IATA CEC 2025

The Potential of Open Source: Real-World Examples in Air Cargo

Oliver Ditz – Fraunhofer IML

DIGITAL TESTBED AIR CARGO

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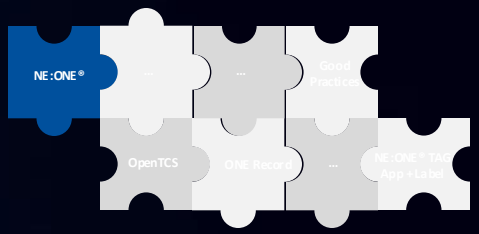
Photo from Tahir Xəlfə

Original photo from Tahir Xəlfə
Modified through by Sora AI

Real-World Examples in Air Cargo

opeN sourcE: ONE record server software



Free to use & Open Source

NE: ONE®

Community driven

Delivered as Source Code

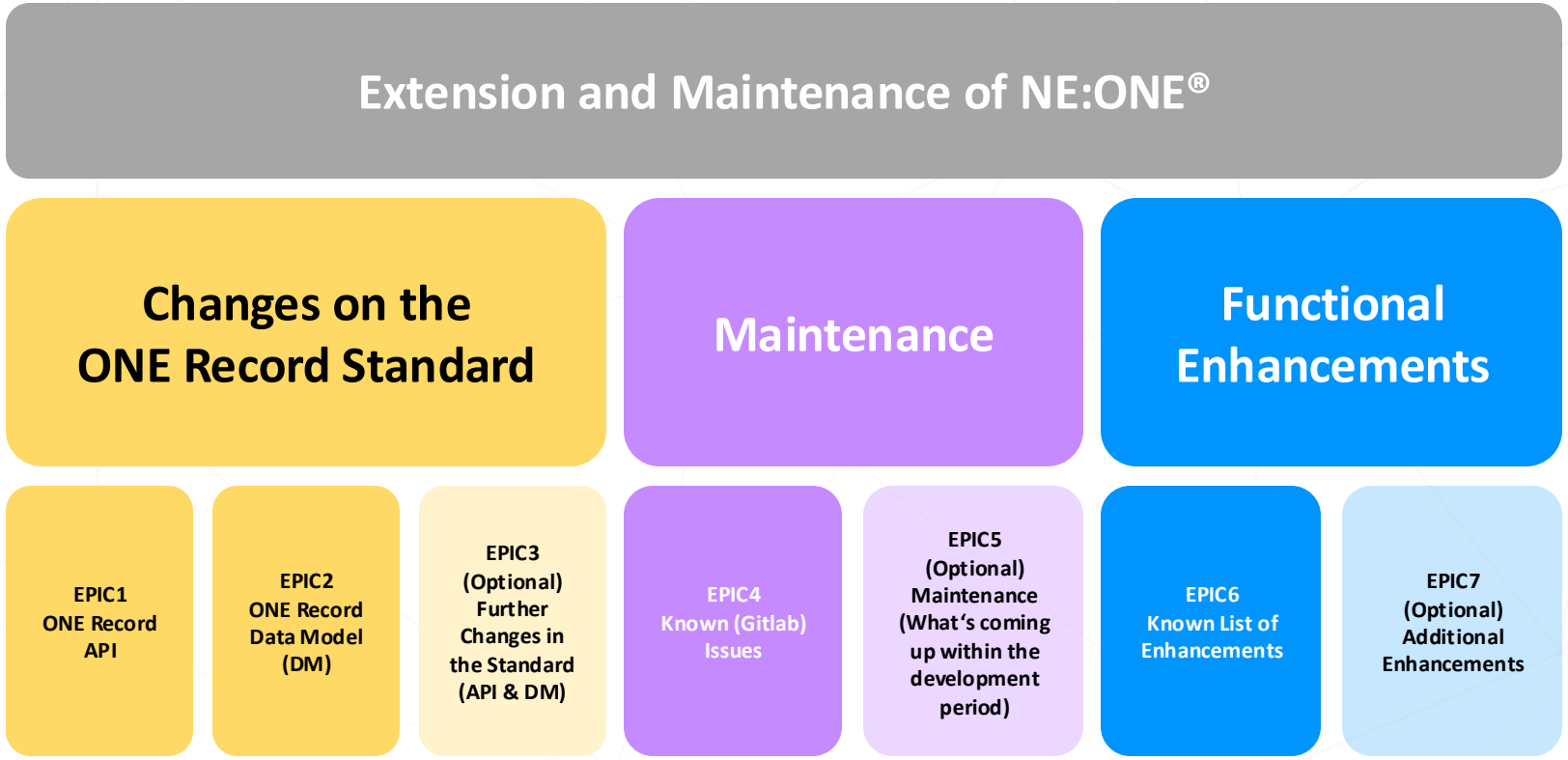
NE: ONE®

Powered by:

