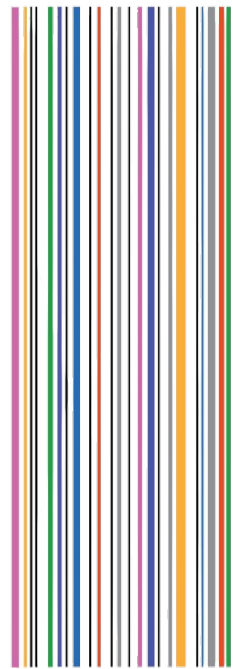


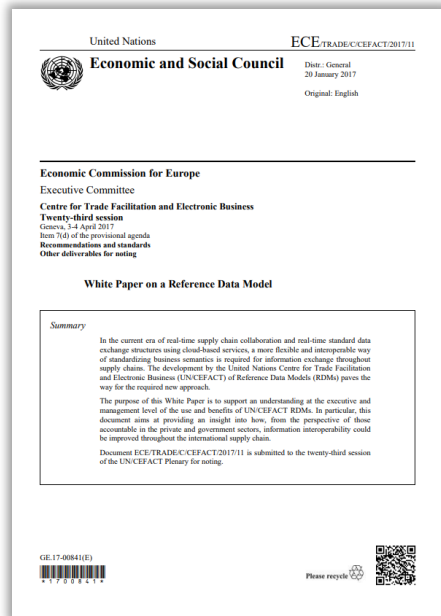
Recommendations, standards, and deliverables supporting implementation: UN/CCL (Core Component Library) & Reference Data Models

Item 6b
(15:40 – 16:20)

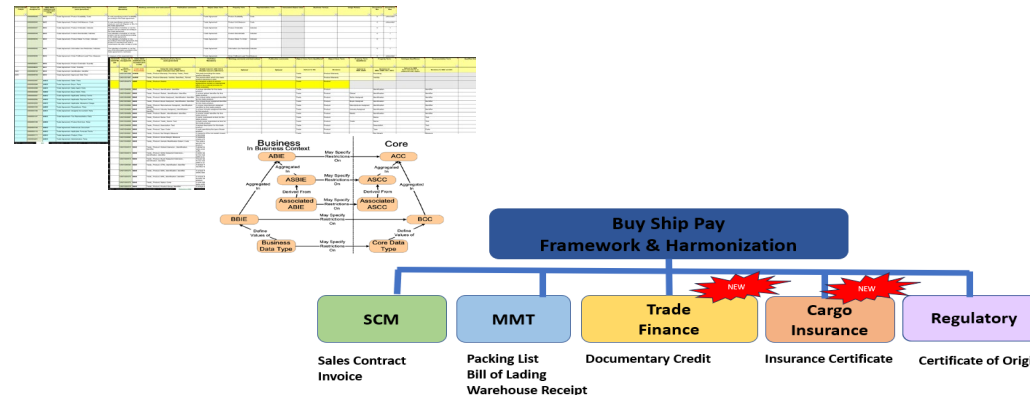


UN / CEFACT

- The UN Core Component Library (CCL) is a library of business semantics in a data model which is harmonised, audited and published by UN/CEFACT. The CCL uses Core component Technical Specifications (CTS) to ensure consistency and interoperability. The library has contributions from many organizations including government and business and deals with Cross Border Trade for messages for Buy, Ship and Pay business processes.

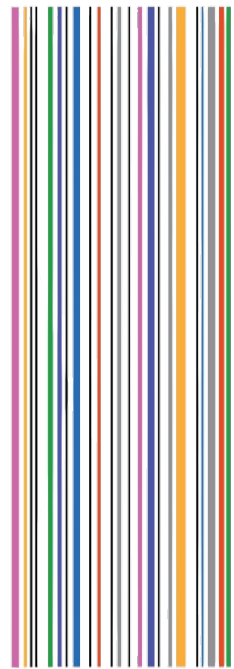


- In several pilot projects, experts analysed the transformative capacity of UN/CEFACT standards and MMT RDM: e.g., digital twin exercises of exports of wood materials from Belarus to Serbia and bitumen and meat between Azerbaijan and Ukraine. Experts are now working on a blueprint for a converter between solutions for railway cargo and multimodal transport between countries in Asia, Eurasia, and Western Europe. It will facilitate exchange of data between UN/EDIFACT, SMGS, CIM/SMGS, and other technologies, using MMT RDM as a common foundation. The European Commission is working now on the implementation of the Electronic Freight Transport Information Regulation (eFTI), considering the use of the MMT RDM as the common interface for multimodal data exchange.



