

# Internet of Things for Trade Facilitation

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### Project Details

|                              |                                                                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Domain                       | <a href="#">eData Management Domain</a>                                                                                                    |
| Project Identifier           | P1070                                                                                                                                      |
| Bureau Decision #            | #1807022, #1907019; #1910044; #1912054; #2003085, #2010052; #2101080, #2110037, #2111049, #2112055, #2205078, #2206085, #2207087, #2207088 |
| Project Proposal Status      | Official                                                                                                                                   |
| Project Page                 | <a href="#">Internet of Things for Trade Facilitation</a>                                                                                  |
| Supporting VC                | <a href="#">Tahseen Ahmad Khan</a>                                                                                                         |
| Project Lead                 | <a href="#">Virginia Cram-Martos Kaushik SRINIVASAN</a>                                                                                    |
| HoD Support                  | N/A                                                                                                                                        |
| Status                       | Completed                                                                                                                                  |
| Version                      | 2.1                                                                                                                                        |
| Submitted date               | 2017-07-23                                                                                                                                 |
| Draft Development Completion | 2022-12-30                                                                                                                                 |
| Publication Date             | 2023-03-15                                                                                                                                 |

### Project Purpose

The Internet of Things is a network of connected devices that contain sensors and other embedded devices that are able to gather, connect and exchange data. The Internet of Things has quickly become one of the most important technology trends of this decade.

In the context of trade facilitation, the Internet of Things will play a crucial role as it enables the collection of timely and accurate data, some of which was previously not available, and its seamless integration into the flow of information used for supply chain management. The growth of the Internet of Things has led to the development of smart devices and new applications using the data that they generate in order to facilitate processes and drive efficiency in trade, agriculture, climate control, water and energy management, healthcare, foreign trade, supply chain etc.

There is ongoing research on how to further, develop and improve the ability of this technology to be used for various purposes, including its interoperability with other cutting-edge technologies such as Blockchain and Artificial Intelligence. A number of use cases were presented during the April 2018 UN/CEFACT conference held in Geneva which focused on use of IoT for Trade Facilitation.

One current project within UN/CEFACT focuses on the use of Smart Containers to track critical data, such as location, temperature or events such as door opening or closing, about shipments from origin to destination.

IoT technology has immense potential for facilitating supply chain and trade processes. The purpose of this project is to look at this technology in the context of UN/CEFACT's mandates and create a whitepaper that focuses on how IoT can be used to facilitate trade processes and key issues that need to be addressed while collecting, analyzing and using IoT data. Potentially, this work could also provide guidance to data providers, IoT device manufacturers, application developers and technology adopters.

### Project Scope

The project scope is to define and create white papers on the collection, analysis and use of IoT data in the context of trade processes with a view to examining:

- How IoT technology could be used to facilitate trade and related processes
- How existing UN/CEFACT deliverables could be used by IoT applications
- Possible changes to existing UN/CEFACT deliverables, or new deliverables, that could be considered in order to support IoT trade-facilitation related applications
- Key issues to consider while collecting, analyzing and distributing IoT data

All of the above will be examined from the perspective of UN/CEFACT's mandates in order to provide input to the Bureau, Programme Development Areas and Domains on

1. Possible future work and a possible common approach to IoT-related projects
2. IoT application developers as a potential new user group for UN/CEFACT standards

## Project Deliverables

- A white paper on technical aspects of IoT and its relation to UN/CEFACT deliverables
- A business-case/process oriented white paper on how IoT technology could be used to facilitate trade and related business processes

## Exit Criteria

- Exit Criteria for Deliv. 1: Draft white paper ready for publication
- Exit Criteria for Deliv. 2: Draft white paper ready for publication

## Project Team Membership and Required Functional Expertise

Membership is open to UN/CEFACT experts with broad knowledge in the area of: IoT technology and/or trade facilitation and related business processes

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.

## Geographical Focus

The geographical focus of the project is global

## 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".

Initial contributions include existing descriptions and technical specifications for the UN/CEFACT:

- Core Components Library (CCL);
- Business Requirement Specifications (BRSSs),
- Requirement Specification Mappings (RSMs) and
- Reference Data Models (RDMs) as well as
- Already published material on IoT technology and implementations,
- Blockchain work undertaken by UN/CEFACT

## Project Proposal Files

| File                                                                               | Modified              |
|------------------------------------------------------------------------------------|-----------------------|
| PDF File 180730 3a eGOV IoT project proposal v2-1.pdf                              | Aug 02, 2018 by Malik |
| PDF File 190701-3f eGOV IoT in TF project proposal Milestone update request v2.pdf | Jul 09, 2019 by Malik |
| PDF File TR_ Revised timelines for IoT project.pdf                                 | Dec 09, 2019 by Malik |

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