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20TH - 22ND SEPTEMBER 2023
GRAND HYATT ATHENS



A Big Welcome to yet another ULD CARE



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Four major themes for the ULD Community

- Sustainability
- Safety
- Knowledge and training
- Digital and Technology



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Sustainability



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Safety

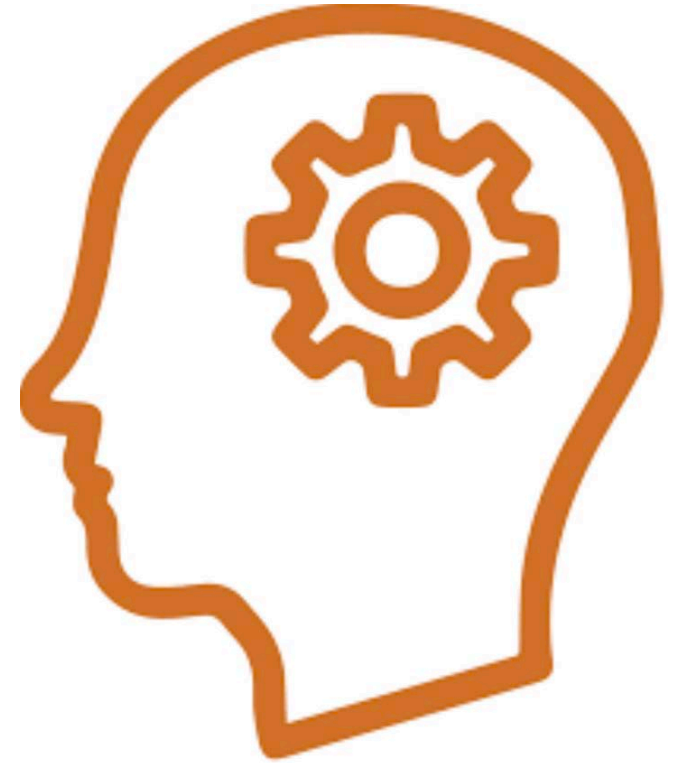


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Knowledge and training

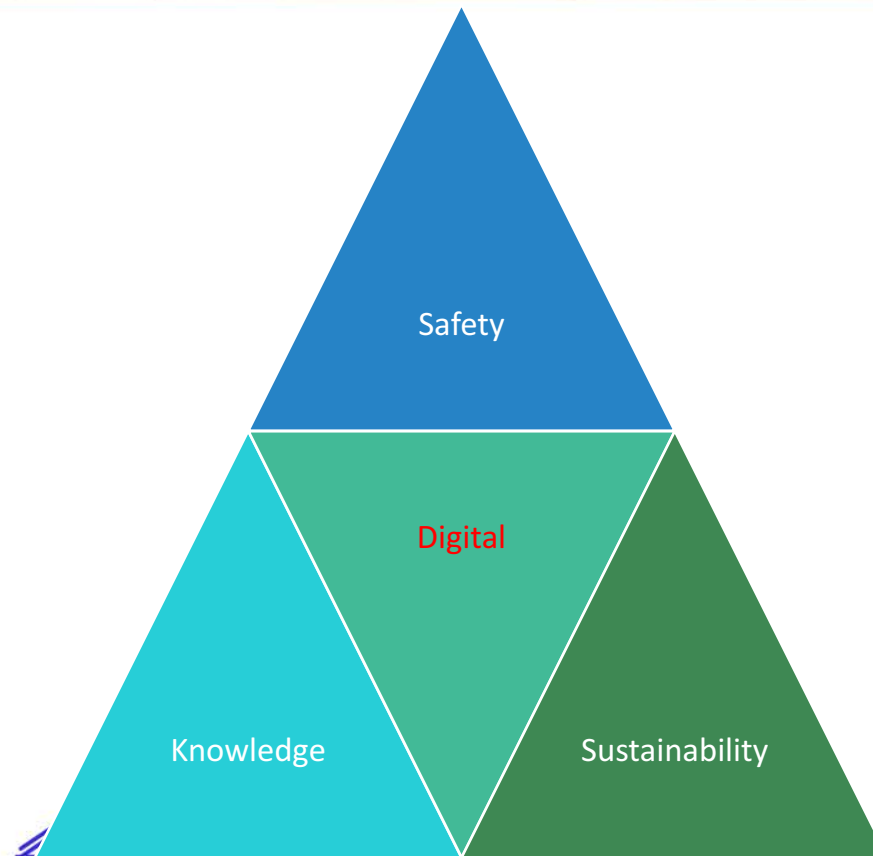


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Digital lies in the centre



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ULD CARE & Digital

- 1970's - first edition of the IULDUG.
 - Mainframe hosted
 - Weekly and monthly paper reports sent via COMAT to airline members
- 2008- Migration to Web based server, on line reports
 - Real time lists
 - Search Function



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What does the IULDUG system do?

- **Only** independent platform displaying unit status to each side of any interline transfer of ULD assets.

```
PMC 10250 AA 06FEB2020 1600 IB AA MAD 001-18048096 XXX SER SEQ182 12FEB2020
17FEB2020 0000 AA AA HDQ 001-00000001 HDQ SER HDQ SEQ903 19FEB2020
```



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Value proposition to member airlines

- Trusted platform for exchange of assets.
- User friendly visibility of any recorded ULD transfer that involves an IULDUG member counterparty.
- Built in "change request/dispute resolution" process.

Despite its 5 decades of service the IULDUG continues to provide exceptional value for money while enabling risk free cargo interlining.