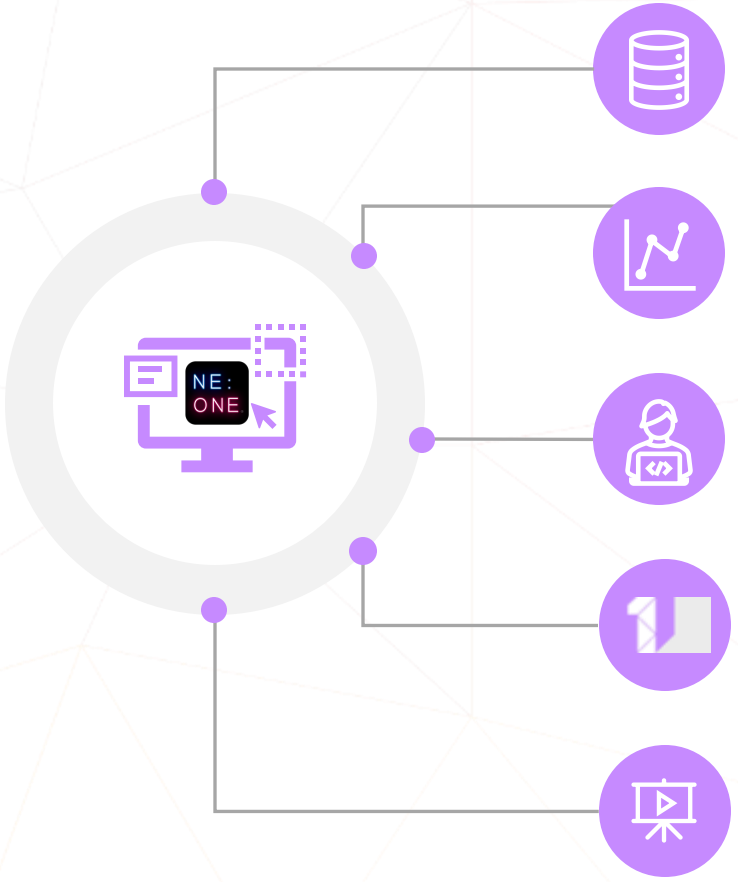
DIGITAL TESTBED AIR CARGO

Source Background Image: DALL·E by ChatGPT

Updating and Extending the most used ONE Record Server software out there



Enhancements that will contribute to continued success of NE:ONE®



Proof of Concept for **an Alternative Database Backend**	*Provide support for a widely adopted database technology*
Enhance NE:ONE®'s **Load Handling** and **Performance**	*Enhance NE:ONE® to efficiently handle high loads and optimize performance*
Support **Flexible Deployment** Setups & Documentation	*Open NE:ONE® to an even wider base of users and improve developer experience*
Ensure Compatibility with **IATA ONE Record Test Suite** & **Partner Scenarios**	*Automated tests to ensure compatibility with the latest version of ONE Record*
Improve **Documentation** & Create **Video Tutorials** for Setup	*Further improvement of developer experience*

