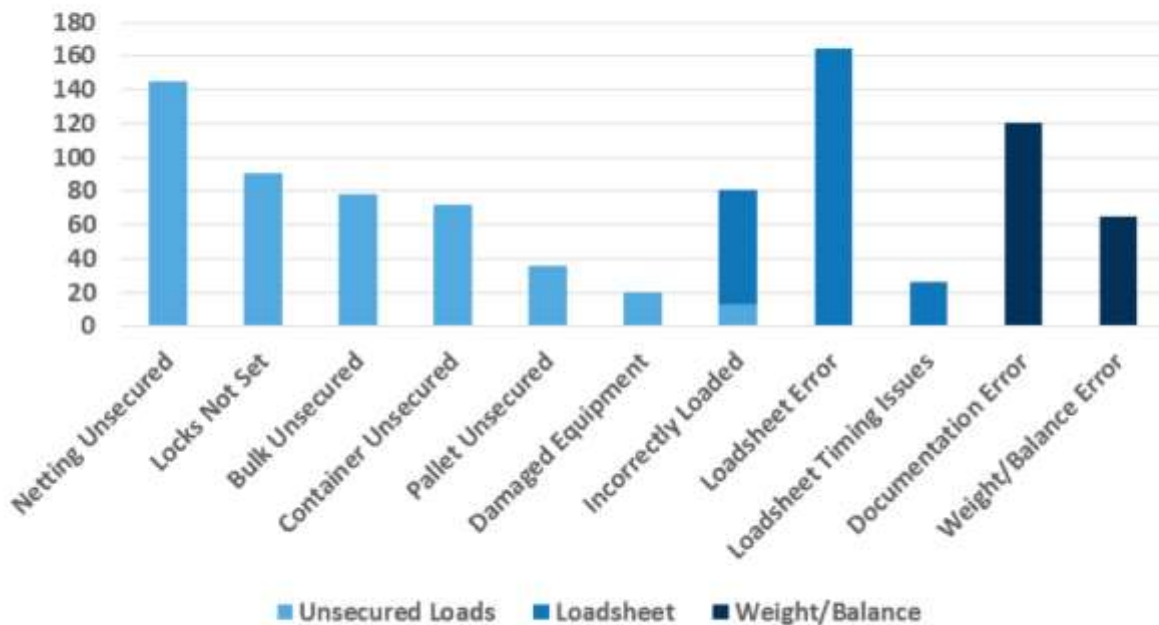
# What's moving?





