



Compliance Airworthiness Regulations Education





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27TH ULD CARE ANNUAL CONFERENCE

MAINZ, GERMANY

SEPTEMBER 8 - 11, 2014

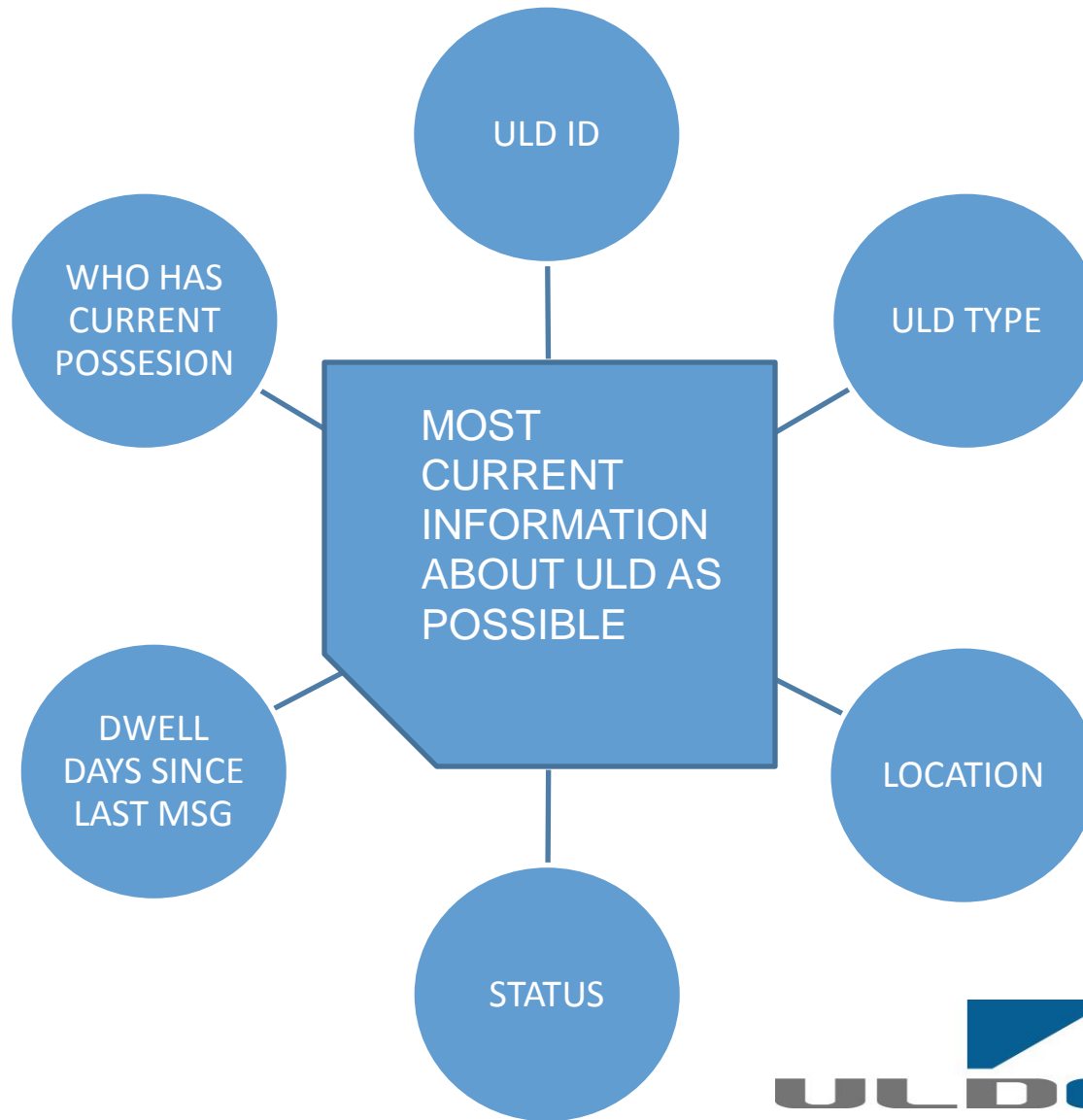
MAINZ 2014 - CALL TO ACTION



ULD CARE & ASSET CONTROL



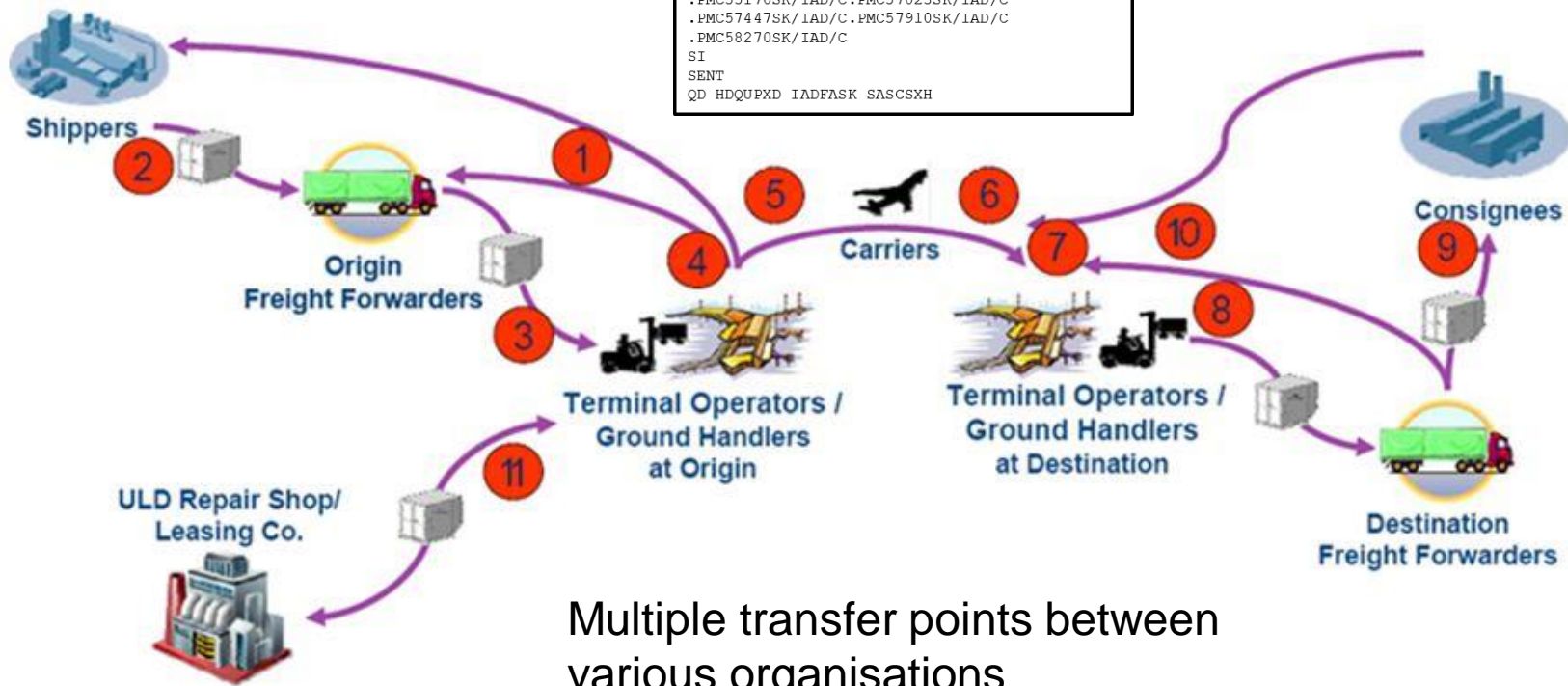
