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// GET INVOLVED: THE FUTURE OF LOGISTICS IS OPEN SOURCE

```
@Transactional
public ResponseEntity<Object> updateEcmrById(String ecmrId, Map<String, Object> jsonBody) {
    LOGGER.info(„[eCMR SERVICE] UpdateEcmrById start“);
    ResponseEntity<Object> response = null;
    // JSON must contain ecmrId and Signature
    if (jsonBody == null
        || !jsonBody.containsKey(EcmrConstants.SIGNATURE_KEY)
        || (jsonBody.containsKey(EcmrConstants.SIGNATURE_KEY) && jsonBody.get(EcmrConstants.SIGNATURE_
            KEY) == null)) {
        response = ExceptionHandling.setBadRequestError();
        return response;
    } else {
        try {
            var writingUser = userService.getById(usermanagement.getCurrentUserId());

            var passedFields = EcmrFieldEntryData.fromJson((Map<String, Object>) jsonBody.get(EcmrConstants.
                ECMR_FIELD_KEY));
            var ecmrExisting = ecmrService.checkEcmrById(ecmrId);
            var signature = „“;
            if (useSsl.equals(„true“)) {
                signature = getSignature(usermanagement.getCurrentToken(), jsonBody, signature);

                if (signature == null) {
                    response = ExceptionHandling.setCorruptedSignatureError();
                }
            }
        }
    }
}
```

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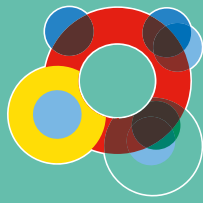
}

```
    LOGGER.info(„[eCMR SERVICE] Failed signature check by user: „ + writingUser);
    return response;
}
```

```
    }
}
if (ecmrExisting) {
```



open logistics
foundation



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Imprint

Open Logistics Foundation
Emil-Figge-Str. 80
44227 Dortmund, Germany

info@openlogisticsfoundation.org
www.openlogisticsfoundation.org

Editors:

Carina Tüllmann, Head of Communications and Marketing, (V.i.S.d.P.),
Annika Kamen, Open Logistics Foundation

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Welcome



For every company, the question of how and with what it earns money, is a crucial one. In the Open Logistics Foundation, however, we are dealing with "what companies do not earn money with". And these are so-called commodities – non-market differentiating services. Companies develop them to better manage their own processes or because their customers expect such a service as a matter of course. Thus, the service neither represents a unique selling proposition nor can money be earned with it. Against this background, it makes little sense for any company to invest time, energy, and money in developing such commodities. This is the basic idea of the Open Logistics Foundation.

However, there are also different views between companies on which services are non-market differentiating – depending on how certain processes are set up and designed. Investigating these different perspectives and discussing the various assessments is a basic prerequisite for the development of any open source solution. Because if the components are to help all companies as a result, we need a common understanding of the processes at the beginning and a basis on which we can then work.

We have developed a special procedure for the exchange in the Open Logistics Foundation: We check logistics services that are basically suitable for an open

source project for their special features: What are the basic functions with which companies can neither stand out from the competition nor earn money? And what are the enthusiasm features that companies use to win orders? How this works can be well illustrated by the example of a refrigerator: The freshness technology for longer shelf life of vegetables is certainly an enthusiasm feature and thus market differentiating. The fact that

the light comes on when the fridge is opened, on the other hand, is not a competitive advantage at all. In the Open Logistics Foundation, we are concerned with this light.

Incidentally, the discussion about the true characteristics of a logistics service offers another added value that should not be

underestimated: For many companies it is a starting point for thinking about new business models – and focusing on what they can really earn money with ...



Andreas Nettsträter

CEO

Open Logistics Foundation

No more isolated solutions

Open Source is one of the **drivers of digital innovation** in many companies today. Representatives from three member companies of the Open Logistics Foundation **explain the importance** of open source for them.

Easy communication with other systems

Open source software can undoubtedly add value. Where and how to deploy it is an important choice. In my opinion, distinctiveness offers considerable added value and not everything should look the same. So “how” and “when” is an interesting challenge. It seems to me that the biggest gains can be realised in the area of digitalisation of (freight) documents and data exchange between systems. Traceability of shipments (“Track & Trace”) for instance, is an important topic. I think that maximum support for this traceability using open source components will create a lot of added value.