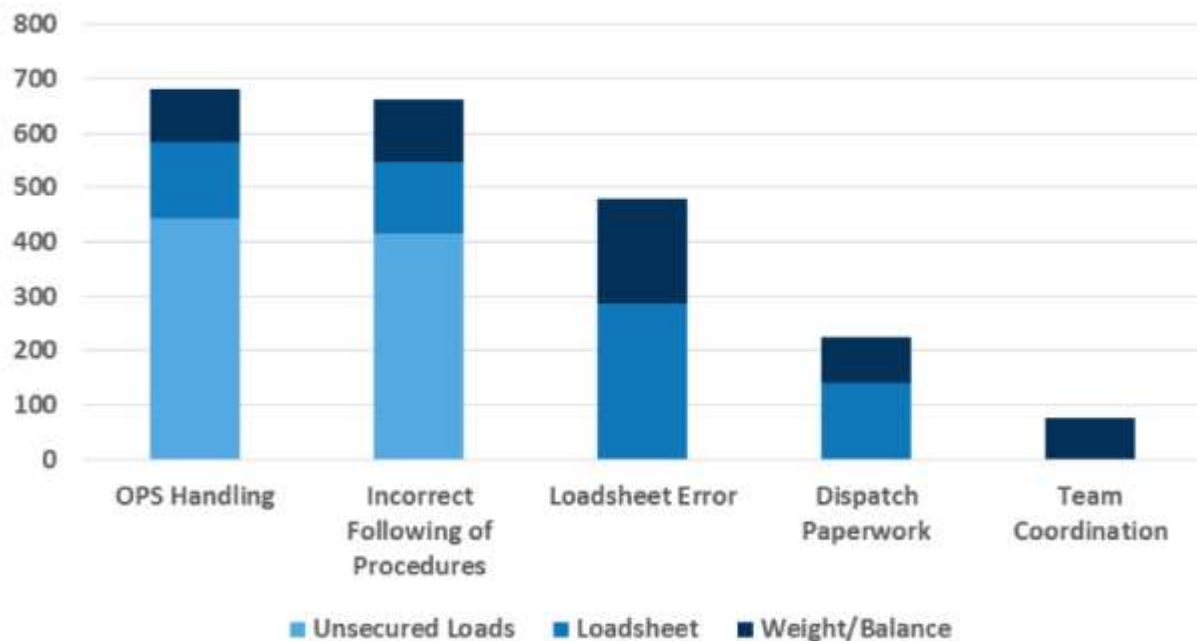


## Broken down further...





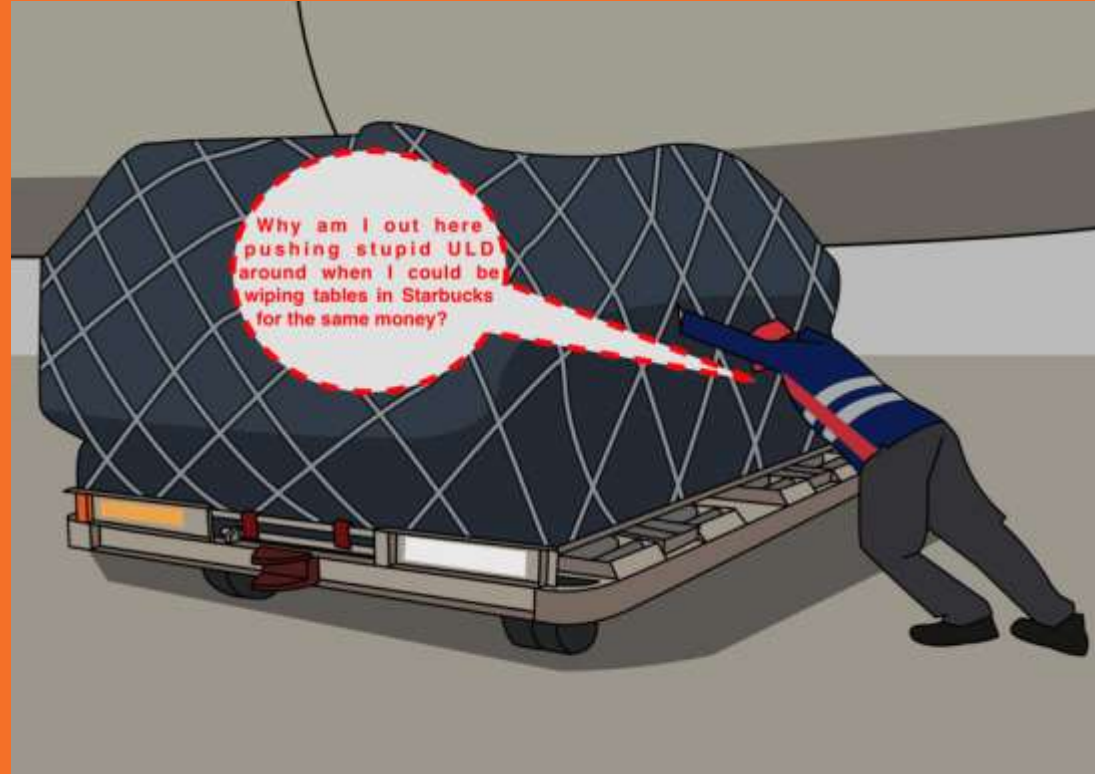
# Why...