ASSET CONTROL - VISIBILITY



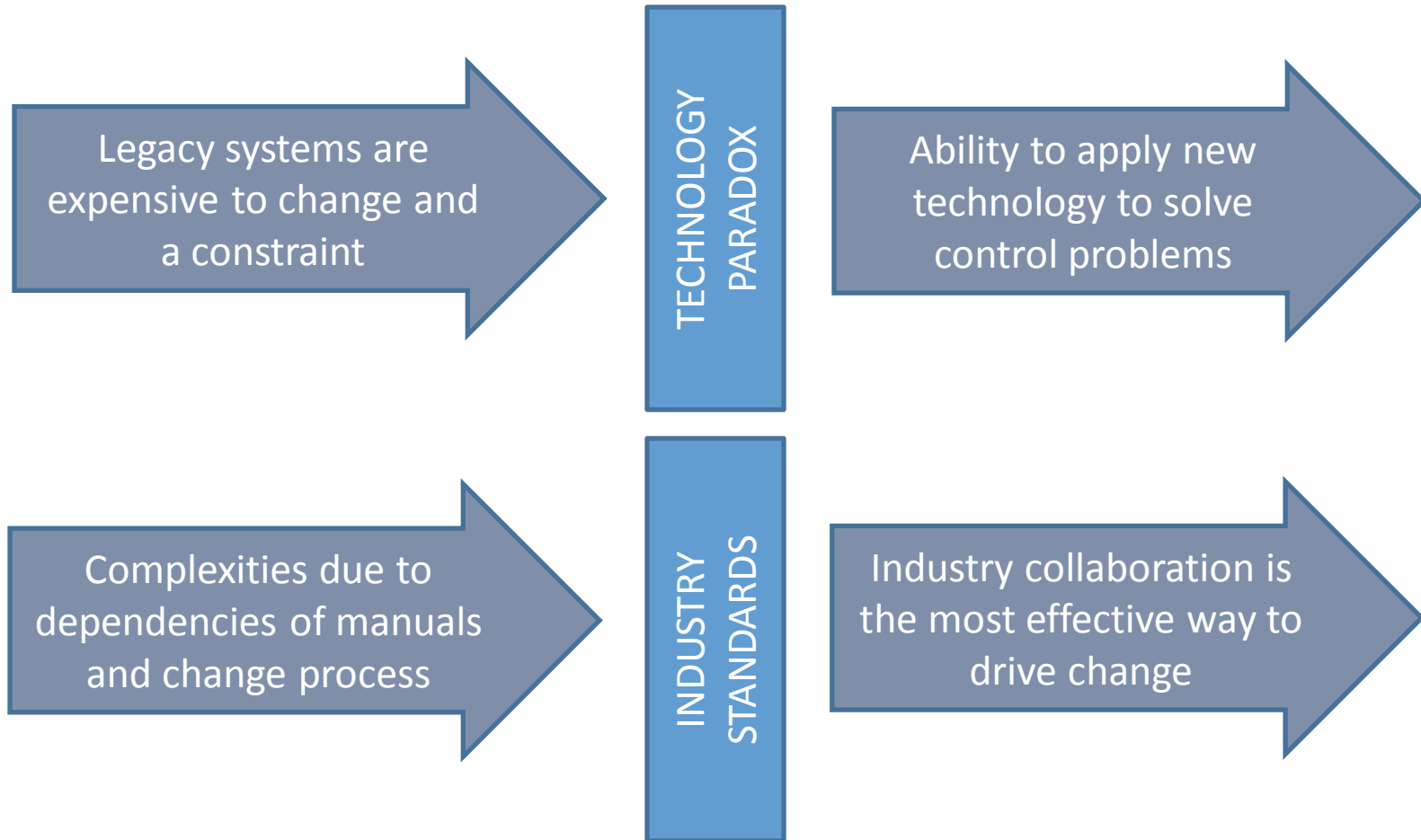
AVIATION SUPPLY CHAIN ULD TRANSFERS

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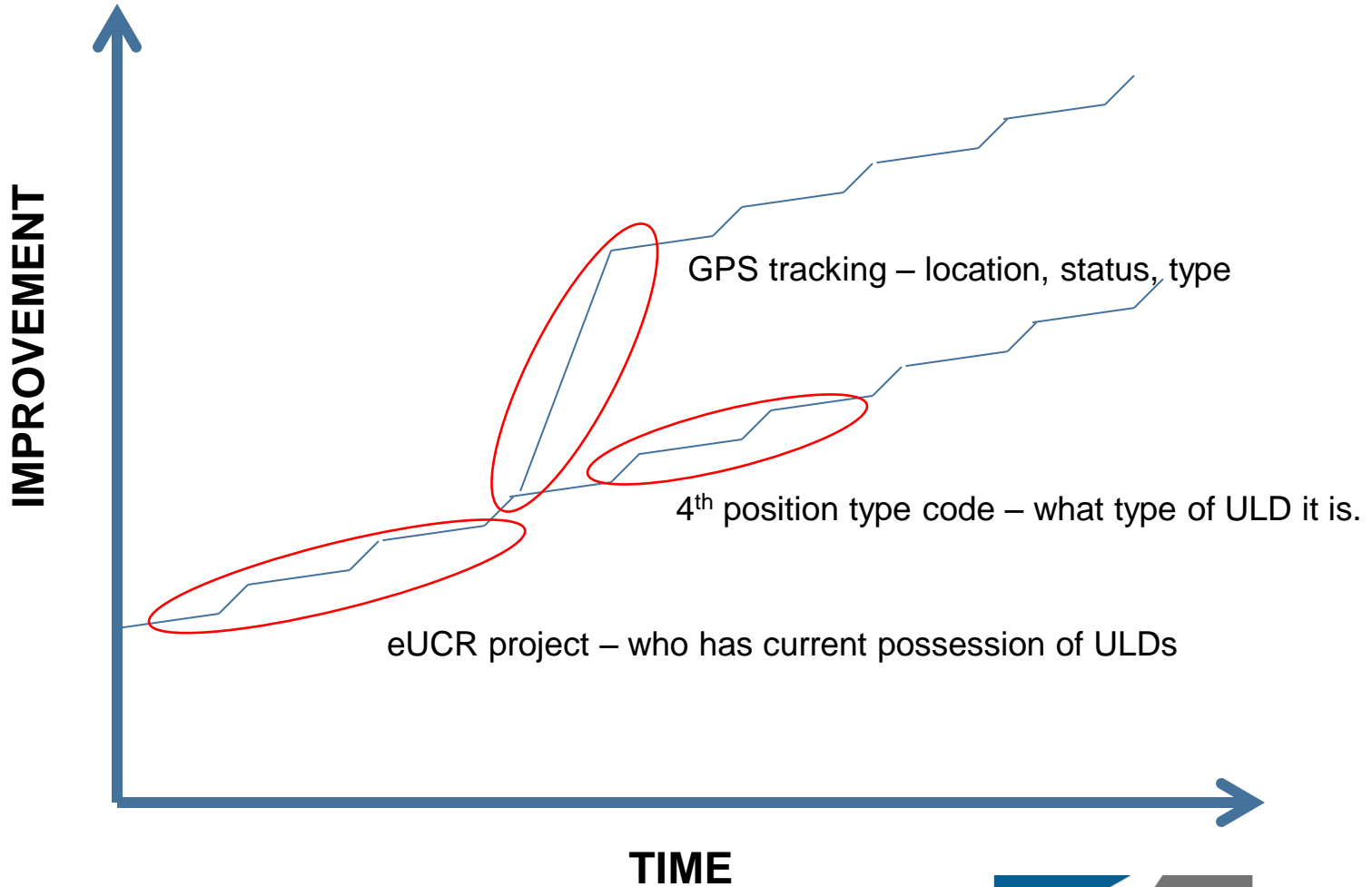
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SI
SENT
QD HDQUPXD IADFASK SASCSXH
    