Within our standard software Logistics.ONE, we have already been using open source components for a long time. A spearhead of our product strategy is to enable easy communication with other systems. In the Netherlands, an open source data model called “OTM” (Open Trip Model) has been developed to realise standardisa-



tion of that communication. We think it would be great if OTM becomes widely accepted, it should greatly simplify the exchange of data between different systems.

That open source is supported and used by enough market players is of course very important. Within the Open Logistics Foundation, this applies to companies active in transport and logistics, but no less so to IT suppliers such as Aventeon. It goes without saying that open source software must also remain in development. Automation never stands still.

Frank Kindt, CEO, Aventeon

The Dutch IT software provider Aventeon supports logistics companies in the digitalisation of processes on the last mile with the help of its Logistics.ONE software.

Accelerating innovation

In a time where the global economy is characterised by increasingly complex supply chains and logistical challenges, digital advancements are shifting more and more into focus

in the industry. As digitalisation continues, there is a growing need to standardise processes and share large amounts of data between companies in real time. It is therefore necessary to define a common language and uniform standards to ensure interoperability.

One of the biggest challenges here is to agree on a „common denominator“. This is precisely where the basic idea of the Open Logistics Foundation comes in.

As proponents of the open source approach, we firmly believe that the free exchange of knowledge and innovation between companies helps to minimise bottlenecks, optimise processes, and ultimately make the entire supply chain more efficient. The logistics industry faces several challenges that we can only solve together. Logical and as simple as possible end-2-end communication between all parties involved requires cooperation beyond one's own company and system boundaries in all essential process steps.

We believe that the future of the transport industry lies in a closely connected, collaborative environment. The open source idea enables us to use synergies and accelerate innovations. Together we can lay the foundation for a future-proof, networked and efficient logistics industry.

Michael Gschwandtner,
Director Digital Business, LKW WALTER

LKW Walter is the leading transport organisation for full loads in Europe and has been pioneering the development of combined rail/road transport and short-sea shipping since 1984.

THREE DIFFERENT COMPANIES, THREE INDIVIDUAL OPEN SOURCE STRATEGIES – BUT A COMMON VISION.

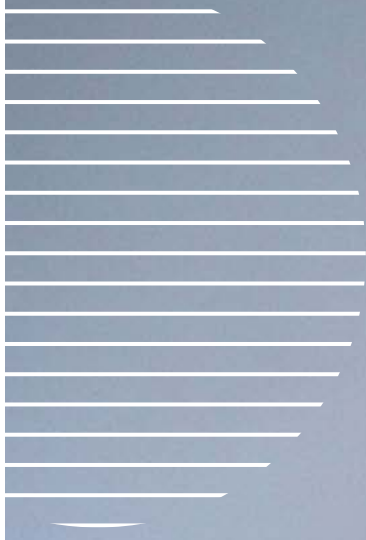
Solutions for the broad “masses”

The enormous importance of open source software solutions cannot be emphasised often enough. Such a highly fragmented industry, with an extremely large number of small and medium-sized enterprises, which often simply lack the time and, in some cases, the know-how to dedicate themselves to the topic of digitalisation, needs standardised, cost-effective, and high-performance solutions. It is crucial that no isolated solutions are created for individuals. The focus of open source is on cooperation with other companies in a community that is as large as possible. This is the only way to ensure that solutions are created for the entire market and not for individual players. After all, in the end it is about creating sensible solutions for logistics and making them available to as broad a “mass” as possible. At the same time, further development must also consider the interests of as many people as possible so that the solutions developed are also used in the long term.

Alexander Garbar,
Head of Corporate Development and Strategy,
duisport – Duisburger Hafen AG

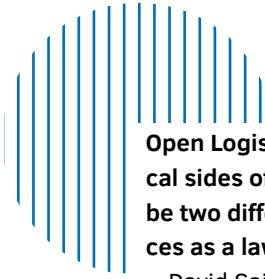
The Port of Duisburg is the largest hinterland hub in Europe and, as a trimodal logistics hub, achieves a handling volume of 4.0 million TEU (20-foot standard containers).





“We need to build legally compliant code together”

No one would think of planning and building houses without considering the **applicable building regulations**. In software development, however, legal regulations are often “neglected”. The Hamburg lawyer and digitalisation expert Dr. David Saive, LL.M., wants to change that – a conversation about the necessity of **interdisciplinary cooperation** between law and technology.



Open Logistics Magazine: The legal and technical sides of software development still tend to be two different things. What are your experiences as a lawyer?