Recommendations, standards, and deliverables supporting implementation: UN/CCL (Core Component Library) & Reference Data Models

Item 6b
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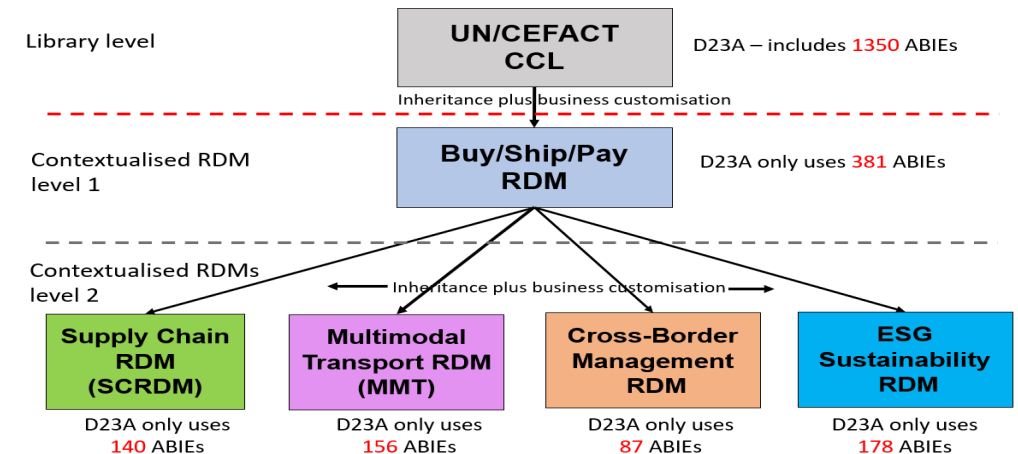
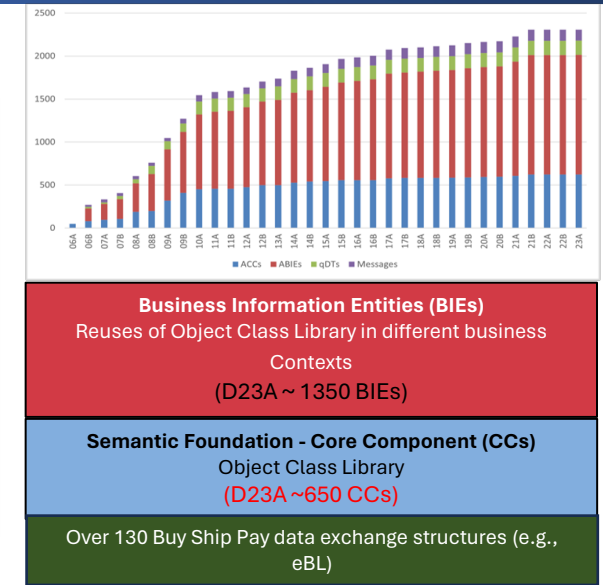
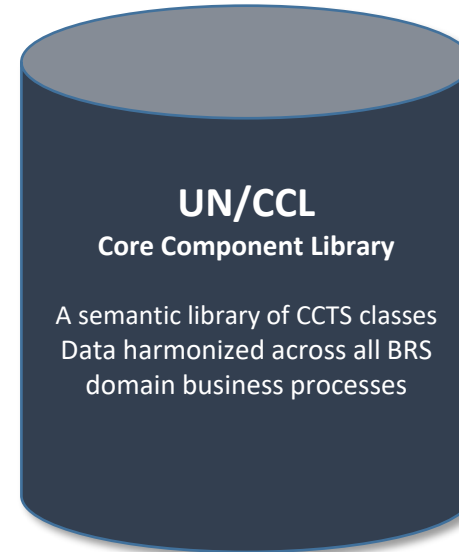


UN / CEFACT



“The UNCEFACT Cross-Industry-Invoice (CII) is very important and is one of the proposed Syntax bindings for implementation of the eInvoice (EN 16931-1). The syntax binding of CII is specified in CEN/TS 16931-3-3. See „Published standards“ section on the website of the responsible CEN/TC 434: https://standards.cencenelec.eu/dyn/www/f?p=205:32:0:::FSP_ORG_ID,FSP_LANG_ID:1883209,25&cs=18F2559A05E966F8D6BA2CD11622D2977 CEN/TS 16931-3-3 is adopted (like all EN and CEN/TS) in all of the 34 CEN members (countries).”