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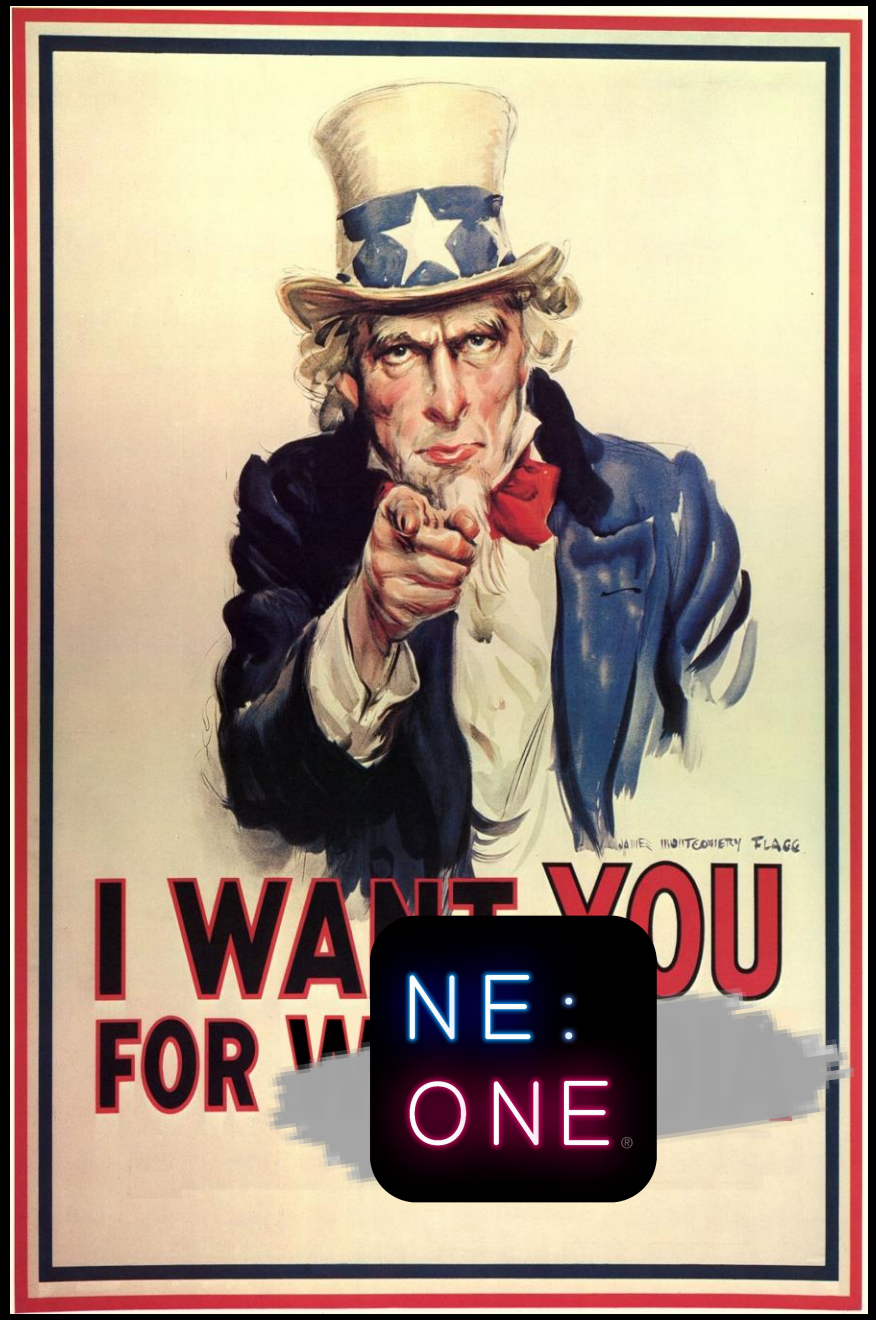