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But IULDUG has shortcomings

- Doesn't capture and process off airport ULD transfers
- Requires manual data input
- Stand alone operation, not capable of modern inter system connectivity
- IT is reaching "use by" date



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Off airport ULD Transfers

- 2013 presentation on an Electronic UCR project by a ULD CARE working group headed by Charles Drummond.

What's the problem?

- Control and visibility of ULD movements off airports is an industry wide issue.
- The current UCR form standard does not adequately meet the needs of the industry
- The UCR form is not user friendly.
- Process for ULD transfer and LUC message does not have a proper 'home' in IATA manuals



Working Group
Electronic UCR Project

WORKING GROUP MEMBERS

| | | | |
|--|--|---|---|
|  Charles Drummond CHEP |  Joseph Chan Jardine Air Services |  Urs Wessendanger ULD CARE |  Markus Venzke IATA |
|  Nisara Tewon CHEP |  Simon Porter Virgin Atlantic |  Bob Rogers Nordisk |  Wanni Masri CHEP |
|  Kathany Jayathilak CHEP |  Hans Fischer Kuehne Nagel |  Zhi Yong Liao IATA |  Gerry Simpson ULD CARE |



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- 10 years later problem has multiplied..
 - Intermodal, off airport operations are fundamental to air cargo operations
 - ULD CARE studies show that, on average, a PMC will undergo an off airport move every 60 days
 - Also typically a large number of units will remain off airport in excess of 10 days
 - Estimated around 20-25000 PMC overdue for return at any particular day, that's over 600 B747 shipsets.
 - Meanwhile despite best efforts of ULD CARE and IATA ULD to improve the working environment of ULD continue to be widely disrespected.



But, meanwhile

moved on...