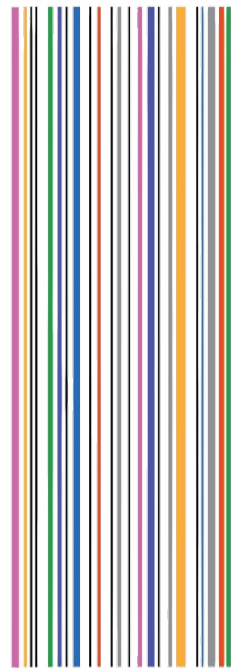
Gregor Roschkowski
DIN



Recommendations, standards, and deliverables supporting implementation: UN/EDIFACT

Item 6b

(15:40 – 16:20)



UN / CEFACT

- UN/EDIFACT, short for the United Nations rules for Electronic Data Interchange for Administration, Commerce, and Transport, derives its data elements from UNTDED (ISO 7372) and is presently in its latest iteration, D23A, encompassing a vast spectrum of 220 UNSM Messages that cater to 15 international domains, spanning B2B, B2G, and G2G exchanges. Facilitating the exchange of millions of messages worldwide on a daily basis, it stands as the inaugural and truly universal electronic standard for global document interchange.
- UN/EDIFACT is a cornerstone international standard for the electronic exchange of data that is widely used in international supply chains, transport and logistics. It is used by 100,000 traders in the retail sector alone.



“Explained how the use of the UN/EDIFACT standard could significantly optimize both communication and efficiencies within a large and complex network such as that of the maritime industry. The company sends over 250 million messages per year using the UN/EDIFACT standard, with 113,000 messages being sent from one ship alone when entering a port.”

Claudio Bozzo of MSC Mediterranean Shipping S.A.

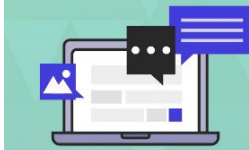


“GS1 believes that the digitalization of trade processes helps to meaningfully impact supply chain efficiencies by strengthening the links between the physical and the digital world. In the data sharing domain, GS1 provides standards for the exchange of master data, transactional data and event data. Over many years, our collaboration with UN/CEFACT has been strategically important because it has allowed both organizations to further our common objectives of harmonization and interoperability (for example, with the implementation of the EANCOM standard, entirely based on EDIFACT). We are looking forward to continued collaboration into the future and expect that we will find new synergies that serve to increase global digitalization.”

Piergiorgio Licciardello, Director, EDI GS1

UN/EDIFACT

United Nations rules for Electronic Data Interchange for Administration, Commerce and Transport



Created in 1987, UN/EDIFACT is a **standardized language for data exchange**, providing:

- a set of **syntax rules to structure data**
- **standard messages** which allow **multi-country and multi-industry exchange**
- an interactive **Electronic Data Interchange protocol (i-EDI)**



UN/EDIFACT is widely used in **international supply chains, transport and logistics**



UN/EDIFACT is used by **100,000 traders in the retail sector alone**



9175	an..3	X	Data element usage type code
9213	an..3	X	Duty regime type code
9280	an..35		Validation result text
9282	an..35		Validation key identifier
9285	an..3	X	Validation criteria code
9302	an..35		Sealing party name
9303	an..3	X	Sealing party name code
9308	an..35		Transport unit seal identifier
9321	an..8		Application error code
9352	an..256		Government procedure
9353	an..3	X	Government procedure code
9411	an..3	X	Government involvement code
9415	an..3	X	Government agency identification code
9416	an..256		Government action
9417	an..3	X	Government action code
9419	an..3		Service layer code
9421	an..3	X	Process stage code qualifier
9422	an..512		Value text
9424	an..512		Array cell data description
9426	an..35		Code value text
9428	an..35		Array cell structure identifier
9430	an..35		Footnote set identifier
9432	an..35		Footnote identifier