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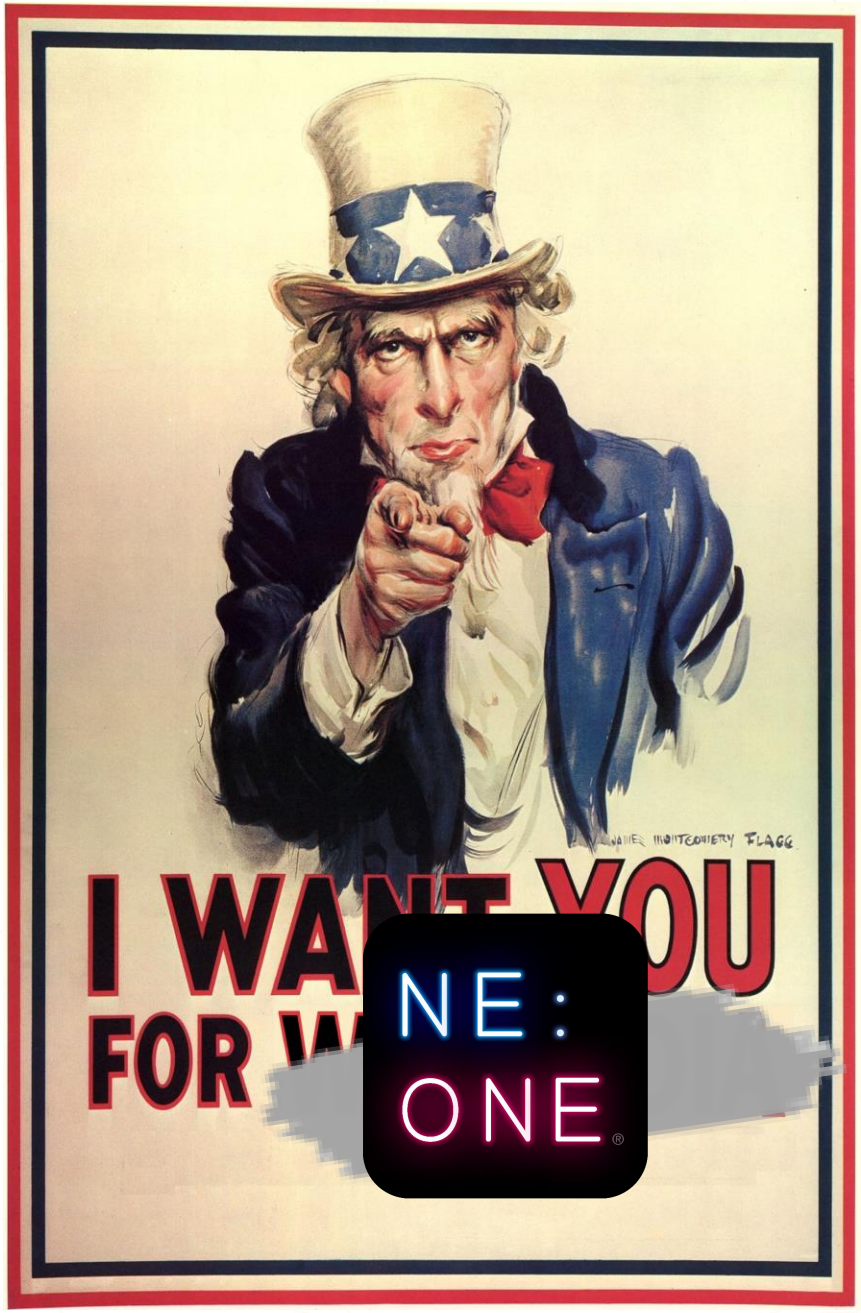