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BARRIERS AND OPPORTUNITIES



IMPROVING ASSET CONTROL





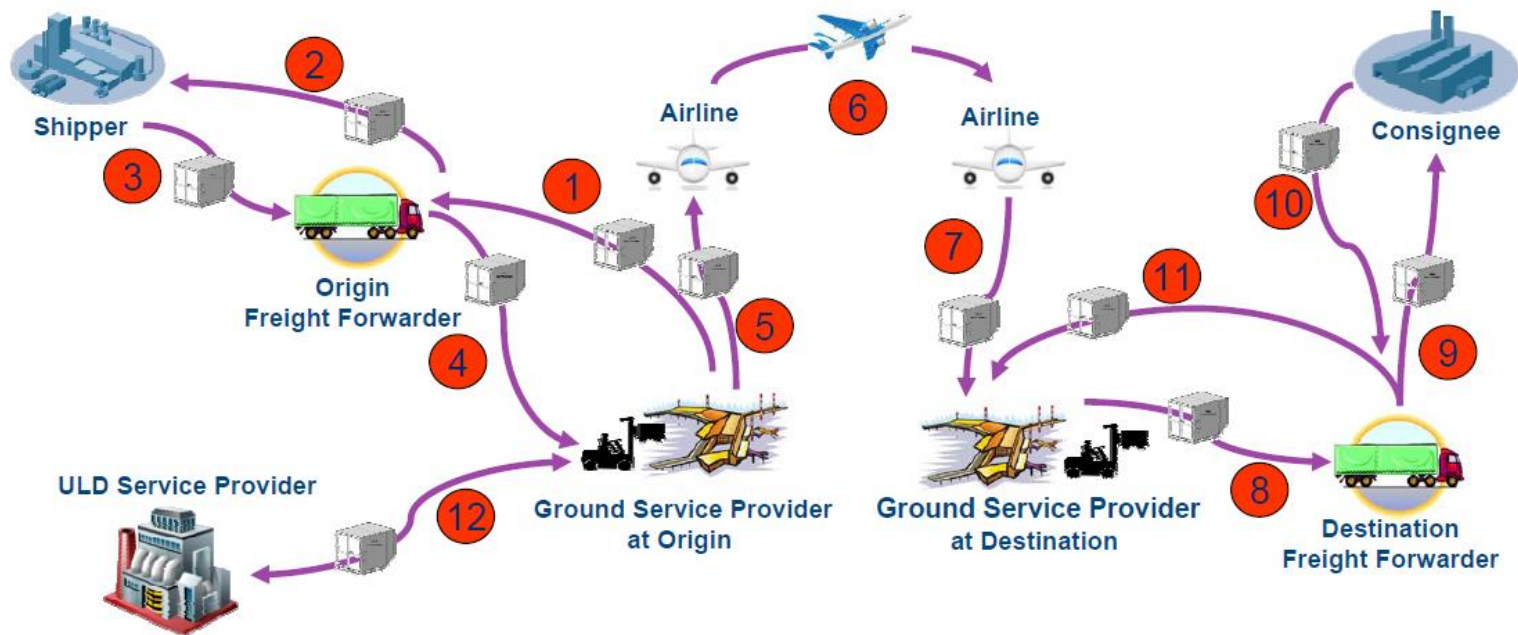
IATA ULD Control Receipt Update





Industry Problem

- ULD needs to be transferred multiple times from one party to another in today's complex cargo operations
- How to ensure inspection? How to clarify liability when damage/loss occurred? How to promote the use of UCR across industry?



Industry Solution

- Initiated by ULDOAG and endorsed by ULDP to enhance CSC RP 1654 (UCR) in order to:
 - Facilitate the inspection of the airworthy condition of the ULD being transferred and facilitate the implementation of IATA Operational Damage Limits Notice (ODLN)
 - Reinforce the 'Liability for Loss or Damage' clause
 - Simplify the UCR for any Transferring/Receiving Party
 - Become the business requirements for e-UCR
- ULD CARE UCR Working Group took on the task in detail
- ULDP/CBPP Secretary finalized the proposal for ULDP/CBPP review

Status Update

CBPP endorsed in general with two pending items for clarification:

➤ List of Demurrage Codes

BCC: ULD return delayed due to government regulations procedures

HHH: Lending of empty ULDs

ZZZ: ULD transferred as courtesy move

XXX: ULD transferred to the owner empty

➤ Liability for Loss or Damage clause

Parties shall ensure that the unit load device (ULD) be handled in accordance with IATA ULD Regulations (ULDR)/ carrier's instructions/ owner's instructions. The use of a ULD is subject to provisions in applicable tariffs in effect as of the date hereof including provisions which are filed in accordance with the law. In particular, the Receiving Party shall be liable for demurrage if the ULD is held in excess of the time specified in the applicable tariff, the Receiving Party shall be liable for damage sustained by a ULD while in the use and possession of the Receiving Party; the Receiving Party shall be liable for a non-return penalty as specified in the applicable tariff. **THE PARTY IN POSSESSION OF THE ULD SHALL ASSUME RESPONSIBILITY TO THE ULD OWNER FOR THE AIRWORTHINESS OF THE ULD.**

Next Steps

- ULD CARE Consultation
- ULDP approval
- CBPP approval
- CSC Notice of Amendment
- CSC Resolutions Manual and ULDR
- e-UCR development
- Industry-wide promotion and implementation



Coming together
is a beginning;
keeping together
is progress;
working together
is success.