Data Elements

Codes

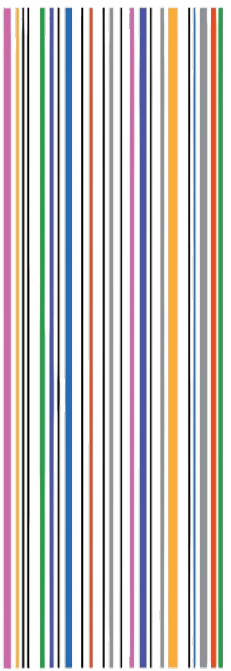
Code	Name
1	Clearance
2	Detention
3	Fumigation
4	Inspection
5	Security
6	Means of transport admittance
7	Cargo hold inspection
8	Container inspection
9	Cargo packaging inspection
10	Export certificate not required

Recommendations, standards, and deliverables supporting implementation: UN/LOCODE

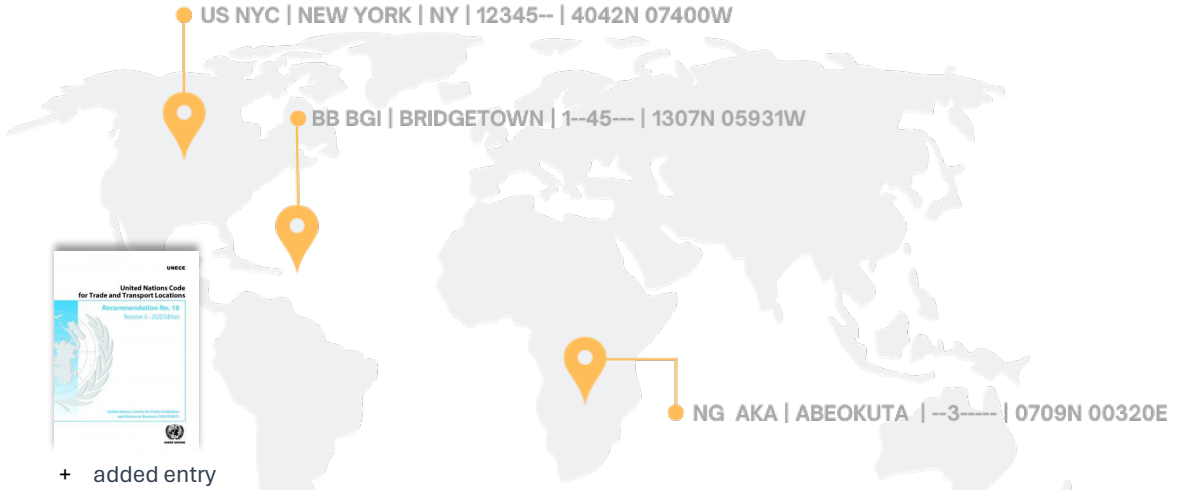
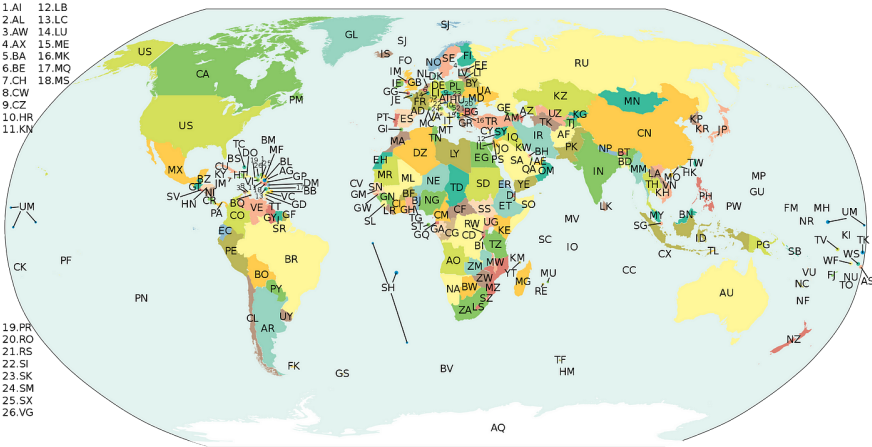
Item 6b (15:40 – 16:20)



- The UNECE introduced in 1981 the United Nations Code for Trade and Transport Locations (UN/LOCODE). As specified in UNECE Recommendation No. 16, UN/LOCODE is a five-character code system to identify locations related to international trade and transport. Today UN/LOCODE is widely used by government agencies and private sector entities around the world. It contains over 115,000 entries in 249 countries, territories and special areas.