… Join the Development of NE:ONE®

- **Take Part in Reviews & Refinements** → share feedback as a stakeholder
- **Join Development Cycles** → contribute directly as a developer
- **File Issues & Requests** → report bugs, propose features, share use cases
- **Help Shape the Roadmap** → influence priorities through open discussions

Be Part of It

- **Want to stay up to date?**
  → Follow us on LinkedIn
- **Interested in contributing?**
  → Contact the PO (Product Owner):
  oliver.ditz@iml.fraunhofer.de

GitLab

Source: Supercarwaar

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Save the Date

JAN
27
2026

AIR CARGO CONNECT 360°
ONE Record

Frankfurt, Germany

Air Cargo Connect 360° - ONE Record

ONE Record conference at management level (Inform, Connect, Accelerate ONE Record Implementations)

Limited Seats – Registration Required
Secure your spot now! If you're interested, please get in touch.

DIGITAL TESTBED AIR CARGO

Coming Soon…

Follow our Project LinkedIn Channel to stay up to date:
https://www.linkedin.com/company/digitales-testfeld-air-cargo-dtac/

LinkedIn

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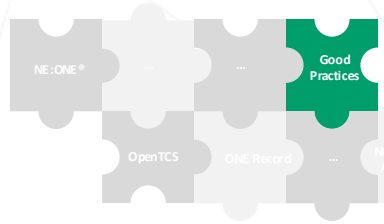
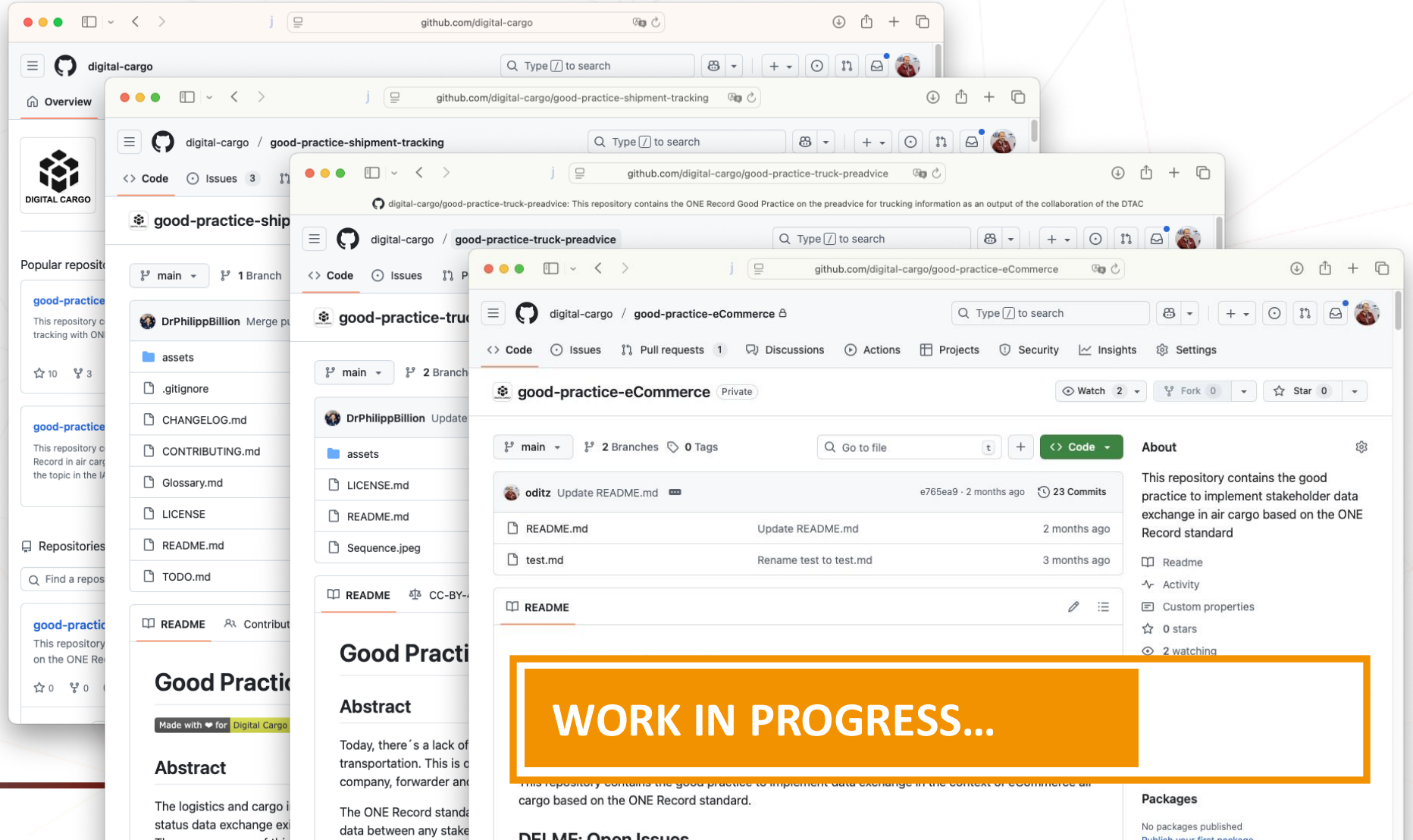


Good Practices

How We Apply ONE Record Consistently



WORK IN PROGRESS...