Emirates

ULD CONTROL RECEIPT

• N30 P0 EK •

TYPE CODE DATA CODE SERIAL NUMBER OWNER

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|
| 0 | P | M | C | 7 | 9 | 4 | 0 | 2 | EK |
| 1 | P | M | C | 7 | 5 | 1 | 1 | 9 | EK |
| 2 | P | M | C | 3 | 6 | 7 | 5 | 8 | EK |
| 3 | P | M | C | 3 | 8 | 8 | 0 | 1 | EK |
| 4 | P | M | C | 3 | 2 | 1 | 9 | 9 | EK |

DATE OF TRANSFER DAY MONTH YEAR TIME LOCAL 24 HOUR CLOCK SECURITY BY (CARRIER CODE)

18 JUL 2021 / 1600 SV

CONDITION CODE KEY Serviceable Incomplete/Damaged SER DAM

| | | | | | | |
|---|---|---|---|---|-----|-----|
| 1 | 7 | 6 | - | 0 | AMS | SER |
| 1 | 7 | 6 | - | 1 | AMS | SER |
| 1 | 7 | 6 | - | 2 | AMS | SER |
| 1 | 7 | 6 | - | 3 | AMS | SER |
| 1 | 7 | 6 | - | 4 | AMS | SER |

CONTROL RECEIPT NUMBER

FINAL DESTINATION

CONDITION

TRANSFERRED BY TRANSFER POINT

E K / N30

REMARKS

ULD RELEASED AIRWAYBILL NUMBER

Empty Loaded

ULD SUPPORT EQUIPMENT (enter as amount)

WLS TAGS STRAPS FITTINGS

CUSTOMER ACCOUNT NUMBER

ADDRESS

CUSTOMER - PLEASE NOTE

DEMURAGE BEGINS Time 600

ORIGINAL (WHITE) RECEIVING CARRIER (BLACK) (OLD RELEASED) SECOND COPY (PINK) TRANSFERRING CARRIER OR CUSTOMER

© 2007 EPP 1005/10

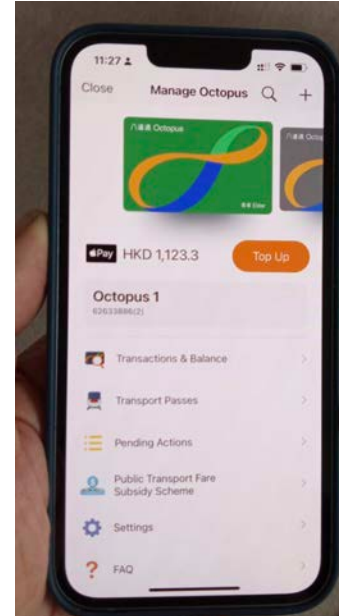
ULD RELEASED CUSTOMER'S RECEIVING OFFICE OF CUSTOMER SIGNATURE DATE DATE

SV HK ROBI KENYA HNA

EK SKYCARLO 16:00 18 JUL 2021

CARRIERS USE ONLY

| | | |
|---------------|---------|----|
| Days | Per Day | \$ |
| Loss | Damage | \$ |
| TOTAL CHARGES | | \$ |



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...and digital is no longer an option

- Ordering food in a restaurant
- Parking your car on a meter
- Paying for your shopping
- Checking in for your flight
- And on and on and on and on

SO WHY NOT A DIGITAL UCR?????



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Digitization opens a wide door to finally solve this long standing problem

- Replace current paper and pencil recording of ULD transfers at loading dock with hand held devices
- Replace computer terminal entry of paper records with data upload from hand held devices
- Display real time and accurate data to all stakeholders
 - Airlines
 - Cargo terminals
 - Forwarders
- Seamless data feed via API's to related systems



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Introducing the ULD CARE E-UCR



Organization Dashboard

| | | | | | | | |
|---------|-----|-------|---|---------------|---|-------------------|-----|
| Airline | 179 | Owner | 4 | Cargo Handler | 2 | Freight Forwarder | 655 |
| Manager | 1 | | | | | | |

| ID | ULD No | Location | Handling | Equipment | Weight | Volume | Temp | Remarks |
|----|------------|----------|----------|-----------|--------|--------|------|---------|
| Q | 2023-06-01 | 1134132 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134131 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134130 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134129 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134128 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134127 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134126 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134125 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134124 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134123 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134122 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134121 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134120 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134119 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134118 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134117 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134116 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134115 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134114 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134113 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134112 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134111 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134110 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134109 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134108 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134107 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134106 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134105 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134104 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134103 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134102 | London | Handling | 100000 | 100000 | 0 | |
| Q | 2023-06-01 | 1134101 | London | Handling | 100000 | 100000 | 0 | |