Henry Ford

prof. wibit | Studio 111

Together

For Better





Thank you for your attention

LIAO, Zhi Yong
Manager, Business Process & Standards
Tel: + 41 (0) 22 770 2637
liaozy@iata.org | www.iata.org



Use of 4th position of IATA ULD
identification code to identify
ULD functionality

Background

- ULD Identification codes established under IATA Cargo Service Conference Resolution 686
- Now on 3rd version
 - Amended 1 Oct 1984 from

A	to	Q	6	A	M	A
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 - Amended 1 Oct 1993 from 4 numerals to 5 for airline serial number
- Weight and Balance Manuals refer to the IATA codes
 - Base size (posn.2) – Boeing
 - Contour (posn.3)- Airbus

Current Issues

- ULD owners wanting to identify sub groups of ULD (particularly lightweight ULD)
- Proliferation of new categories
 - Fire suppression/containment equipment
 - Temperature controlled equipment
- Proliferation of different contours
 - **INSUFFICIENT LETTERS TO COVER THESE NEW REQUIREMENTS.**

Result of last years questionnaire

Question				
1	Proposed use of 4th digit as an additional method of identification			
			Responses	%
	a.)	Generally in favour	15	52%
	b.)	Neutral	8	28%
	c.)	Generally not in favour	6	21%
			29	
	Comments:	Asian carriers are generally neutral. European, Middle East and African carriers are generally in favour Carriers Opposed are: American Airlines, Finnair, Fed Ex, UPS, Eva Airways and Garuda.		
2	Do you have types of ULD's that you cannot identify under the current system?			
			Responses	%
	a.)	Yes	16	55%
	b.)	No	13	45%
			29	
3	If you had the capability to identify various ULD user preferences of ULD's what would you consider important? (Note: Multiple responses expected.)			
			Responses	%
	a.)	Lightweight	14	18%
	b.)	Garment	9	11%
	c.)	Metal Door	8	10%
	d.)	Security Locker	6	8%
	e.)	Variation on Contour	3	4%
	f.)	Variation on Base Type	3	4%
	g.)	Variations on Pallet Construction eg. "Heavy Duty"	9	11%

CARGO IMP

...	Data Element No.	Name	Alternate Name	Description	Format	Example	Reference	Note
		ULD						
-	115	ULD Serial Number		Serial number allocated to each Unit Load Device by its owner	mnn(n)	1234		The three possible representations of the format shall be mnnn, nnnn or nnnnn
		Sub Element ID		Format	Description			
		115D001		mnn(n)	ULD Serial Number			
+	513	ULD Rate Class Type		Coded description of a Unit Load Device rate class	n(a)(a)	8		See CTCC Resolutions Manual, Resolution 523.
+	516	ULD Charge Code		Code explaining the nature of a ULD rate/charge	a	A	1.44	
-	801	ULD Owner Code		Code to identify the owner of a Unit Load Device	mm	TW		Actual format is "aa", "an" or "na". Owner can be an airline or leasing company. See IATA ULD Technical Manual.
		Sub Element ID		Format	Description			
		801D001		mm	ULD Owner Code			
-	802	ULD Type		Code identifying a standard Unit Load Device type	amm	ASE		See IATA ULD Technical Manual.
		Sub Element ID		Format	Description			
		802D001		amm	ULD Type			
+	803	ULD Volume Available Code		Code indicating the proportion of the volume in a Unit Load Device which remains unfilled	n	1	1.20	
						ULD PREPARED BY		

The three possible representations of the format shall be
 mnnn
 nnnn
 nnnnn

CBPP has recognized that mnnnn is missing and will add from next edition of CARGO IMP

Part 1

- Messaging and IT conformance

Cargo Interchange Message Procedures 32nd Edition

★ Bookmarks Home General Information Message Specification Data Elements Codes List

Toggle View

...	Data Element No.	Name	Alternate Name	Description	Format
		110 Intentionally Left Blank			
+	111	Embargo Number		Identification number allocated to each embargo by originating airline	n[...3]
+	112	Airline Prefix	AWB Prefix, Airline Code Number	Coded representation of an airline	nnn
+	113	AWB Serial Number	Shipment Reference Number	A serial number allocated by an airline to identify a particular air cargo shipment and the associated Air Waybill	n[8]
+	114	CCA Serial Number		Identification number allocated to each Cargo Charges Correction Advice	mnnnnn
+	115	ULD Serial Number		Serial number allocated to each Unit Load Device by its owner	mnnn(n)

There is no justifiable reason for any airline or third party service provider to reject ULD identification codes having format ANNNN e.g. AKE L1234 AB

Part 2 • Standard usage of letters in position 4

Code Letter (1 st Character of ULD Serial Number)	ULD Special Characteristics
C	Collapsible
F	Fly-Away Kit (FKT)
G	Garment on Hanger (GOH)
K	Light weight
L	Light weight
N	Forkliftable
R	Temperature Controlled Container (TCC) with dry ice
S	Solid/ rigid door
T	Temperature Controlled Container (TCC) without dry ice
X	Reserved for airline internal use
Y	Reserved for airline internal use
Z	Reserved for airline internal use

Outcome

- Adoption of a table allocation of certain letters for certain functionalities was not able to obtain a unanimous acceptance at ULD Panel and was not approved by IATA CBB panel.
- Users may select any letter they like to describe any particular functionality they choose- but they will have to then inform their service providers of their selection

Summary

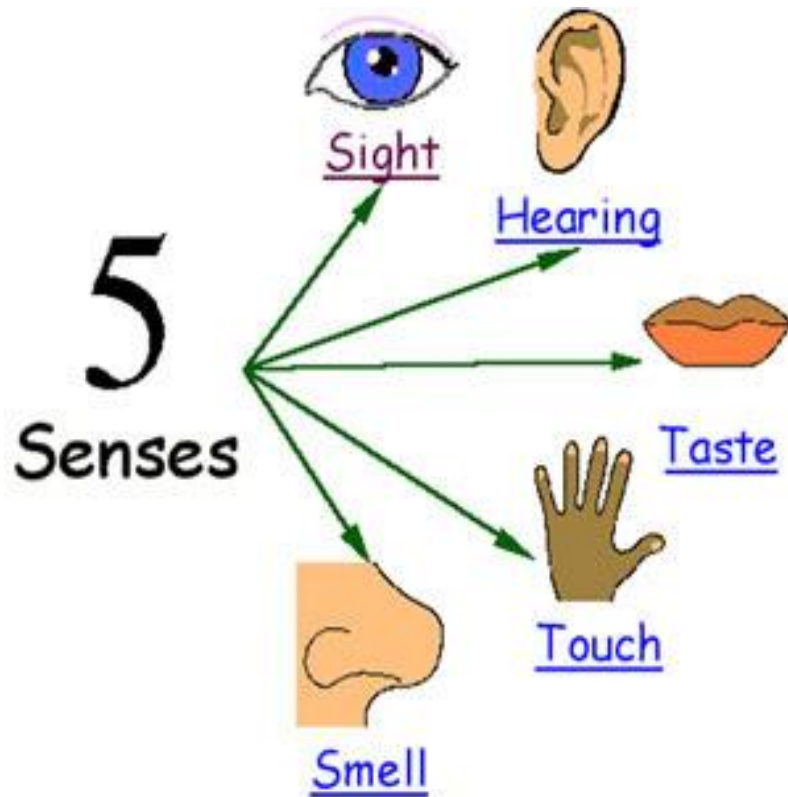
- ULD Owners now have a method to identify sub group/functionality of different ULD
- When position 4 is a letter then the number range is restricted to 9999 units.
- The use of Alpha or Numeric in Position 4 is now correctly shown in IATA Cargo IMP manual- all IT systems should comply
- Use of this system is at owners discretion and is not mandatory
- Compliance with IATA Reso 686 is mandatory
- Use of X,Y,Z in positions 1 and 2 should be done with consideration to the operational implications that such a practise may trigger