OpenTCS

- Open-source
- Manufacturer independent
- VDA5050 standard
- Frontend and backend
- Airport specific control center for DTAC
- Web-based, mobile devices
- Integration with airport AI/Flightradar

→ DTAC own control system, also implementable for future projects

Recommended Session

„Autonomous Handling from Truck to Belly: R&D Insights from the Digital Testbed for Air Cargo (DTAC) (Joint with DIGITAL)“

- Manuel Wehner

25 September 2025

16:30-16:45 CET

As part of the „OPS“-Track

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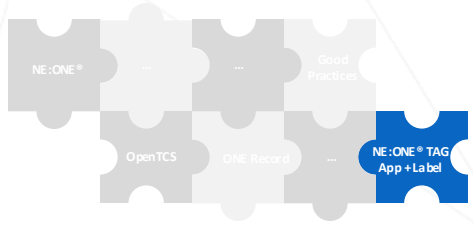
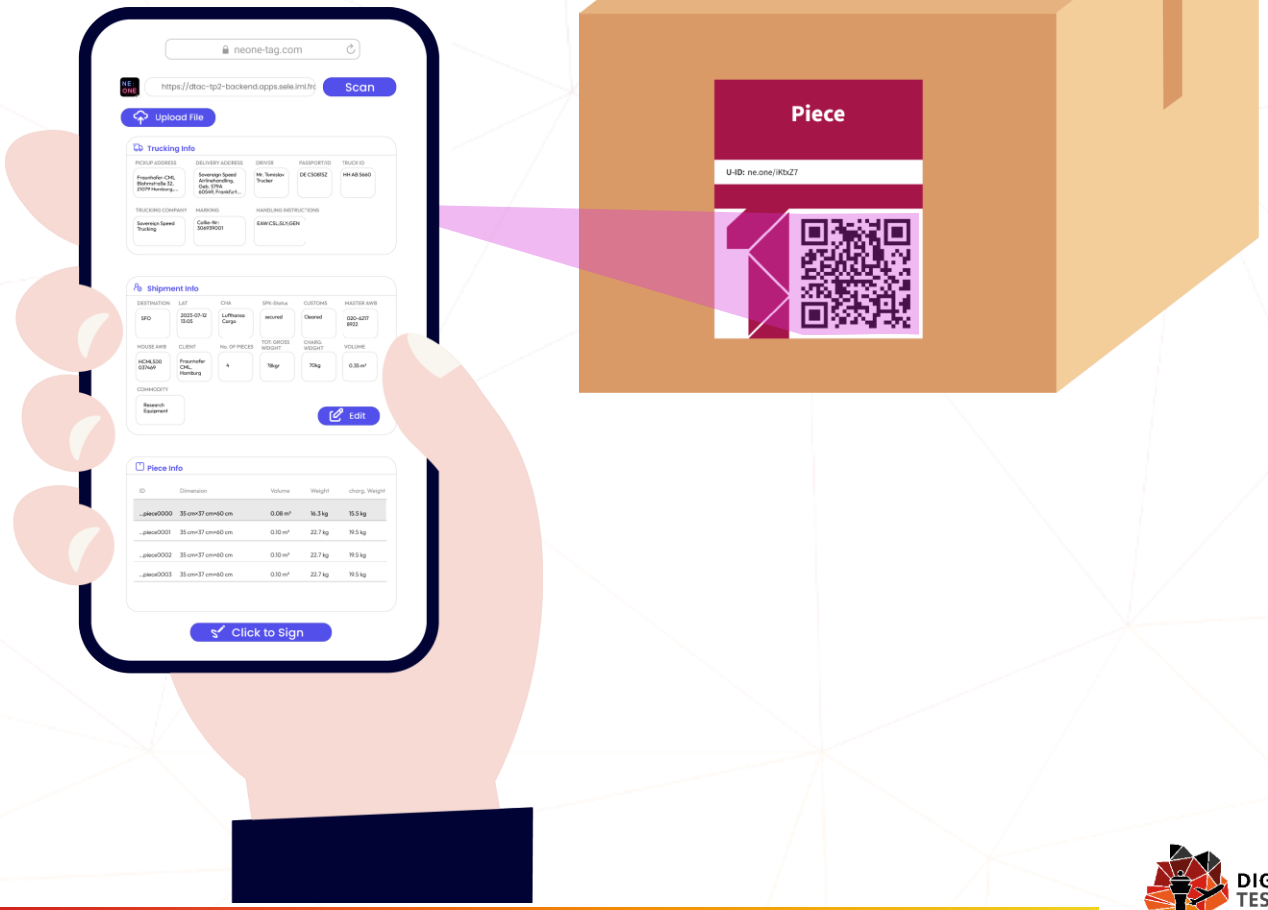
NE:ONE® Tag App & Label