UN / CEFAC



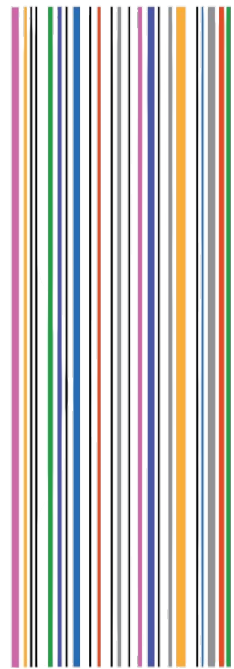
- + added entry
- # Change in the location name
- X entry to be removed
- | entry has been changed

Column "SubDiv" (Subdivision)
 ✓ state, province, department, etc
 ✓ Based contain the ISO 3166-2

Ch	LOCODE	Name	NameWoDiacritics	SubDiv	Function	Status	Date	Coordinates
	DE BWZ	Bad Wurzach	Bad Wurzach	BW	-23--6--	RL	0901	4754N 00954E
+	FR AC6	Arçonnay Arconnay		72	--3-----	RL	1301	4824N 00050E
	IN DMA	Dhamara Dhamara		OR	123-----	RL	1301	2048N 08654E
#	US PFT	Pfafftown Pfafftown		NC	--3-----	RL	1301	3609N 08021W
X	AU GNO	Geelong Geelong North		VIC	--3-----	XX	1301	3806S 14420E

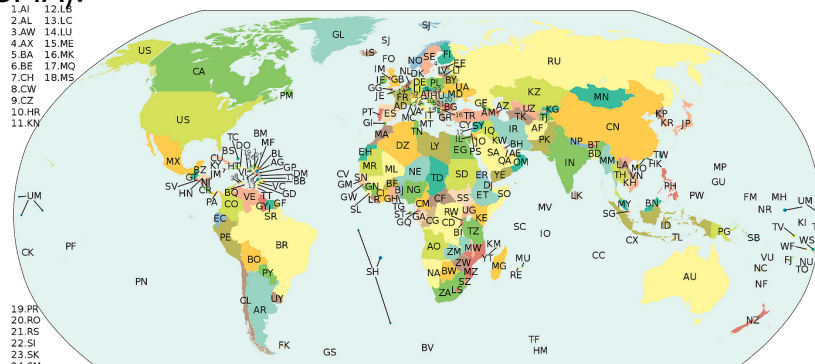
Recommendations, standards, and deliverables supporting implementation: UN/LOCODE

Item 6b (15:40 – 16:20)



UN / CEFACT

- IMO sub-committee on Safety of Navigation agreed on guidance on the use of the UN/LOCODE in the destination field in AIS messages with circular **SN.1/Circ.244/Rev.1** of 4th November 2016.
- The FAO Global Record Informal Open-Ended Technical and Advisory Working Group (GRWG) made a recommendation at its sixth meeting on 12 December 2022 regarding UN/LOCODE as an identifier for the port of registry of fishing vessels uploaded on the Global Record.
- The FAO Technical Working Group on Information Exchange (TWG-IE) made a recommendation at its third meeting on 13-14 December 2022 concerning the use of UN/LOCODE for identifying designated ports (DPs) under the Agreement on Port State Measures (PSMA).



It is fair to say that the UN/CEFACT standards are the backbone of any electronic communication in the maritime industry. These standards are used by all actors in the international logistics network: Shipping lines, forwarders, customers, truck/rail/barge operators, container leasing companies, depots, repair shops, port authorities, customs, etc. irrespective of their size or different backgrounds they may have.