# Staff Competence

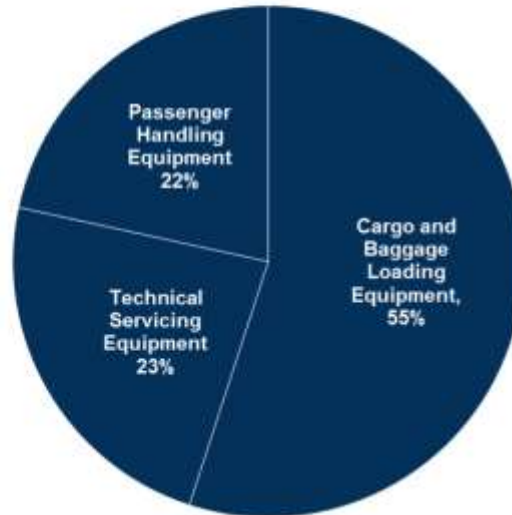
- Is he aware of the potentially catastrophic outcome of incorrect aircraft loading
- Does he place safety first
- Does he enjoy a "just culture" reporting environment?
- Is he suited to loading a US\$ 150 million aircraft about to fly at 35000 ft for 8000 Km?





# IATA GDDB Data

## Ground Equipment Type



- Overall 4,069 of all damage reports listed the equipment that caused the damage.
  - 55% (2,238) related to Cargo and Baggage Loading Equipment
  - 23% (952) related to Technical Servicing Equipment
  - 22% (879) related to Passenger Handling Equipment





# EASA



## ANNUAL SAFETY REVIEW 2017



### Top Safety Issues and Associated Actions

The list of safety issues have been developed during the first meeting of the Aerodromes and Ground Handling CAG, which met in the first quarter of 2017. These has since be matched with data and a check was made to ensure that there were no safety issues missing from the data. The top safety issues in addition to the general safety issue on human performance, identified from the data are:

- Decision making and planning.
- Baggage and cargo loading.
- Perception and situational awareness.
- Experience, training and competence of individuals.
- CRM and operational communication.
- Aerodrome design and layout.
- Control and coordination of turnarounds.



# FAA

## Non Compliance

### Operator

- letter or enforcement process.

### Civil Aviation Authority

- Informal communication or formal notification.
- Processed through the U.S. State Department

### Heighten Surveillance List

- Two foreign (Cargo) air carriers are current the list for increased surveillance.



U.S. Department  
of Transportation  
Federal Aviation  
Administration

800 Subsequent to Acc. 844  
Washington DC 20591

Dear Sir/Madam:

We would like to share with you safety information the Federal Aviation Administration (FAA) has gathered from its gap analysis of a Boeing 747 in April 2013 at Dugway Airfield in Afghanistan. It was determined that this accident was the result of improper cargo loading and restraint that resulted in a load shift.

The FAA team's analysis of the accident and subsequent ramp inspection of domestic and foreign cargo operators identified a number of findings. Among the findings identified, it was noted that Aircraft Flight Manuals (AFMs) and operating manuals were not derived from or in accordance with the operating limitations of the applicable Type Certificate, Supplemental Type Certificate and/or Mass and Balance Manual (MBM). As a result, some cargo loading procedures may contain safety risks which could lead to unsafe practices.

The FAA performed ramp inspections and identified the following findings:

1. AFM did not reflect or include aircraft loading limitations.
2. Aircraft Mass & Balance, and cargo loading programs were not available or procedures did not meet international standards.
3. Aircraft cargo compartments' loading limitation placards were not clearly identified.
4. Aircraft cargo compartments' loading diagrams were not included in the aircraft cargo manual, and/or not clearly identified.
5. Operators not following loading procedures in the aircraft cargo manual to include:

7. Cargo manuals lacked procedures for, inspection, repair, use of cargo containers, restraining belts, straps or verification to an approved source or document





# Pain Point #1

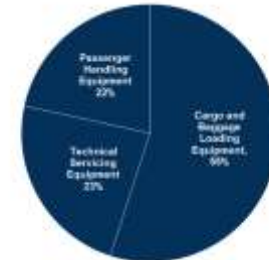
FAA and EASA have both raised concerns that the safety of the cargo loading process is not adequate.