Receiving Party: ULD Number: 000 000000, Location: London, ULD Equipment: 44444444, Transfer Date: 2023-06-01, Transfer Time: 17:00:00, Transfer Party: ULD Air 1

Opposing Party - Transferring Party: ULD Number: 000, Location: London, ULD Equipment: 44444444, Transfer Date: 2023-06-01, Transfer Time: 17:00:00, Transfer Party: ULD Air 1

ULD: ULD Number: 000, Status: 000, Damage Description: 0, No. Boxes: 0, No. Pallets: 0, No. Pieces: 0, Weight: 0, Remarks: 0

Contract Receipt Number: 000-00000000

ULD Air 1: 123 371 Avenue London, Heathrow United Kingdom, ucr@iata.com

123 Main Street Atlanta, Canada C2300, iata@iata.com

| TRANSFERRED BY | RECEIVED BY | DATE OF TRANSFER | TIME LOCAL | TRANSFER POINT |
|----------------|-------------|------------------|------------|----------------|
| FF3 | ULD Air 1 | 20230601 | 17:00 | London |

| ULD IATA CODE | ULD SUPPORT EQUIPMENT | FINAL | REWORKAGE | DATE | DECL | DAMAGE |
|---------------|-----------------------|-------|-----------|------|------|--------|
| FF3 | 44444444 | 0 | 0 | 2023 | 000 | 000 |

Signature: Transferring Party (Bill), Receiving Party (Joe Smith)



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Live demonstration



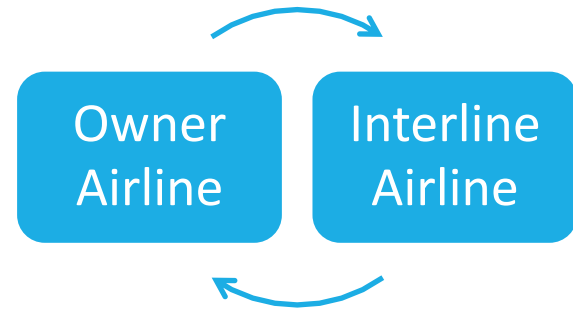
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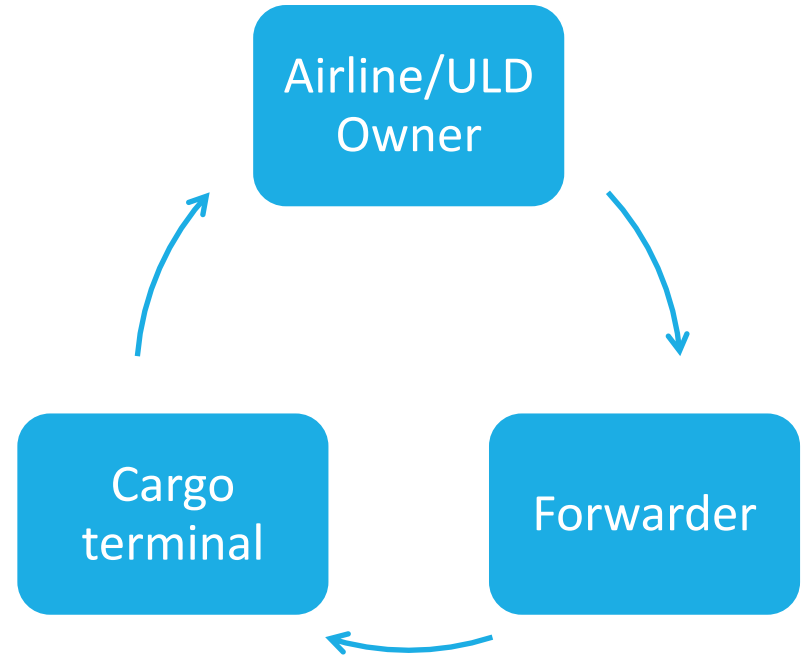
Natural extension for the IULDUG system

- Logical to extend IULDUG's footprint
- Will modernize the IULDUG system with improved input and output
- The UCR and the IULDUG are like bread and butter- they go together, an E-UCR is a natural development path.