David Saive: In practice, developers only involve legal departments after all development work has been completed and ask for a legal assessment for a finished product. Unfortunately, then often, the following happens: After the legal review, it becomes apparent that the requirements of the law were only partially taken into consideration, or in the worst case not at all. For reasons of product liability alone – yes, software is also subject to the Product Liability Act – such software cannot be brought to market. Therefore, the development work must be continued, but this time considering the legal requirements. After completion of the new development, the software will then – again – be subject to another legal review.

Which, of course, delays the project completion enormously ...

In the worst case, starting from scratch may even be necessary. This would result in additional development hours and considerable additional costs. That is why we need consistent interdisciplinary cooperation between law and IT. Today it is still the case that these departments are virtually opposed to each other: The developers perceive their colleagues from the legal department as slowpokes – from their perspective, this is understandable. But of course, the lawyers also have their point: they are simply doing their job, averting (legal) risk from their company or clients. But this approach is outdated: We need to adapt the process. Today, law and code must be inextricably linked. Law is code – and vice versa.

In the Open Logistics Foundation, companies jointly develop open source software. Are there any particular pitfalls here?

For the cooperation of companies – especially if they are market-dominant companies competing with each other – it goes without saying that no agreements contrary to antitrust law may be made. This is explicitly pointed out at the beginning of every meeting. Of course, this

also applies to software. Antitrust law must not be undermined through the back door. It is also very important that all legal issues are discussed centrally and do not end up with a single project member or, in the worst case, dissipate completely.

You are available to the Open Logistics Foundation as a “Legal Product Owner”. What is the meaning behind this designation?

The “Legal Product Owner” is a lawyer who accompanies the software development process with his professional know-how. He is the counterpart to the classic product owner, who takes care of the technical aspects and the technical implementation of the software.

In concrete terms, your work at the Open Logistics Foundation involves participating in the Working Groups and projects. How is that received by the IT professionals?

My experience is that IT experts always appreciate it when they can discuss things with a lawyer at eye level. The Open Logistics Foundation community has welcomed me with open arms. In the Working Groups and projects, we are now at a point where the legal issues are becoming more and more concrete. Whenever the project team develops a new idea for the software, the technical owner designs an architecture, plays his work back to me and I check whether it meets the relevant legal requirements. The whole thing happens against a (legal) scientific background. We are solving many issues together for the first time. Digitalisation in transport law is still new and somewhat unexplored territory.

You also describe the approach with the words “Community shapes the law – the law shapes the community” ...

Legislation and legal provisions do not usually fall from the sky: it is often the case that

**LEGAL CERTAINTY FUELS
INNOVATION WHICH IS ESSENTIAL
FOR TECHNICAL EVOLUTION.**

Dr. David Saive



a community – understood as the entirety of companies in a sector – first develops a custom, a practice or a process that works. For lawmakers, this lived practice serves as a template for the law. The best example is the Bill of Lading: The legislator has created a legal framework based on a universally valid practice. As a Legal Product Owner, I proceed precisely according to this principle: I am tasked to find ways to implement the lived practice. So much for the first part of my statement. But law can also help to shape or influence the industry solution. After all, some things that work well in analogue form cannot be implemented or make sense in digital format. As a Legal Product Owner, I then also get back to the community, i.e. the companies, to understand their processes and make suggestions as to how things must be solved differently digitally or even how they can be solved better.

Now, each of the two disciplines has certain peculiarities: How can the necessary openness be created in practice?

The agile way of working in software development does not in fact correspond to the classic way of working of a lawyer, who first needs a complete picture of an issue to then evaluate it. This approach, on the other hand, is foreign to a software developer. But the two disciplines are not far apart in terms of their basic understanding: legal assessment is based on logic, systematic methods, and precision just as much as the work of developers. Therefore, lawyers need to understand the needs of companies and programmers; and developers need to learn to describe their own technical environment. If we succeed in this, nothing will stand in the way of project success. Furthermore, legal certainty also promotes innovation, which is essential for technical development.