FAA Cargo Focus Team

EASA 2017 Annual Safety Review

IATA GDDDB shows that 55% of ground damage occurs in the cargo/baggage loading activity.

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# Pain Point #2

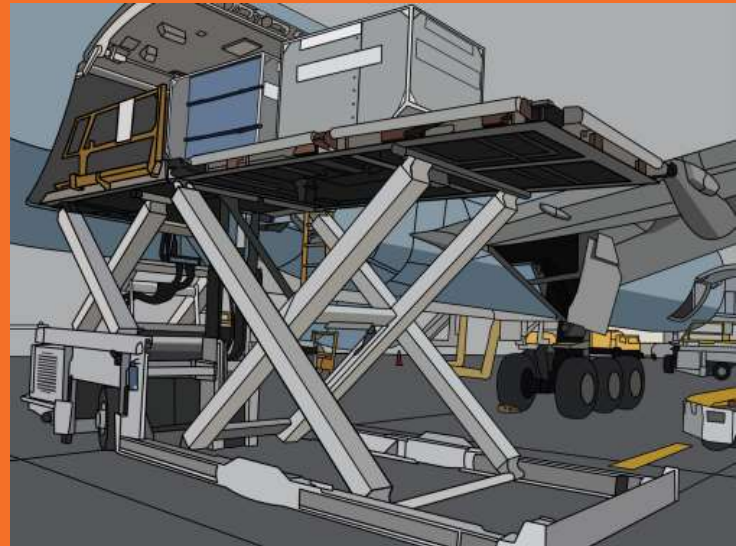
A rapidly emerging picture that ground handling and cargo operations are characterised by high labour turnover which coupled with zero significant improvements in technology leaves this safety critical process in a vulnerable position





# Cargo and Baggage loading-is it really so challenging?

- Simple tasks
- Challenging environment
  - Time pressure
  - Commercial pressure
  - Operating environment
  - Weather conditions





# New WBM procedures from Boeing



## SUPPLEMENTAL PROCEDURES

### WEIGHT AND BALANCE CONTROL AND LOADING MANUAL



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Boeing Commercial Airplanes

Weight Engineering Organization

P.O. Box 3707 Seattle, Washington 98124

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### WEIGHT AND BALANCE CONTROL AND LOADING MANUAL SUPPLEMENTAL PROCEDURES

#### SECTION EFFECTIVITY

SECTION TITLE	NO. PAGES	DATE
A INTRODUCTION	2	09/12/18
1 USE OF RESTRAINT STRAPS AS PRIMARY RESTRAINT TO A PALLET	14	12/05/18
2 INTERMODAL CONTAINER CARRIAGE	22	12/05/18
3 SIZE CODE B-M L PALLETS	2	09/21/18
4 AIRCRAFT ENGINE TRANSPORT	4	12/05/18
5 PALLET COUPLER DEVICES	2	09/21/18





# New WBM requirements from Airbus

## 2. Hard mounted loads

### → Folding horse container



### → Engine transport pallet



## 1. Soft mounted loads









GAINING TRACTION  
30th ULD CARE ANNUAL CONFERENCE





# Putting flesh on our bones

## ULD Code of Conduct

2. Operators shall only perform those tasks for which they are currently qualified

3. Respect that ULD are aircraft equipment that provide flight safety cargo restraint in flight.

4. Store ULD in a damage free manner and environment

5. Move and transport ULD using damage free methods



ULD  
Explained



ULD  
Instruct



ULD  
Connect



# ULD Code of Conduct

- Simple and easy to follow Codes
  - 1 For airlines and OEM's
  - 10 for users and operators
- A basis for safe and effective ULD Operations and Handling
- Fills the gap between the IATA ULDR and the front line operators
- Expected to be included in the IATA Cargo Handling Manual
- Easily promoted







# ULD Explained


- Layman's guide to ULD
- E-Book and Hard copy
- Chapters 1-8 align with CofC 3-10.