Bringing ONE Record Data to the Shopfloor



- Scanning ONE Record QR Codes
- Display process relevant data
- Supporting documents
- Writing
- Digital Signature
- Will be available Open Source



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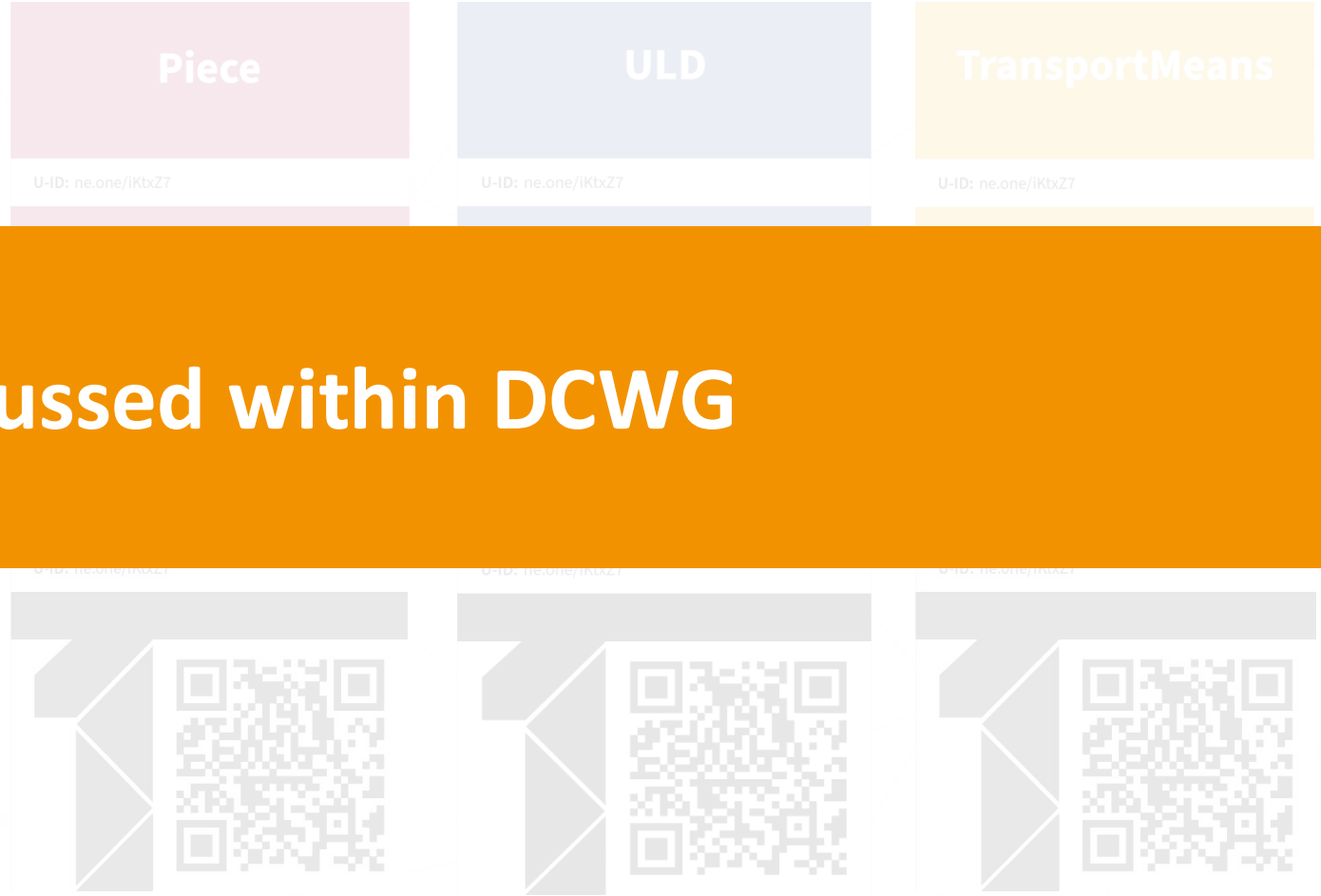
NE:ONE® Tag Label – Style Guide