For software development, interoperability is now the ultimate goal. You demand interoperability for law as well. Why is that necessary? Software today, must cross borders and work in an international context – especially in logistics. Legally we must be on the safe side. The electronic consignment note is a good example of



Dr. David Saive,

LL.M. advises companies, international organisations, and states on the digitalisation of foreign trade. He works as a Legal Product Owner for the Open Logistics Foundation and is an external advisor to ICC Germany e.V. He is also publisher and editor-in-chief of “Logistik & Recht” magazine, published by dfv Mediengruppe. The ICC UK and the “Centre for Digital Trade & Innovation (C4DTI)” have named Dr. Saive “Advisor of the Year 2023” for his work on the digitalisation of foreign trade.

how the law must be designed: The eCMR-Protocol and the EU’s eFTI Regulation on Electronic Freight Information have created uniform law under European and International law. This helps us enormously in the development of software today. For universal plug-and-play solutions, we need not only technical interoperability, but also legal interoperability. The eCMR can serve as a blueprint here.

Your appeal to companies and developers?

Producing legally compliant code is a joint task! To achieve this, a Legal Product Owner must be just as natural and fully accepted in agile teams as, for example, the business analyst, who builds a bridge between the business and IT worlds. If we strengthen the developers’ trust in the law, we will also enhance the users’ trust in the code. </>

The interview was conducted by Carina Tüllmann, Head of Communications and Marketing, Open Logistics Foundation.

In good company: Community as the engine of open source development



User-led open source communities are an essential driver for the development of commercially relevant open source software. In a guest article for the Open Logistics Magazine, **Prof. Dr. Dirk Riehle**, Professor of Computer Science at the Friedrich-Alexander University Erlangen-Nürnberg, explains how they become successful.

COMMUNITY SOFTWARE IS USUALLY DEVELOPED TO CREATE INDUSTRY STANDARDS.

Open source software has become an important, perhaps even the most important component of software products. For today there is practically no software that is not also based on open source or contains open source components.

Community vs. vendor software

Now, there are two types of open source software: community open source software, which is developed in a community for a community and vendor open source software. The latter is developed by a single company in a closed process. Such “single-vendor” companies often use so-called copyleft licences so that they cannot face competition from other manufacturers who could drive prices down. They consolidate their central position with registered trademarks. In the process, the companies usually build up a community in which freelance developers or developers from other companies adapt the product to their needs and thus improve it. However, the rights to these changes and enhancements are then transferred to the original company.

The situation is completely different with “genuine” community open source software. It is jointly developed by a group of programmers or users – in a community – and based on an open governance process. The Open-Source-Licence allows companies that have not co-developed the software not only to use it, but also to modify it and even use it for commercial purposes.

The classic and also best-known open source communities include Linux (initiated in the early 1990s, foundation status since 2007), Apache (founded in 1999) and Eclipse (first project in 2001).

Community open source software is usually developed under the “protective hand” of such associations or organisations with a non-profit

character, mainly foundations. The first and most important open source organisations that emerged were still predominantly developer-driven. Their mission was mostly to stand in the way of an overpowering monopolist or competitor. However, more and more, user-driven communities gained in importance: companies came together in projects or working groups, foundations, or cooperatives to pool their strengths. In such communities, the two essential characteristics of open source became apparent: open cooperation in the process and open software as a result.

From project to foundation

There are now numerous exciting examples of global user communities – from The Autoware Foundation, which hosts an open source project on autonomous driving, to GNU Health, run by a non-profit organisation GNU Solidario, which promotes the use of free software in public health and education, to the Open Geospatial Consortium (OGC), which promotes consensus-based open standards and best practices related to the use of location-based technologies, such as geospatial data. In Germany, the industry took notice when three large German automotive companies that compete came together in 2014 to form a working group under the Eclipse umbrella: AUDI, BMW and Daimler. Together, the manufacturers founded the openMDM working group and have since been driving the development and dissemination of open source tools for the management of measurement data, as a working group of the Eclipse Foundation. Previously, the vehicle manufacturers had worked rather loosely on solutions for the Open Data Service (ODS) standard of the Association for Standardisation and Measuring Systems (ASAM). The working group now gave this work a new framework and a binding character. The energy sector also recog-

A WELL-ESTABLISHED OPEN SOURCE ORGANISATION PROVIDES A FAIR PLAYING FIELD FOR COMPANIES TO DEVELOP OPEN SOURCE SOLUTIONS.

nised sign of times: network operating companies, IT service providers and non-profit research institutions joined forces to develop open source software for network operators – initially as part of a consortium, and since 2017 as a separate organisation: openKONSEQUENZ, or OpenK for short, is run as a cooperative. The community develops solutions for the smart grid – a project of the century that concerns everyone and that none of the players can manage alone or on their own. The Open Logistics Foundation, founded in 2021, also joins the list of user communities.