# ULD Instruct

- Detailed instructions on basic and advanced ULD operations
- Low bandwidth application, no special software required
- Runs on desktop, laptop, tablet, smartphone
- Pay as we go- no upfront cost
- Page-turner instructional design
- Integrated Learning Management System ( LMS)
- Module for each Code of Conduct



**Online ULD Instruction Material, Anytime, Anyplace, on your smart phone, your tablet, or your PC!**

**Member/Student Registration**

The following steps will be required for new operatives to the GISTnet training portal:

- Create a user record for yourself by [registering with GISTware](#).
- Once you have registered your user name and password with Gistnet then apply to enrol for a specific program by [using this link](#) to be directed to the self enrollment page, or, if you wish, you can do this by emailing to [Instruct@uldcare.com](mailto:Instruct@uldcare.com). In case of email please include your Gistnet user name.
- Wait for an email confirmation (this is done manually by a learning administrator and may take up to two business days to process).

For existing GISTnet users:

- Log on to [your personal page](#) on the GISTnet web site
- [Request association with ULD CARE](#) and wait for an email confirmation (this is done manually by a learning administrator and may take up to two business days to process).
- Once you are associated with ULD CARE, you will be assigned the modules selected by your organization. If you have no modules listed you can request enrollment by emailing [Instruct@uldcare.com](mailto:Instruct@uldcare.com)
- If you have forgotten your password, you can [reset your password here](#).



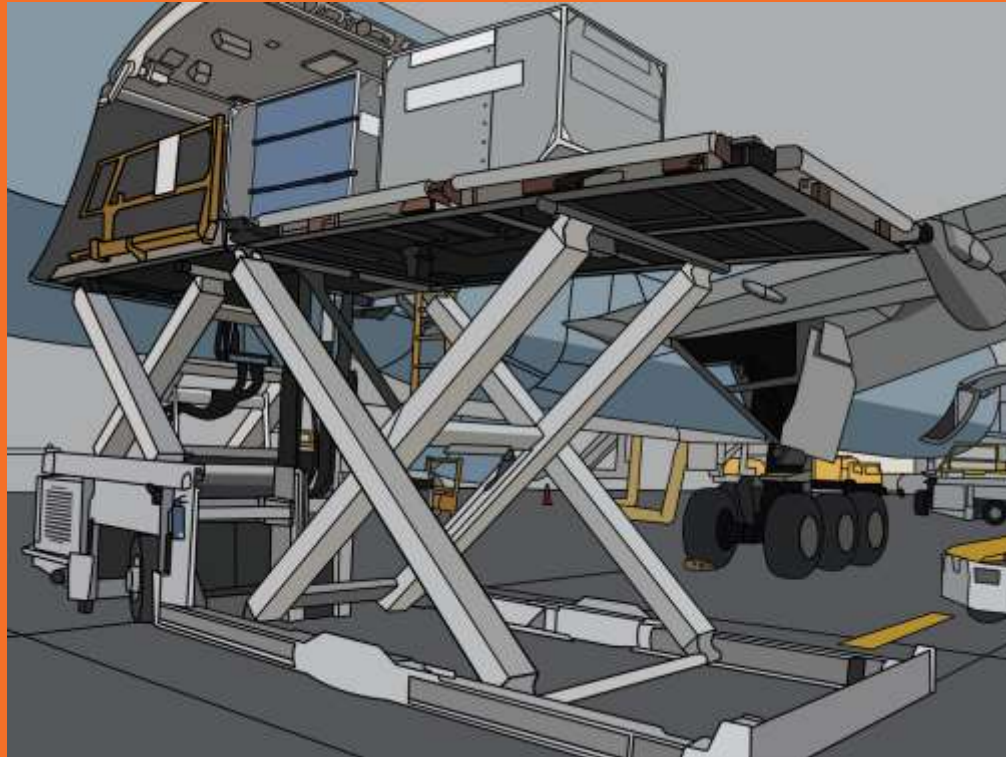
# ULD Connect

On the brink of a  
breakthrough?