UN/LOCODE is the leading global standard for identification of geographic locations in global trade, for an administrative or economic area, such as cities, towns, etc. Whenever along the supply chains it is required to identify where an event has occurred or will occur, it will be based on the UN/LOCODE.

All stakeholders are using the UN/LOCODE to identify any location along the supply chain: Place of origin and destination, ports of call, but also place of document issuance, and place of invoice receiver; the complete list would be lengthy. Plus of course, all vessel schedules, published by the line operators are based on UN/LOCODE. In that sense, UN/LOCODE describes the container movements and the means of transport movements (truck, rail, vessel) and also the handling chain for all shipping documents along the routing.

Subsets of a location, for example, inland terminals, sea terminals, and depots are identified by separate code lists, so-called UN/LOCODE Child Codes, which are again based on the UN/LOCODE.

UN/LOCODE is technology agnostic. It is used in any communication format, such as UN/EDIFACT, ANSI, XML, or in the latest API in just the same way.

UN/LOCODE is accurately maintained by the central UN/CEFACT bodies, following the clear guidelines of UNECE Recommendation No. 16.

Michael Schröder, Project Manager
Hapag-Lloyd AG




UN/LOCODE

Implementation in Air Cargo and Maritime



Air Cargo Report View
Air Waybill No: 00112345677
Flight No: QF001, **Original Loading Port Code: USLAX**
Discharge Destination: AUSYD

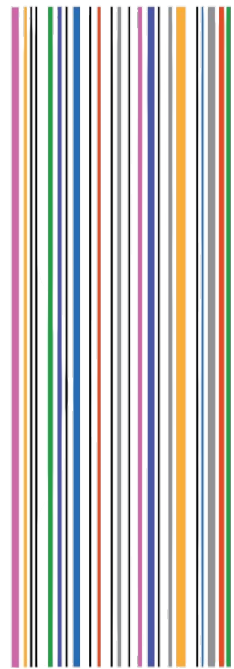


AIS TRACK: 
Name: HANIG LMGS
Callsign: 9Z1452, Ship Type: Passenger Ship, **Destination: MX ACU > PE CTA**
Nav Status: Under way sailing, Latitude: -5.641691, Longitude: -90.667179



Recommendations, standards, and deliverables supporting implementation: UN/LOCODE

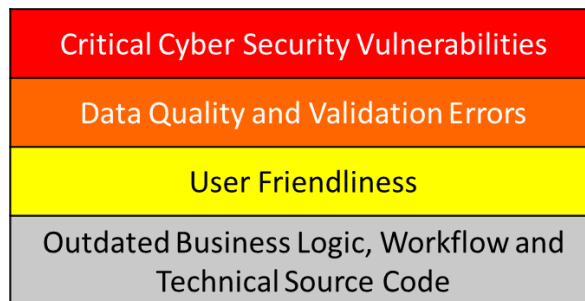
Item 6b
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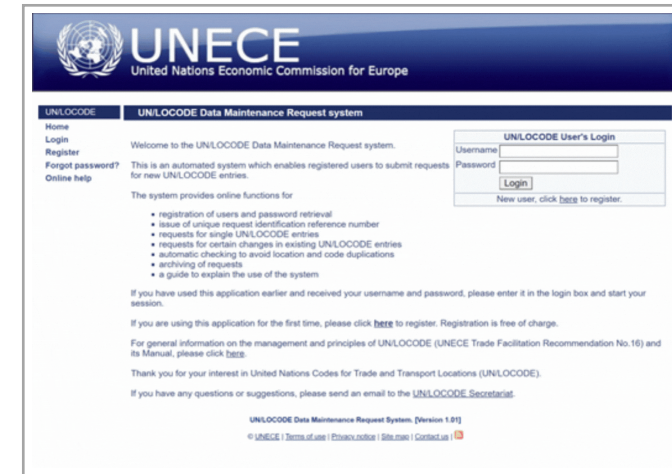
UN / CEFAC



- The current UN/LOCODE system, including its IT web interface, was developed almost two decades ago. Since then, IT systems, including cyber security needs have evolved considerably. This resulted in a situation where the UN/LOCODE web interface (i.e., the web-based online Data Maintenance Request application), was flagged by the Office of Information and Communications Technology (OICT) as non-compliant with UN cyber security requirements, and the rest of the system has not been audited. This was reflected in the UNECE Executive Secretary Compact assessment for 2021 as well as in **para. 24 of UNLOCODE-AG/2022/INF.2**.
- To date the following progress has been made:
 - 3/3 of the critical cyber security vulnerabilities have been remediated.
 - Testing of the implemented changes on the UNECE testing platform
 - In-progress: implementation of additional OICT cybersecurity recommendations.
 - In-progress: field validations, data quality, and user-friendliness improvements.