A game with clear rules

Of particular importance for a user community is a (well-established) open source organisation that offers its members a fair and equal playing field, sets clear rules for management and regulates the intellectual property of the results of the work. This is success factor number one. Software development is social by nature – so the second success factor is the companies themselves: in Working Groups and projects, they drive the development of software they need for current applications for use in business. When companies that compete with each other work together in a user community, the basis for this cooperation is that the software they develop is not market-differentiating or competition-differentiating, but instead establishes a standard. Particularly interesting are models of user communities that – like the Open Logistics Foundation – are characterised by two-tier ecosystems: Here, commercial products and services can and should emerge from projects.

More than a philosophy

But, the development of community open source software also has stumbling stones. As with vendor software, there is the possibility of

dependencies. This can always be the case if a company becomes disproportionately involved in working groups or projects and thus dominates the process, or if it accumulates too much knowledge, usually without any intention but out of interest. In fact, however, potentially relevant users are then kept away. It is the task of the organisation to ensure that this does not happen and to counteract it. In this way, open source does not remain “just” a philosophy but becomes a versatile business strategy. </>

With the collaboration of Annika Kamen, Communications and Marketing, Open Logistics Foundation

About the author

Prof. Dr. Dirk Riehle is a Professor of Computer Science at the Friedrich-Alexander University Erlangen-Nürnberg and an expert in open source, inner source, and product strategy. Before being appointed professor, he led the open source research group at SAP Labs, Palo Alto, California (Silicon Valley) and worked as a software developer, software architect and development manager for software start-ups and large companies in Boston and Zurich. Dirk Riehle runs a blog at www.dirkriehle.com and tweeted as @dirkriehle.

From the idea to the project

An open source community thrives on the commitment of its members – and needs the support of an organisation. Nathalie Böhning, Innovation and Project Manager at the Open Logistics Foundation, answers the most important questions about the interaction between the Head Office and the companies in the so-called ideation process, the path from idea to project.

Who determines the topics of the Open Logistics Foundation Head Office? In the Open Logistics Foundation, all participants are in regular contact: The members of the office and the members of the Innovation Community (member companies) maintain an open exchange under the neutral umbrella of the Foundation. The impulse for new topics, Working Groups and projects comes from the companies themselves. The topics are processes, applications, or interfaces from the logistics and supply chain management that every company must deal with and that are relevant to the entire industry. The logistics reference is important, but there are no industry boundaries.

What is the role of the Head Office in this process? The office team sees itself as an enabler, matchmaker, and moderator. It collects and bundles ideas, supports the partnering of companies and drives it forward. The heart and core of the ideation process is the planning and implementation of workshops with companies.

How do these workshops work? All companies work together as equals, whether small or large. To concretise new ideas and develop topics, the method of Design Thinking is used. This also includes creativity techniques. It is crucial to create a common understanding of a topic among all participants and to work out the status



// Open Logistics Foundation

Supports the identification of topics for new projects: Innovation and Project Manager Nathalie Böhning

quo. In some cases, Minimum Viable Products are already developed in this phase. This helps to concretise ideas.

When does an idea go into implementation?

If several companies pledge their cooperation and one company provides a representative for the lead, a Working Group or project can be set up. This is the start of the concrete technical implementation. Both the workshops and the meetings of the Working Groups and projects take place hybrid, the regular meetings remote. This is fast, efficient and saves resources for all participants. </>

EVERY COMPANY BRINGS ITS PERSPECTIVE AND WE LOOK FOR THE GREATEST COMMON DENOMINATOR.

Nathalie Böhning



„The next big thing“: the eFTI Regulation



The EU regulation on electronic transport information, or eFTI for short, poses **major challenges** for logistics companies, but also offers them **opportunities**. What the regulation says, why it is also spurring the introduction of the electronic consignment note – and what role open source plays in its implementation.

In the past years and decades, the exchange of data in freight transport in Europe has hardly changed: Transport information is still predominantly recorded and controlled in paper form. However, with the adoption of Regulation 2020/1056, now known in logistics as the eFTI Regulation, three years ago, the European Union established a framework for the digital exchange of freight transport information between member state authorities and companies.

