Report on the UN/LOCODE Reengineering Project

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Outline

1. Background
2. Overview
3. System Design
4. Project Management
5. Remaining Issues and Next Step
1. Background

Current system:

- Developed about 20 years ago from a desktop MS ACCESS application.
- Extended with a web-based application for Data Maintenance Request (DMR) online submission.
- No data-interface between the back-end-system and the front-end-system.
- Lack of tracking DMR validation
- Poor access security, performance, compatibility and disaster recovery features
1. Background

New business needs:

- Dramatic increase of number of entries in the UN/LOCODE directory (from 8,000 to over 100,000).
- Revised Rec.16
  - Geographical coordinates (Optional -> Mandatory)
  - Changes in status codes
  - Changes in function codes, consistence with Rec. 19
- New maintenance workflow
  - Collaboration among FPs, experts, submitters, with support of the secretariat.
- Data quality
- Real-time data exchange between the UN/LOCODE system and Stakeholders’ in-house business systems
2. Overview

  - CNIS volunteered to provide resources for the re-engineering
  - Recorded in the conference report (ECE_TRADE_C_CEFACT_2019_023E)
- In April 2019, reported to the UN/CEFACT Plenary (item 9 in the agenda)
- In July 2019, CNIS and UNECE agreed the Terms of Reference of the project
- On 25 July 2019, the kick-off meeting of the UN/LOCODE Re-engineering Project.
2. Overview

- On 28-29 Nov. 2019, the Business Requirement Analysis report was approved at the Third Annual Meeting of the UN/LOCODE Advisory Group.
- In May 2020, the prototype was developed and presented to the Steering Committee.
- Since August 2020, the modules are open for user testing upon developed.
- In November 2020, all modules completed.
3. System Design

- **Technologies**
  - Mainstream technologies
  - In line with UN ICT policy

- **Functionality**
  - Whole DMR life cycle: DMR draft -> DMR submission -> DMR validation
  - Generating the UN/LOCODE directory in different formats
  - Publishing to the website
  - API

- **User Interfaces Styles**
  - UN style
  - Ease of use
3. System Design

- System Roles
  - End User
  - DMR submitter
  - National Focal Point
  - Expert
  - Secretariat
  - System Administrator
3. System Design

- System modules
3. System Design

- **Layout – Home page**

  - The home page design
  - The statistics
  - Meeting Calendar
  - Overview of LOCODEs
  - Real time search
  - Navigation menu
3. System Design

- Layout - DMR list

![DMR list with navigation and search features]
3. System Design

- Layout - Details of a DMR
3. System Design

Features

- Overall validation of DMR: justifications, expert comments, FP validation, etc.
- Map aided to visualize the UN/LOCODE assignments, requested locations, to avoid duplication, incorrect coordinates, etc.
- DMR data quality: mandatory fields, pre-define code lists, etc.
- API
- Tracking of DMR validation
- Efficient organization of meetings, auto/semi-auto generation of agendas, meeting minutes, etc.
- Efficient publication process
4. Project Management

- **Transparent Project Management:**
  - Decisions prepared by the Steering Committee, including the representatives of the UN/CEFACT Bureau, the UN/LOCODE Maintenance Team and secretariat.
  - Decisions made by the UN/LOCODE Advisory Group
  - Decisions reported to the UN/CEFACT Plenary
  - All documents shared on CUE
  - UNECE owns and hosts the new system
  - Developed in-house with support of CNIS
4. Project Management

- Others
  - Advance user testing
    - Report to the Steering Committee
    - Testing environment hosted by UNECE
    - Testers identified by the UN/LOCODE Maintenance Team
  - Weekly project meetings
  - Newsletters: September and December 2019 and in March, May, August, September 2020.
  - COVID-19
5. Remaining Issues and Next Step

Remaining issues

- Wrap-up of development
  - Refinements
    - Dictionary
    - Configuration
  - Updates on ISO 3166-1, ISO 3166-2
  - API with WebEx to update meeting information
- Further testing by the secretariat, experts, FPs, requesters
  - Need more rounds of testing
  - Need more testers (more testers for each role)
  - Need testers to do more tests
5. Remaining Issues and Next Step

- The next step
  - Wrap-up of development
  - Continued testing
  - Data migration
  - APIs
  - Deployment

- How to transfer to the system?
  - Smooth transfer: launch the new system and run the current system in a parallel way for a while?
  - Decision to when to close the old way and when to use the new system?
  - There needs to be a study and a solution
5. Remaining Issues and Next Step

- How to transfer to the new system?
  - **Current system:**
    - Run until the cut-off date of the release 2021-1: 31 March 2021.
    - DMRs to be processed for the release 2021-1.
  - **New system:**
    - Launch of the new system before the end of March 2021, for example, in February 2021.
    - With the current system run in a parallel way.
    - All DMRs to be processed only for the release 2021-2.
    - Close the current system before the work for release 2022-1.
5. Remaining Issues and Next Step

- A possible Version 2.0
  - The purpose is for a better user experience and enhanced features
  - Maybe other considerations...
  - All comments and suggestions should be collected, recorded and addressed for the current version.
Thank you!