● HIGH ● MEDIUM ● LOW ● LOWEST



Challenges

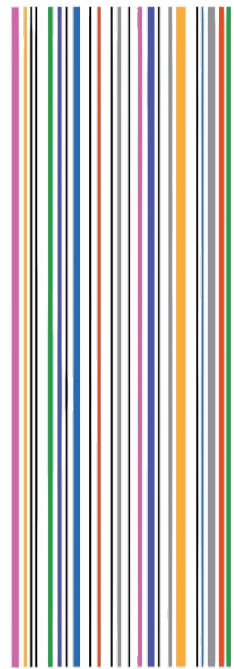
- Complexity in the source code and legacy software development pattern
- Cost of third-party services for mapping platforms, ext. i.e., API quotas QPM (request per day)
- Availability of reference data i.e., sub-division geographical data
- Data integration between the sub-systems

Need for further funding

- Implementation of additional OICT cybersecurity recommendations
- User support on technical issues
- Re-engineering of subsystems 2 – 3 to ensure data integration and quality
- Other technical fixes, data validation, features, and data maintenance procedures expressed by the user community that are too complex to complete in 3 months

Recommendations, standards, and deliverables supporting implementation: UN/FLUX

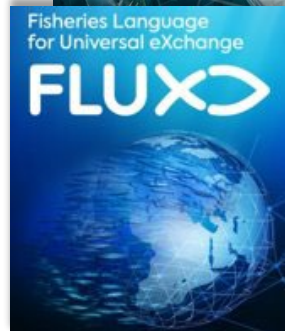
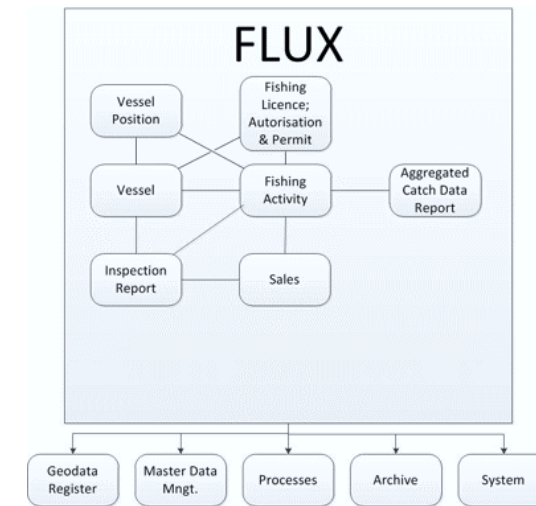
Item 6b (15:40 – 16:20)



UN / CEFACT

- The United Nations Fisheries Language for Universal Exchange (UN/FLUX) is a way for fishing industry operators to exchange information in a single and globally standardised way. It can be used in all phases of fisheries operations – from catch to sale. UN/FLUX gives automatic access to the electronic data needed for fish stock management. The data includes information on:
 - vessels and their fishing trips;
 - fishing operations (logbook data);
 - catches (area, species, quantity, etc.);
 - landing and sales;
 - fishing authorisations and permits;
 - inspection reports.
- The UN/FLUX standard is directly linked to Sustainable Development Goal (SDG) 14 of the 2030 Agenda on Sustainable Development. It supports the achievement of Target 14.4, which focuses on ending illegal and unreported fishing and overfishing, and destructive fishing practices and implementing science-based management plans by 2030. UN/FLUX also contributes to ensuring sustainable production (SDG 12) in the fishing industry through fisheries management based on reliable fishing data, which will help efforts to preserve biodiversity and support the sustainable use of fish stocks and overall fishing practices.

The UN/FLUX is a priority in the EU's fisheries data management strategy and has been promoted as a global standard for data exchange in fisheries.



Download
FLUX