"A system that consists of a group of sensory cell types that responds to a specific physical phenomenon, and that corresponds to a particular group of regions within the brain where the signals are received and interpreted."

Source: Wikipedia

Senses help us to optimize how we interpret, communicate and interact with our surroundings.



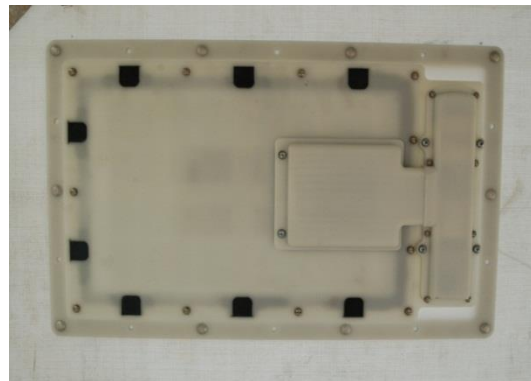
How can we apply these great sensing instruments to improve ULD management and ULD CARE?

THE 7 SENSING CAPABILITIES OF THE CHEP ULD

CHEP



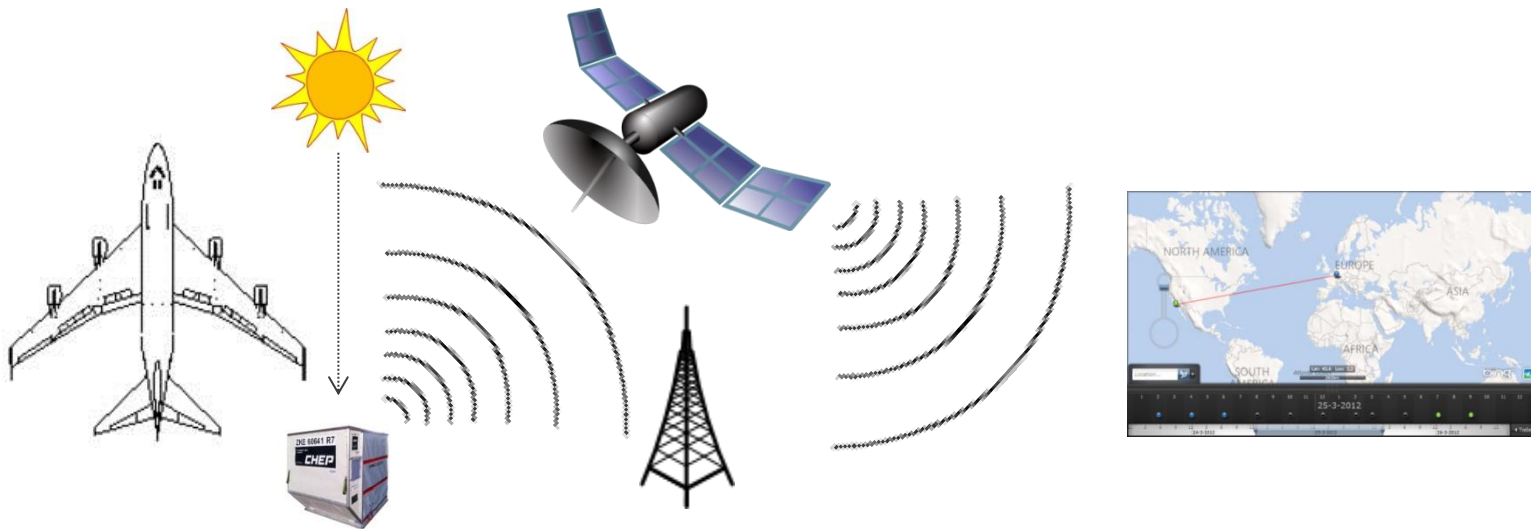
1. Location
2. Acceleration
3. Noise
4. Light
5. Temperature
6. Humidity
7. Pressure



First empirical evidence has proven benefits exist in the area of:

- **Asset control**
 - Improved timeliness and accuracy of ULD movements increases confidence in stock positions and allows us to meet customer demand efficiently
- **Damage reduction**
 - Correlation of excessive shock with time and location information allows us to attribute accountability for unnecessary damage to ULD's and content whilst in operation
- **Value added information (cargo tracking)**
 - The rich array of sensor information allows us to share information with our customers regarding the well-being of the goods that our transported under their care