# Just some challenges





# Collapsible containers

- E-Commerce driving demand for structural containers over pallets
- Repositioning challenges
- Collapsible ULD would be ideal if the handling environment could handle them.





# FRC and FCC

- Added dimension
  - High cost
  - Limited tolerance to damage
  - Requires careful installation





# Temperature Controlled ULD

- Big earner for airlines
- Extremely complex ULD
- Requires skilled handling





# Cargo requiring special handling

- Any cargo not fully enclosed in a cargo net is NOT a ULD !!!!
- Overhanging cargo
- Oversize cargo
- Cargo secured entirely or partly directly to the aircraft floor





- Where cargo is restrained **ONLY** by straps then it's a whole new ball game.
  - Strap calculations
  - Strap spacing
  - Strap condition
  - Strap Life







# Vehicle Transport

- Are these straps correctly fitted?



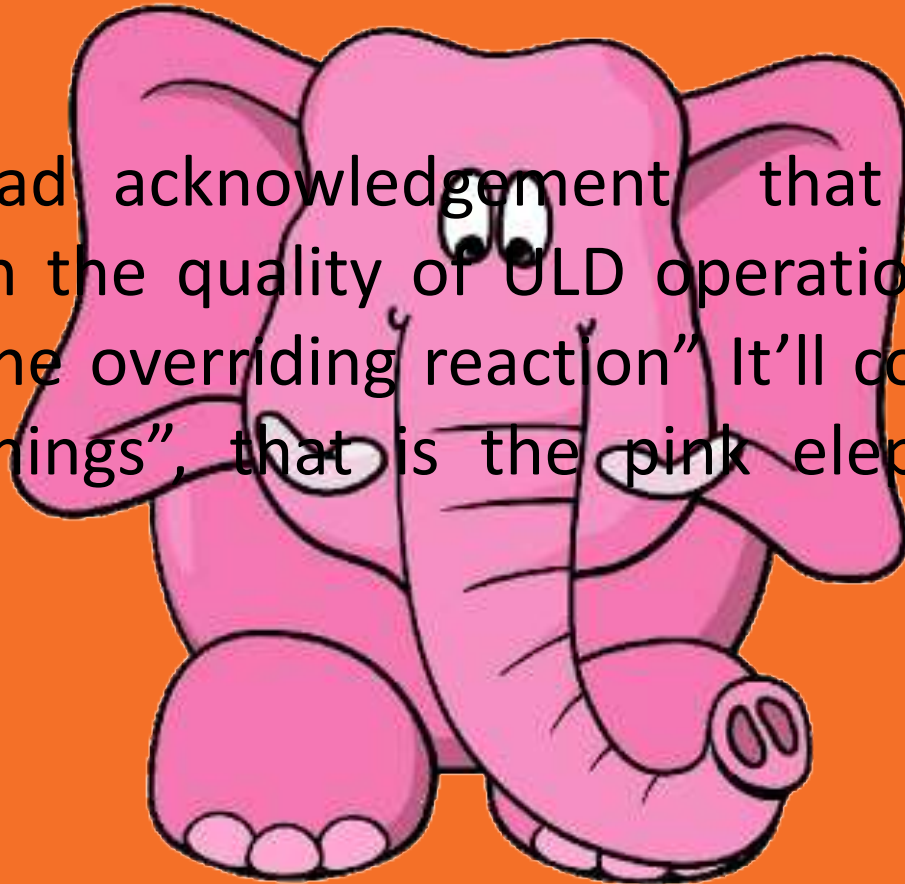


?????!





Widespread acknowledgement that there is an issue with the quality of ULD operations, but then there is the overriding reaction "It'll cost money to change things", that is the pink elephant in the room.





Thank You