Win Win Win

Finally an opportunity to untangle the inefficient, unsustainable, legacy process that has no place in a modern air cargo process and works to the disadvantage of all stakeholders



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Value proposition-airlines and other ULD owners

- Regain visibility of the 8-10% of your ULD assets that are somewhere off airport, even off network
- Receive accurate and timely LUC messages relating to off airport transfers (YY codes)
- Photo evidence of ULD condition
- Enhanced management of accessories -nets-straps-fire blankets-etc.
- Utilize accurate ULD disposition data for analysis purposes
- Enhanced control of rental pallets



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Value proposition- cargo terminals

- Replace legacy paper based UCR's with modern digital application
 - Mountains of paper UCR's
 - Hours of data entry
 - Time spent sorting out errors
- Resolve the question of common marked rental pallets



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Value proposition-freight forwarders

- On line visibility of ULD assets "on their tab".
- Greater availability of ULD due to industry wide efficiencies.
- Photo evidence of ULD condition.
- Enhanced management of accessories -nets-straps-fire blankets-etc.
- Actively participating in digitisation.



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Where are we now?

- Emirates have been running a live trial in DXB and other stations for some weeks now.
- KLM Ground Services (handles containers) have been running the system for about 9 months.
- Eva Air is launching a trial of the system



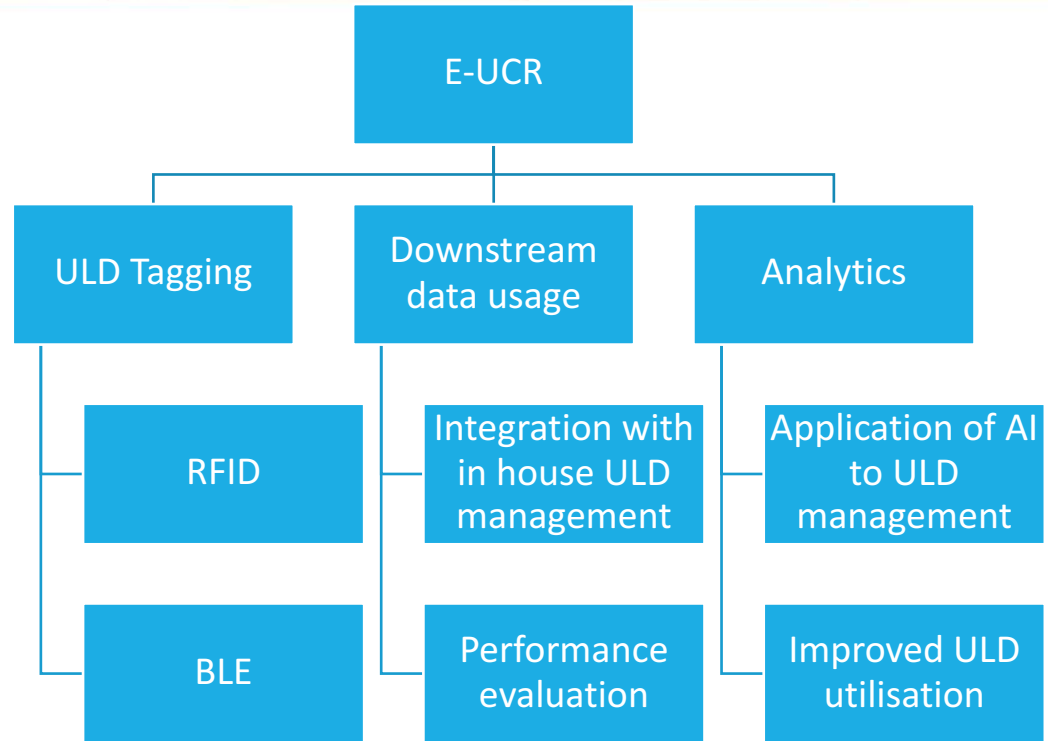
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E-UCR is just the start