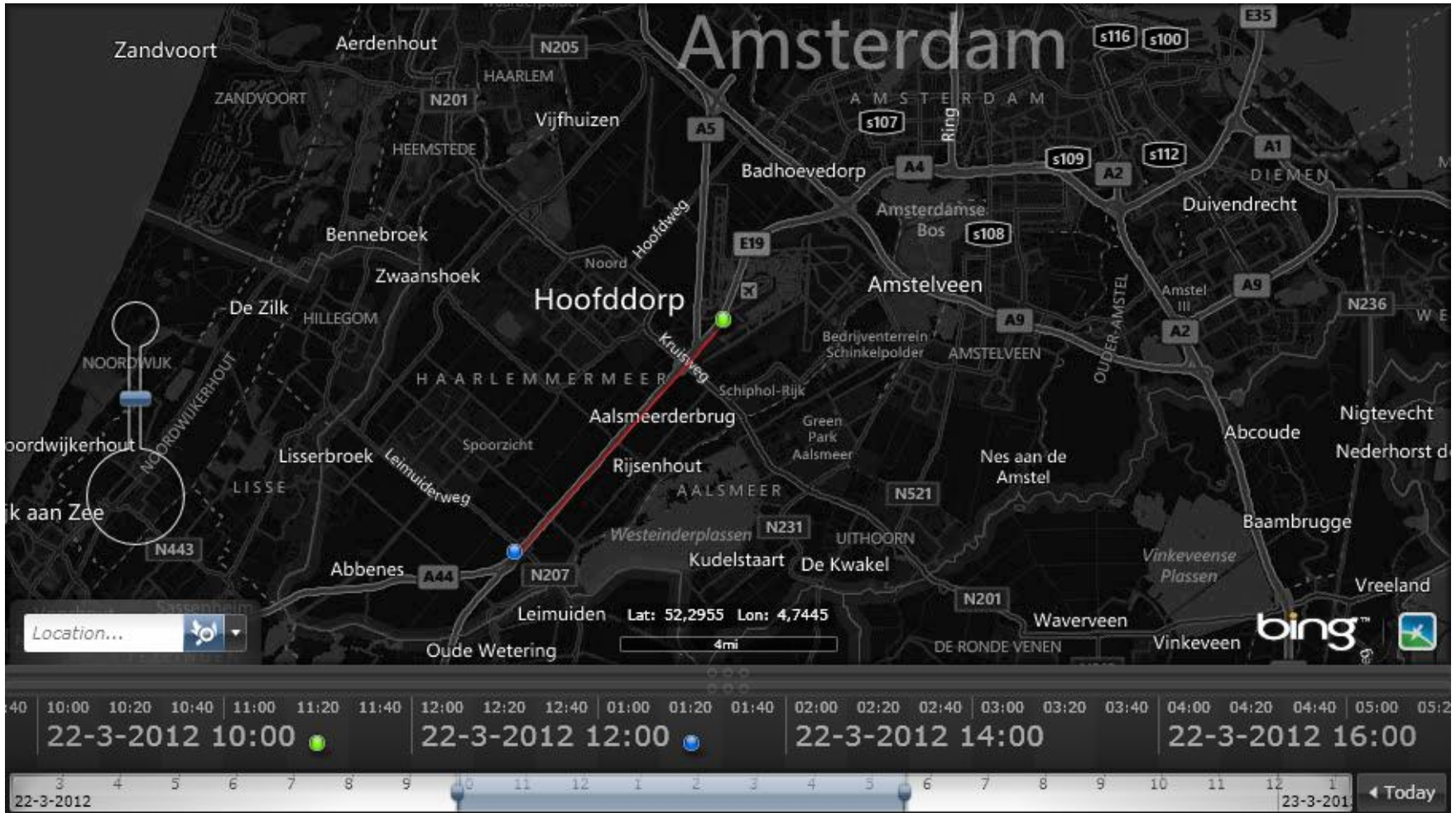


The CHEP tracking device harvests energy from sunlight to power its on board tracking capability which communicates both GPS and GSM location and sensor data to a backend information system that offers accurate real-time information on the container and its cargo.

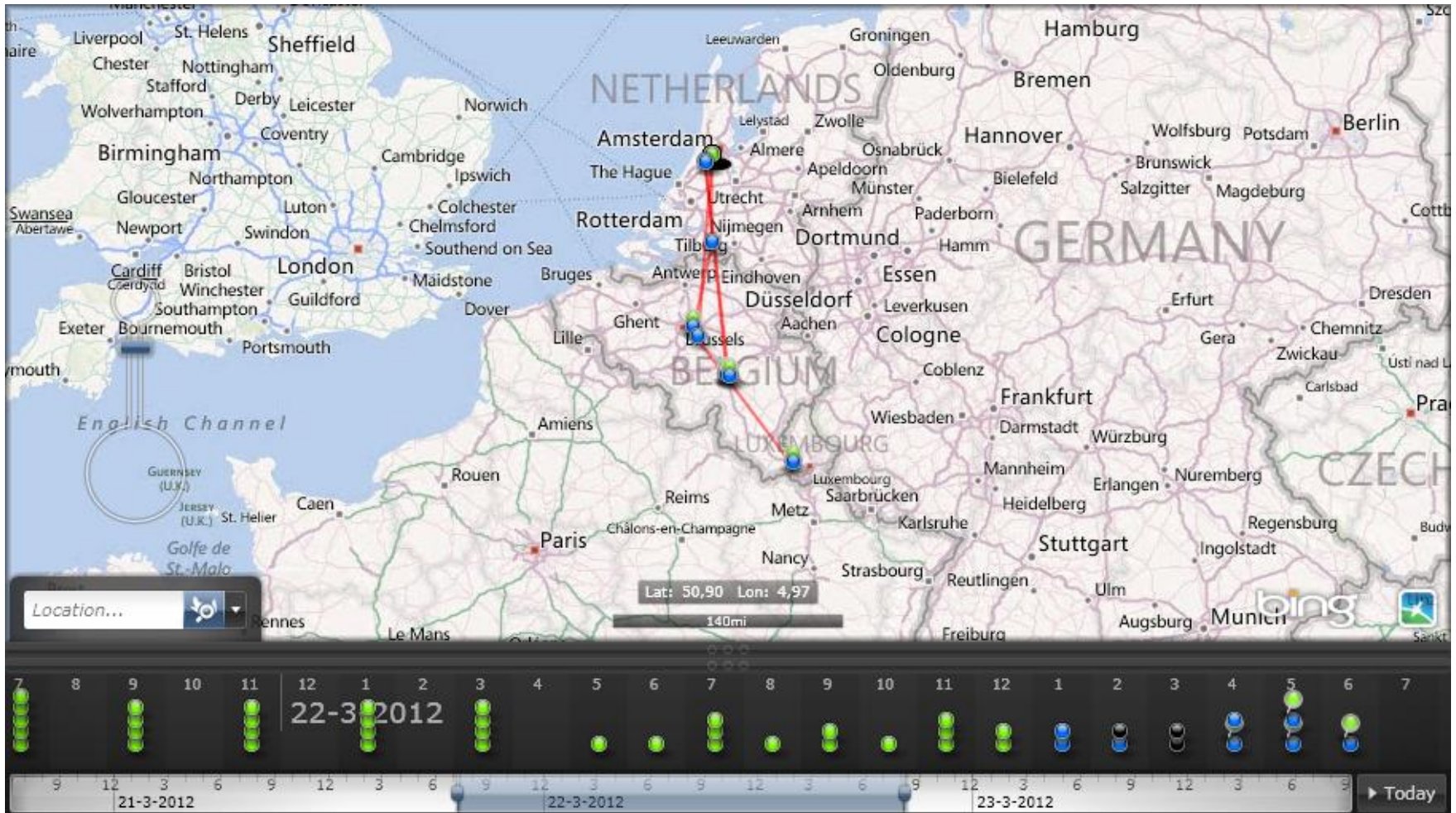
Container ready for release at AMS Schiphol station