The digitalisation of transport information brings considerable benefits both to the state authorities responsible for controlling freight transport in the EU and to logistics companies. According to estimates by the European Commission, up to 27 billion euros can be saved in administrative costs in the transport sector alone over the next 20 years. These savings for logistics companies become tangible, for example, when freight transport is checked by competent authorities in the countries: The exchange, sif-

ting and checking of paper documents still takes a lot of time today. In the future, however, if all relevant transport data is available at the click of a mouse, the checks can be carried out in a matter of minutes.

The Federal Ass. for Freight Forwarding and Logistics Germany (DSLVL) member of the Open Logistics Foundation, welcomes the eFTI Regulation for another reason: "When a truck – or any other means of transport – is involved in an accident, quick action is always required: Thanks to eFTI, the police and fire brigade will in future be able to call up all the data on the vehicle and its load with one click and initiate the right measures", says Raoul Wintjes, Head of International Road Transport | Digitalisation at the DSLVL.

Data exchange via certified eFTI platforms

For digital transport information to be exchanged securely and smoothly between authorities and logistics companies, a harmonised and trustworthy ICT environment is required. The member states of the European Union are already working at full speed on the technical implementation. The core issue is currently the architecture for data exchange. In principle, companies should in the future operate so-called eFTI platforms on which they store information relevant to the authorities. The authorities themselves will develop eFTI gates through which they can access the platforms. The eFTI Regulation states: "The use of eFTI platforms guarantees companies that the legally required information is accepted and provides the competent authorities with reliable and secure access to this information." The law does stipulate that communication must take place via certified platforms. But it says nothing about what this certification should look like.

For logistics companies, this new construct basically represents an intervention in previous

// DSLVL



Advocates for a balance between small and large companies: Raoul Wintjes from the DSLVL

THE PRACTICABILITY OF THE TECHNICAL IMPLEMENTATION WILL BE DECISIVE FOR THE SUCCESS OF THE EFTI REGULATION.

practice. At least the larger companies already have functioning software architecture for transport documents. Many therefore feel little inclination to introduce a new solution for which they must spend considerable internal resources or which they must purchase externally, for example, from software companies, at great expense. Raoul Wintjes from the DSLV therefore demands: “The implementation of the eFTI Regulation must be practicable for companies in logistics – regardless of their starting position. Since there are many small and medium-sized companies among the freight forwarders and logistics service providers in addition to the international groups. We therefore need a balance between large and small companies. No one should pay more!”

Logistics companies still have a time delay: the regulation only stipulates that the authorities must accept digital documents if the companies provide them. Initially, this applied from 2024, now from the end of 2025. However, there is (still) no obligation on the part of the companies to provide them. The principle of voluntariness currently extends at least until 2028.

eFTI Regulation gives eCMR tailwind

However, companies that get involved in the process at an early stage have the opportunity to help shape the solution on the one hand and implement it at an early stage on the other. A current example of such an approach is the electronic consignment note in international cross-border road freight transport, one of many transport documents in logistics: “The eCMR makes everything easier for logistics,” says Dieter Sellner, Head of Digital Transformation at DB Schenker, also a member of the Open Logistics Foundation, “but at least the operational handling.” Whereas a freight forwarder today must wait until the truck driver submits the paper

consignment note signed by the consignee on site before issuing the invoice for a transport, with the eCMR, the confirmation of receipt arrives in the accounting department in real-time. In addition to the simplification of handling, Dieter Sellner also sees the cost savings as playing a significant role in the electronic consignment note: according to expert calculations, a paper CMR costs 22.83 euros, while an eCMR costs just 9.72 euros.

The end of analogue waybills was already initiated in 2008 with the eCMR Protocol. The protocol supplements the 1956 agreement on the international carriage of goods by road (CMR). The more than 50 CMR members include not only EU countries but also states such as Albania, Iran, and Morocco. However, ratification of the protocol in the member states took several years. In 2015, only ten members had integrated the eCMR into their national law; in Germany, the eCMR Additional Protocol entered into force in 2022.

Admittedly, the eFTI Regulation does not cover the digitalisation of private-sector transport documents such as the eCMR. But it will give a boost to the introduction of the electronic consignment note, says Dieter Sellner: “eFTI will promote the creation of data standards, and reduce the complexity of the technical solutions to be created.” This can be achieved if all relevant transport information is bundled in one place – on the certified eFTI platforms at the companies – and can be used for a wide variety of purposes. According to Raoul Wintjes, there will then be a separate logistics file for each transport operation – comparable to a patient file in the health-care system. This will ultimately make “minimally invasive controls” possible, as the Federal Office for Logistics and Mobility (BALM) in Germany appropriately puts it.



