COMMUNI-CON @ INDIAFOSS 2026

Open source is moving trucks across continents

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12 WEEKS INSIDE UN CUSTOMS SOFTWARE

ABOUT ME

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FORMER ONLINE VOLUNTEER WITH UNECE

eTIR National Application



TIR

One journey.
Several borders.

Customs seals the load.
Participating authorities recognize each other’s controls.

> **A customs guarantee**
>
> Covers the duties and taxes at risk during transit.



Routine intermediate inspections are reduced. Customs can still inspect when needed.

eTIR

Information ahead of the goods

Advance cargo data.
Electronic guarantee checks.

An agreed way to exchange it

Common messages.
Legal recognition of electronic records.

2003

eTIR project launched

Feb 2020

Annex 11 adopted: the legal basis

May 2021

Annex 11 entered into force

THE PROBLEM

Connecting a country took months

11 months

Average for five early integrations

Each needed funding and expert support.

Historical baseline reported on UNECE’s national-application page.

Why open source

eTIR National Application, released under Apache 2.0 in October 2025

Reuse across countries

A shared implementation.
Code teams can inspect and adapt.
Improvements others can reuse.

Digital sovereignty

Choice over deployment and support.
Ability to modify the software.
Capacity to maintain it over time.

Open code. Protected operational data.

Access controls and agreed data exchanges still apply.

Source code on UNICC GitLab

A SHARED PROCEDURE, SEPARATE SYSTEMS

How eTIR works

National application

Customs authority A

⟷

eTIR international system

Operated by UNECE

⟷

National customs system

Customs authority B

Customs sends messages. The international system sends notifications back.

Guarantee chain

Registers electronic guarantees

International TIR Data Bank

Holder and customs-office reference data

National application: React + Java / Spring Boot · SOAP / WS-Security / X.509

WHAT THIS SIGNALS

Open source in public infrastructure strategy

UNECE	A shared customs application countries can adapt
The wider UN	Principles for reuse, contribution and long-term sustainability
Government adoption	Schleswig-Holstein: resilience and autonomy through open source

UN Open Source Principles and Common Policy Framework; UNECE and UN OICT reporting.

People are needed

Public infrastructure needs maintainers.
Contributors need support to get started.

Supported ways in

Bharat Digital Fellowship

UNV Online Volunteering

Fellowships, volunteering, and mentorship.
Support varies by programme.

Your first contribution

1. Read the contribution guide.
2. Run locally with test data.
3. Reproduce and discuss a small issue.
4. Submit a focused, tested change.

Program dates and eligibility vary. Check the official pages for current opportunities.

Thank you

Public infrastructure needs people who can improve the software.

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etir.org/etir-national-application

bharatdigital.io/fellowship