UN/CEFACT Project Proposal

Project Name:	Geofencing Facilities		
Date submitted:	31/03/2023	Proposed by:	David Roff

1. Project purpose

Required

Industry is increasing the use of smart container technology and IoT devices within their supply chains to improve security, visibility, and plan more efficiently. These IoT devices transmit the location of the assets to which they are attached, however the context of where the assets are at that point in time is often not known unless it is part of the transport plan and being within an existing geofence.

Many parties can be involved in a transport movement, and container owners may make use of several vendors of devices, along with shippers own IoT devices being deployed there is currently no single definition of a facility, or methodology to define those facilities with a geofence.

This leads to duplicated effort and more importantly differences between definition of the same facility (terminal, berth, container facility or other) and there is no guidance on how to draw these geofences or to improve quality when reviewing them.

BIC Facility Codes and SMDG Terminal Codes are child codes of the UNLOCODE and code list publishers for these facilities, the purpose of this paper is to define the rules for their respective facilities and outlining the methodology, providing consistency and a drive towards quality geofences that can be used and trusted in industry.

A sample of business cases that this will facilitate:

- Reduce time to implementation and ROI for smart containers
- Automation of Gate-In and Gate-Out events at a depot
- Realtime depot reconciliation, check live container stock at a facility without manual inventory checks
- Schedule deviation alerts allow exceptions to be reported when a container deviates from the transport plan
- Identification of short shipped containers or overlanded containers
- Ability to build additional zones-of-interest such as berths in an ocean terminal or customs areas within a depot on top of standard-agreed base facilities

2. Project scope

Required

To review current practices, document and outline the recommendations to geofencing for BIC and SMDG facilities

Scope of the paper will cover the facilities such as:
Ocean Terminals, Container Depots, Repair Yards, Freight Stations, Rail Yards, etc.

It will not focus on defining rules for Shipper or Consignee Facilities.

It will outline the rule sets for different 'families' of geofences and how to define them, demonstrate examples with quality markers, and explain acceptable shapes, provide guidance for a process to support a review panel in evaluating geofences. Publication of geofences and structure will also be defined in the paper.

The project will be limited to child code facilities of the UNLOCODE and for each recommendation the code list provider must participate to be included in publication.

3. Project deliverables and 4. Exit Criteria

Required (check all that apply)

Please note that the Bureau may reassess and change a deliverable after its completion at its discretion.

	Project deliverables	**Exit Criteria**
☐	Policy Recommendation	Public Review logs demonstrating all comments have been satisfactorily resolved; Final document ready for publication.
☐	Business Requirement Specification	
☐	Technical Specification	
☒	White Paper	Final document ready for publication.
☐	Green Paper	
☐	Requirement Specification Mapping	
☐	Core Component Business Document Assembly	
☐	Guidelines	
☐	Executive Guide	
☐	Brochure	
☐	Entries/alignment to the Core Component Library	Final deliverable ready for publication.
☐	XML Schema	
☐	UN/EDIFACT message	
☐	Internal UN/CEFACT Document	Final document ready for Bureau approval.
☐	Other (specify)	

5. Project Team membership and required functional expertise

Membership is open to UN/CEFACT experts with broad knowledge in the area of:	Geofencing, IoT, UNLOCODE, Transport and Logistics, Smart Containers or other relevant areas

In addition, Heads of Delegations may invite technical experts from their constituency to participate in the work.

Experts are expected to contribute to the work based solely on their expertise and to comply with the UN/CEFACT Code of Conduct and Ethics and the policy on Intellectual Property Rights.

6. HoD support

Required for Technical Standards, Business Standards and UNECE Recommendations. And at the request of the UN/CEFACT Bureau. A request for HoD support will be circulated to all HoDs in these cases. If you have verbal confirmation from specific delegations of their support, please list these here. Projects that require HoD support must obtain this within 6 months of Bureau provisional approval.

7. Geographical focus

The geographical focus of the project is global

8. Initial contributions

The following contributions are submitted as part of this proposal. It is understood that these contributions are only for consideration by the Project Team and that other participants may submit additional contributions in order to ensure that as much information as possible is obtained from those with expertise and a material interest in the project. It is also understood that the Project Team may choose to adopt one or more of these contributions "as is".

List any initial contributions:

- Smart Containers Whitepaper
- MMT Reference Data Model
- GeoJson

9. Resource requirements

Participants in the project shall provide resources for their own participation. The existence and functioning of the project shall not require any additional resources from the UNECE secretariat.

Any additional request:	

10. Proposed project leadership

(subject to Bureau approval)

Proposed:	David Roff	E-mail:	david@cif-consulting.co.uk
Proposed:		E-mail:	

11. Milestones (repeat for each deliverable, if different)

The following are draft milestones of the project.

	ODP Stage	Expected Completion Date	
Yes	Project Inception	1 month	
Yes / No	Requirements gathering	☐	1 month
Yes	Draft development	☒	3 months (Very quick)
		☐	6 months (Quick)
		☐	12 months (Normal)
		☐	18 months (Normal)
		☐	24 months (Long)
Yes / No	Public Draft Review	☐	2 months
Yes	Project Exit	1 month	