Keyword eFTI platform

An eFTI platform is an information and communication technology (ICT)-based solution for processing electronic transport information, e.g.

- an operating system,
- an operating environment or
- a database.

One of the most important technical design principles here is that the data from companies also always remain with them ("shared by source") and are only made accessible to the authorities for the specific query.

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OPEN SOURCE IS AN IMPORTANT LEVER FOR ENSURING THAT THE EFTI REGULATION IS ALSO IMPLEMENTED IN PRACTICE.

Open source ensures a uniform solution

The success of the implementation of the eFTI Regulation will not only depend on the member states of the European Union agreeing on a common approach, but also on logistics companies working together. The declared goal of all parties involved is to create compatible systems at a European level.

The eCMR approach can serve as a blueprint. In the Open Logistics Foundation project of the same name, 14 companies and organisations are currently working on the open source solution for the electronic consignment note. Free open source components make it possible for companies of all sizes to participate: no one is excluded. Because the basis remains the same even when companies adapt the solution to their logistical processes, the compatibility of data and applications and thus the formation of a de-facto standard is favoured at the same time. In any case, the digitalisation of the consignment

note makes it easier for logistics to also meet the requirements for the new eFTI Regulation.

In the large-scale research project Silicon Economy of the Federal Ministry of Digital and Transport (BMDV), which is led by the Fraunhofer Institute for Material Flow and Logistics IML – one of the partners of the Open Logistics Foundation – the foundations for an open source solution are already being laid: Here, the exemplary implementation of an eFTI platform is taking place using the eCMR as an example. The electronic consignment note is to be expanded into an eFreight folder including an eFTI interface.

The German approach is not (any longer) a solo effort: In the eFTI4EU research project, nine EU countries have now come together to promote a common architecture – and to publish it as open source. An approach Raoul Wintjes from the Federal Ass. for Freight Forwarding and Logistics Germany (DSLVL) also supports: “We need a clever concept so that existing solutions work with eFTI. Above all, we need interfaces so that every company can dock onto the eFTI gates. Open source is an important lever for eFTI to really spread.” Dieter Sellner from DB Schenker is also convinced that open source makes sense for the technical implementation of the eFTI regulation, because: “We don’t need 100 different solutions, but one.” Together, say the digitalisation experts from industry and the association in unison, they will lift the logistics industry to a new level of efficiency. The Open Logistics Foundation will play a central role in this. </>

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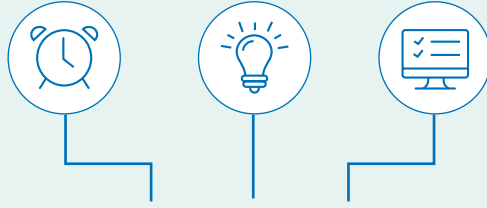
Assumes significant cost and efficiency benefits: Dieter Sellner of DB Schenker



eCMR vs. eFTI

The terms eFTI und eCMR are often mentioned in the same breath in logistics today. But they are two pairs of shoes – an overview.

	Electronic consignment note (eCMR)	eFTI Regulation
Legal basis	Supplement of the 1956 Convention on the International Carriage of Goods by Road (CMR) by the eCMR Protocol in 2008	Adoption of EU Regulation 2020/1056 in 2020
Content	Legal equality of the electronic consignment note to the paper-based consignment note	Promote the digitalisation of freight transport and logistics services, acceptance of digital transport information by authorities
Category	Document	Data model
Scope of application	International, CMR member states	EU (all member states)
Mode of transport	Cross-border freight transport, road	(Cross-border) freight transport, alle modes of transport
Exchange between companies (Business-to-Business, B2B)	... companies and authorities (Business-to-Authorities, B2A)
Exchange of information under private law from a contract between logistics companies (sender and carrier), but also with information carrier function for authorities	... information required by EU and national law for authorities in the transport of goods



In 28 hours from the idea to the solution

The **“IATA ONE Record Hackathon”** is a platform for digital experts who want to develop innovative solutions based on the ONE Record standard for air cargo. Oliver Ditz, research associate at Fraunhofer IML and head of the Working Group Digital Air Cargo, took part in the seventh edition of the exclusive event in Frankfurt with his **NE:ONE Play team**. The countdown is on ...