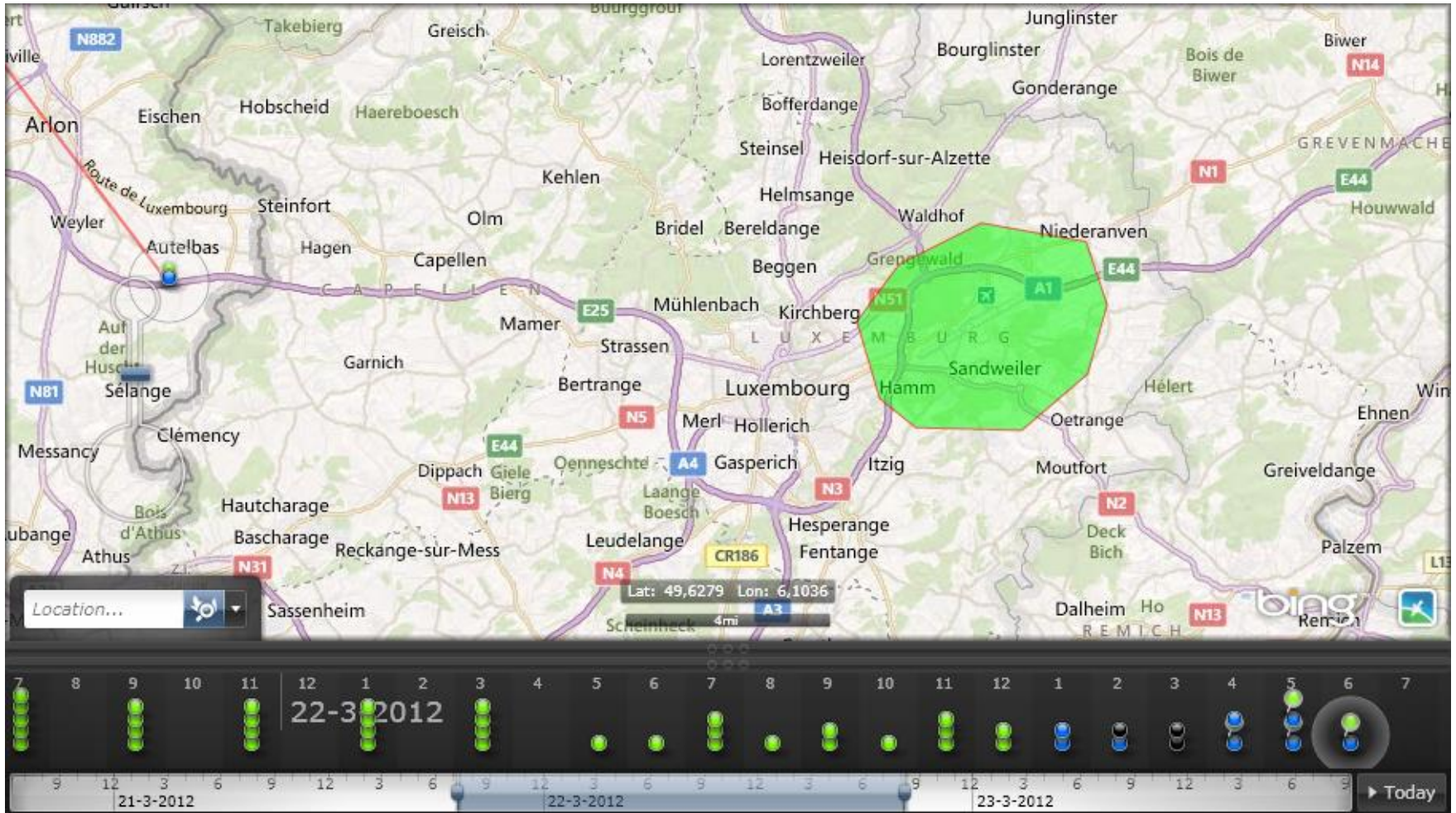
Container on board a truck driving towards Luxemburg



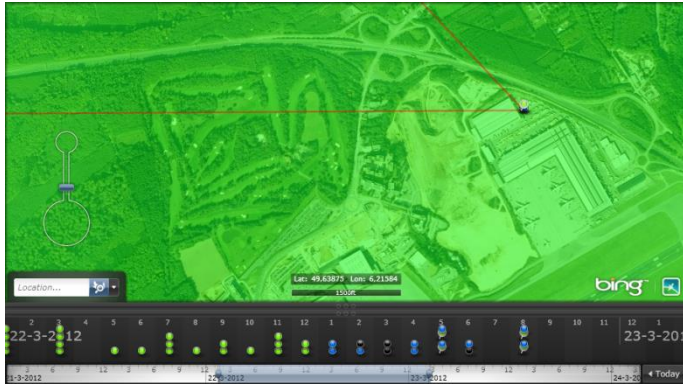
Tracking of the route towards Luxembourg



A geofence has been drawn around Luxembourg airport



Container arrives at Luxemburg airport – Geofence alert is triggered



Sentry Alert Notification: 30532

Dear Floris:

An OnAsset SENTRY device that you are monitoring has reported the following conditions for rule group Inside Luxembourg:

**Inside Luxembourg
Information is provided in this email for additional analysis.**

Date Message Acquired:

03/22/2012 19:28:34 UTC

Date Server Received:

03/22/2012 21:28:25 UTC

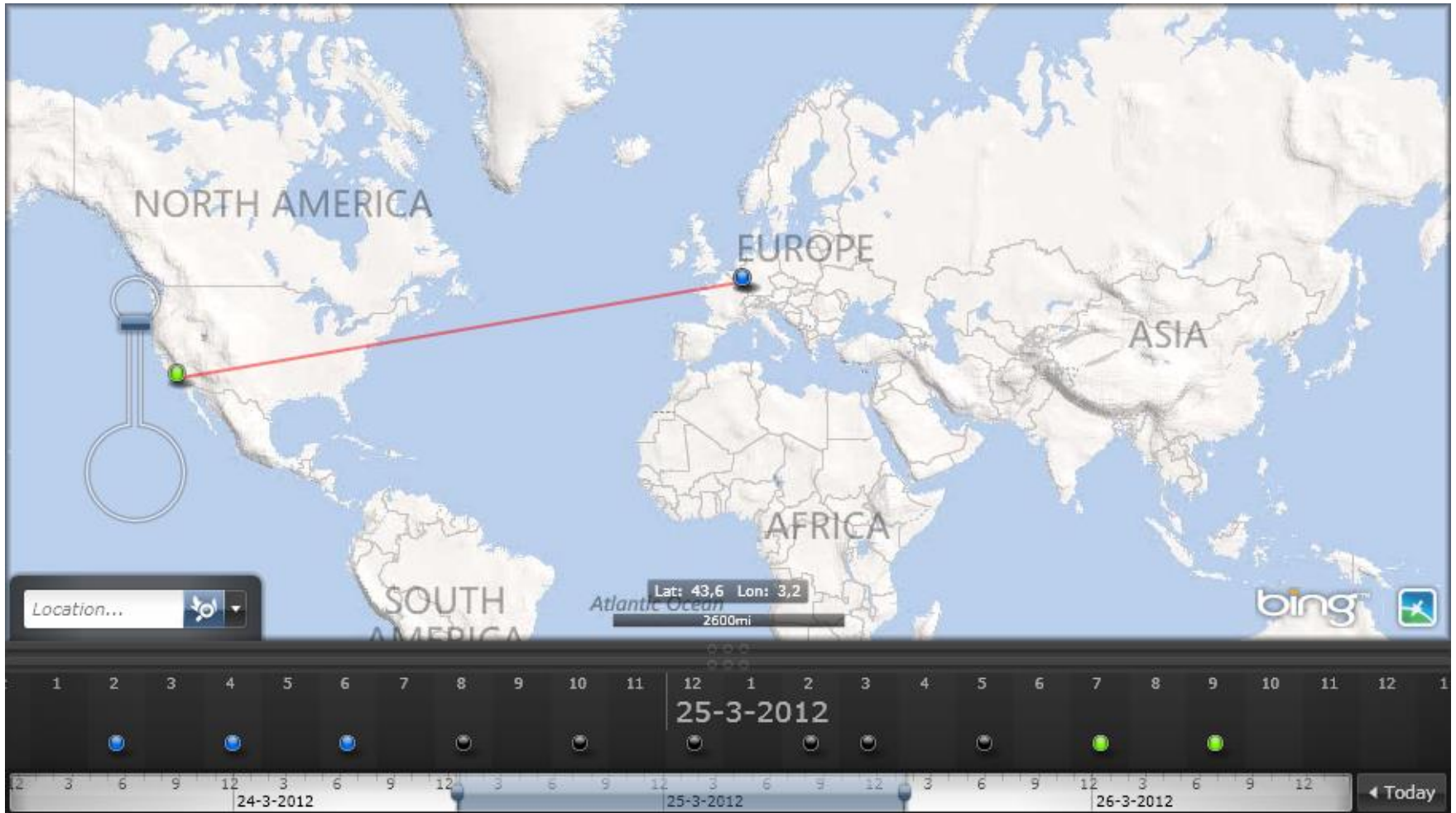
Device S/N#:

SN-30532

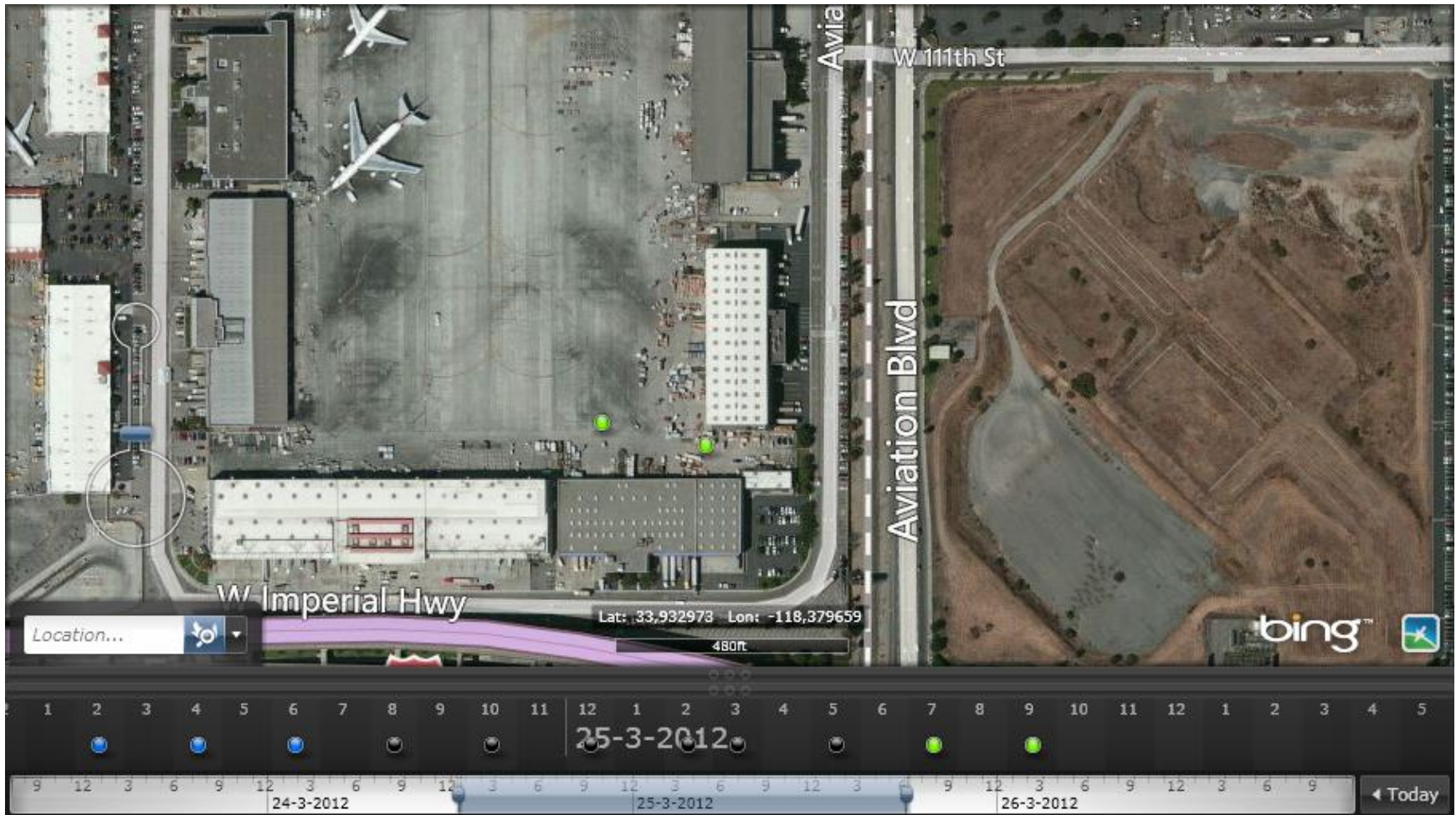
Client Name:

CHEP Aerospace Solutions

The container has now boarded a flight to LAX



The container has arrived at LAX



Following Field Trial #1 we proceeded to develop:

- **Energy Harvesting Capability** – We quickly knew that it would be impossible to manage an operation whereby we would need to periodically recharge the batteries of each and every device so we had to make sure the device became its own power source
- **Form factor and attachment method compliant with industry regulations** – Regulatory compliance requires us to attach the tracking device to the ULD in a way such that it is compliance with OEM guidelines, Airline regulations and that the device does not compromise the operational use of the ULD container.
- **Integration with backend IT systems** – The data we capture is only valuable when it is made available to stakeholders in a way that allows them to make more accurate decisions more quickly



- **Field Trial #2 - September 2014 – TBD**
 - Multiple CHEP customers actively participating

Trial objectives:

1. Prove energy harvesting capability works
2. Gather empirical evidence that supports the business case
3. Identify and address any operational gaps
4. Directly engage key customer stakeholders in our roll out strategy

Roll out:

Subject to continued success and sign-offs we will proceed towards phased roll out by ULD type.