Delivering accurate and timely data



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ULD Tagging

- RFID
 - Low cost ULD tagging
 - Eyeball replacement
 - Opportunity to employ low cost RFID antenna on nets, straps, FCC etc.
- E-UCR is set up to accept RFID and BLE digital inputs.



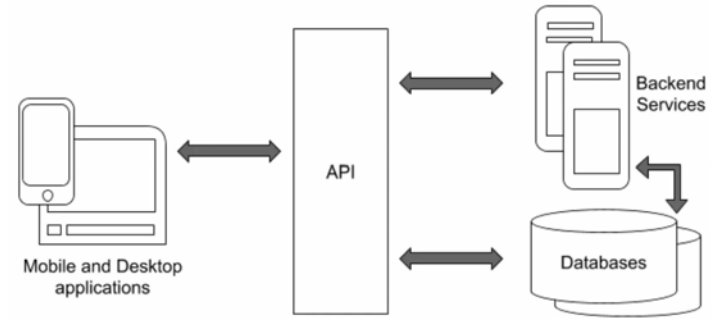
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Downstream Data usage

- The E-UCR is just a start- with comprehensive and timely reporting of the transfers of ULD between parties:
 - API's can communicate seamlessly with airlines ULD systems
 - Replace reliance on LUC messages
 - Synchronize between platforms
 - Enable improved ULD control management



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Analytics

- ULD management is begging for improved management systems
- Tribal knowledge is not sustainable
- With reliable E-UCR data effective analytics can deliver real value.