***Label Size**: 102 x 127 mm (IATA Resolution 606)*

***QR Code**: QR code level H and use of a U-ID shortener if the link is longer than 30 characters*



	Hex	RGB	CMYK
Piece	#a51547	(165, 21, 71)	(24, 100, 49, 19)
ULD	#2c4f9c	(44, 79, 156)	(92, 72, 2, 0)
TransportMeans	#fab51e	(250,181,30)	(0, 33, 91, 0)

To be discussed within DCWG

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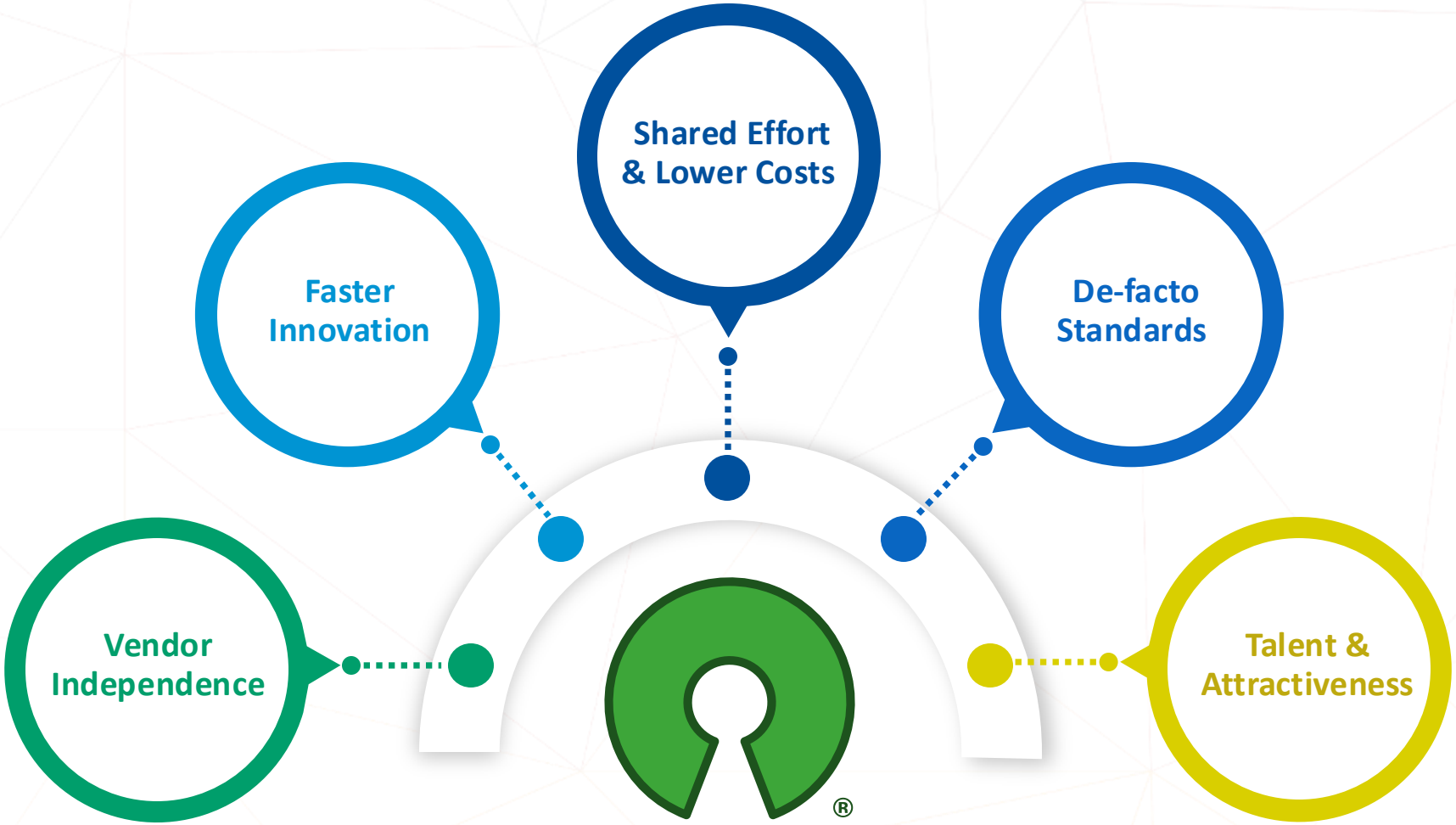

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100% Aviation