OUR MISSION IS TO MAKE WORKING WITH ONE RECORD DATA FUN AND EASY TO USE!

Oliver Ditz, Fraunhofer IML



Team NE:ONE Play is ready! It is one of 20 teams with 150 participants from all over the world, including the first all-female hackathon team from Lufthansa Industry Solutions, at the 7th IATA ONE Record Hackathon. The host is Lufthansa Cargo. The first ONE Record Hackathon of the International Air Transport Association (IATA), the umbrella organisation of airlines, took place in Geneva in 2018. In the meantime, the event is held twice a year: in Amsterdam and Toronto in 2022, and in Frankfurt and Doha in 2023. Invitations are published on the international hackathon platform “Devpost”. Interested teams, mostly from companies, can simply register there. Participation in hackathons is generally free of charge; but each organiser handles the coverage of costs for accommodation and travel differently.

DAY 1 – THURSDAY

After the kick-off, with introductions and pitches from the teams in the late afternoon, Oliver Ditz and Daniel Döppner from the Digital Testbed Air Cargo (DTAC) team will have the opportunity to present the result of their work over the past weeks and month: version 1.0.0 of the open source ONE record server software NE:ONE for the air cargo community. With the release in the repository of the Open Logistics Foundation, a significant milestone has been reached. Lufthansa Industry Solutions provides each team directly with an instance so that all participating teams can set up their hackathon ideas directly there.



DAY 2 – FRIDAY



In the evening there will be the opportunity to network. Always exciting to meet developers from companies that compete with each other – all in one place, all with the same mission.



8:00 a.m. – Coding begins: The teams now have 28 hours to code innovative solutions based on the IATA ONE Record data exchange standard. The developments are based on the challenges that the IATA announced at the beginning of the week. Team NE:ONE Play's idea: a tool that helps both developers and non-IT professionals to get started and work with ONE Record.

DAY 3 – SATURDAY

Short crisis meeting at Team NE:ONE Play: More ONE Record servers are necessary ...



A hackathon is also always a competition: the members of the eight-person jury with representatives from industry look over the teams' shoulder to get an initial idea of the solution.





/* Information about the challenge and the NE:ONE play video (4:09 min) can be found on the Devpost website. */

It works: Breakthrough for NE:ONE Play's contribution in the early evening!



1:30 a.m.: The NE:ONE Play team's solution still needs a little fine-tuning – and then finally a good night's sleep until the project is handed in at 12:00 a.m. the next day.

DAY 4 – SUNDAY



The sun is setting. The demonstration set-up for the obligatory video, which is part of the presentation of results at this hackathon, is being built. Team NE:ONE Play has a video specialist in the team who ensures a professional result. Shortly before midnight, a stop at the food truck – and a nightcap.

The NE:ONE Play team dismantles in the morning – and can leave after the award ceremony in the afternoon as one of six winning teams, exhausted but happy. In their luggage: the prize money of 3,000 US dollars, the recognition of all participants and lots of new impressions.



// Fotos: privat/ Luthansa Cargo



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#OSID2023

Around 80 participants from the member companies and organisations of the Open Logistics Foundation took the opportunity to broaden their perspectives and gain new perspectives on the topic at the Foundation's first **Open Source Innovation Day 2023 (#OSID2023)** in Berlin. In their joint welcome address, the board members of the Open Logistics Foundation, Christa Koenen, CIO/CDO DB Schenker, and Stefan Hohm, CDO Dachser, highlighted the potential of open source software to bring about the necessary change in logistics. The Working Group leaders then gave an overview of the state of affairs in the Working Groups and projects. Exciting new food for thought was by companions and observers of the Open Logistics Foundation provided in the afternoon. After the presentations, numerous further questions were asked in the question-and-answer sessions, and new alliances were forged during networking during the breaks and in the evening.



Awarded: The Open Logistics Foundation is among the three winners of the **5th ALICE Logistics Innovation Award** of the European Technology Platform ALICE. The award recognises activities that promote the Physical Internet.

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Your company is interested in **becoming a member**? Then you will find all materials from the statutes to the application here:



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Know more

The Open **Logistics Magazine**, which is published twice a year in print and digital, provides background reports on open source.



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“**Get inspired**”, the monthly newsletter of the Open Logistics Foundation, informs about the current activities of the foundation and community.



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