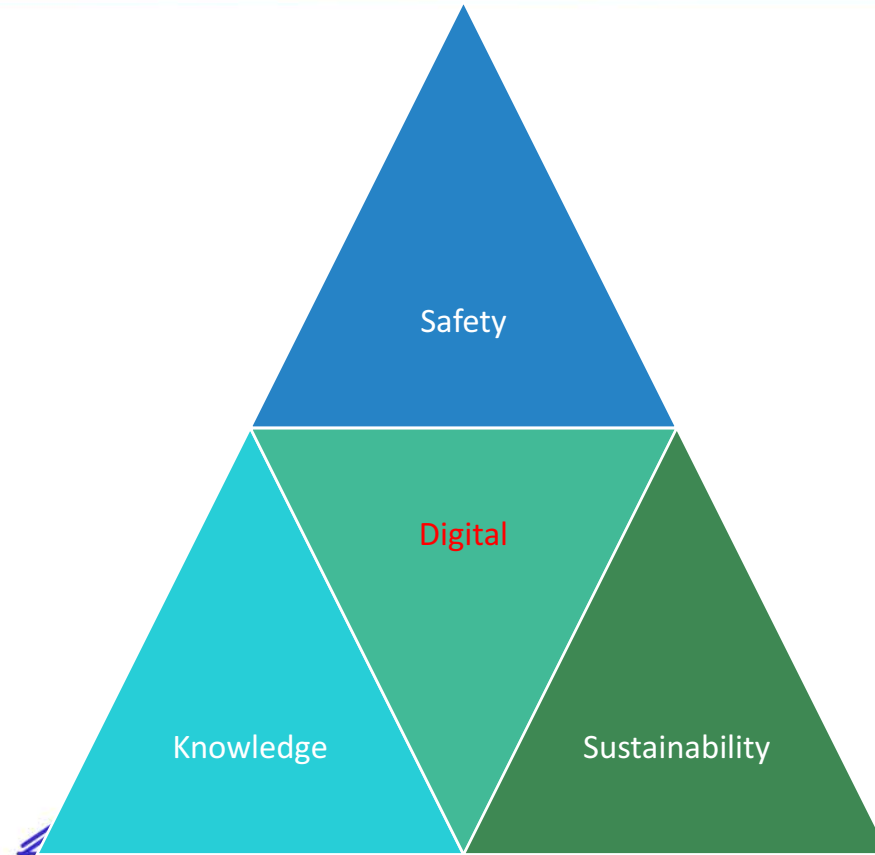


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Digital lies in the centre



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Sustainability

Digitalisation will increase effective use of ULD assets and reduce the extraordinary amount of waste in day to day air cargo operations



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Safety

Digitalisation will support airline monitoring of the condition of their ULD assets leading to safer operations



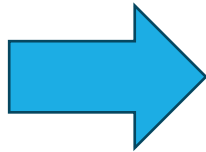
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Knowledge and training

Digitalisation is the way of the future, employees look for modern working practices, not paper and pencil.

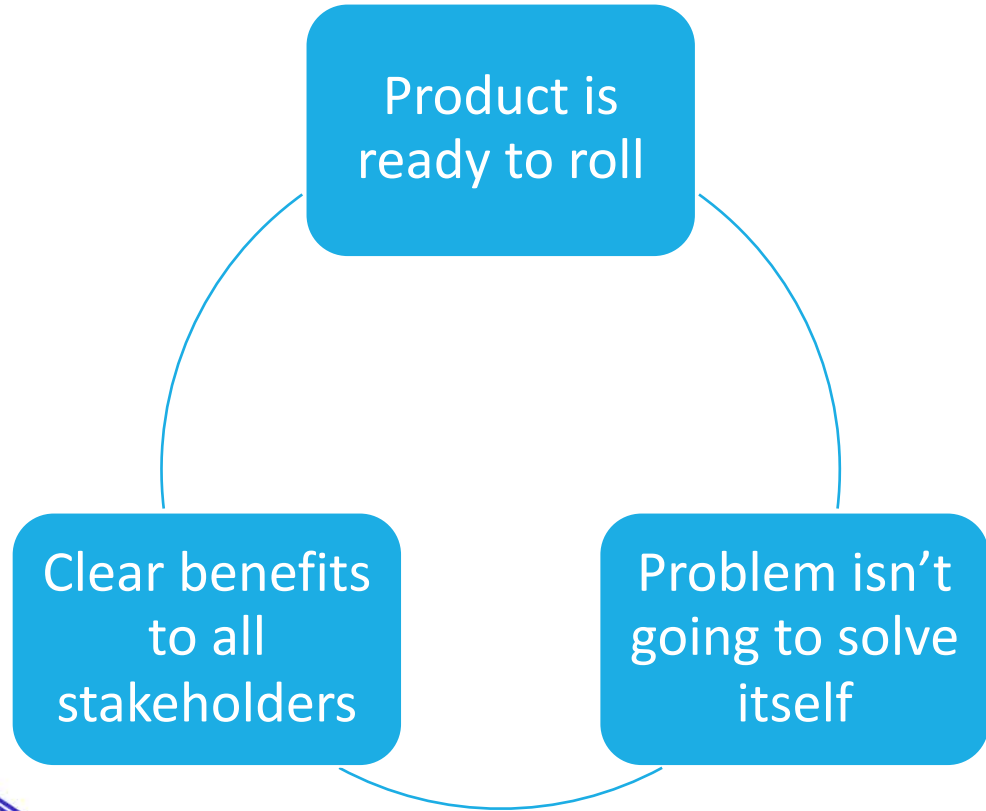


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Where to from here?



Acknowledgements

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