openIDS

PREPARED BY: OPENIDS COMMUNITY

OPEN INSURANCE DATA STANDARDS

OPENIDS WHITE PAPER: A FUTURE-PROOF STANDARD FOR INSURANCE DATA INTEROPERABILITY

Advancing Industry Data Standards to Power an Open, Unified Insurance Framework

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Long-term Adaptability

A key principle of open Insurance Data Standards' (openIDS) core model is its neutrality regarding technology implementation. Rather than enforcing a rigid data syntax such as XML or JSON, openIDS allows data exchange partners to determine the syntax best suited to their systems and workflows. This ensures that legacy systems, modern cloud-based platforms, and emerging technologies can all leverage the standard without requiring costly overhauls. By focusing on the underlying data relationships rather than prescribing a specific transport mechanism, openIDS ensures long-term adaptability and broad industry adoption.

- **Vendor-Agnostic** – No single entity controls the standard, ensuring a level playing field for all participants while promoting new market opportunities.
- **Interoperable** – Seamless integration across systems, reducing the need for costly, custom-built connectors.
- **Scalable** – Designed to evolve alongside emerging technologies and industry requirements and to and for the future.
- **Cost-Efficient** – Lower maintenance and integration costs, freeing up resources for new revenue stream exploration and strategic initiatives.

Abstract

01

According to a July 2023 survey about Open Data Standards by the *Linux Foundation*, **71%** of organizations favor open standards, vs. **only 10%** favoring restrictive proprietary models.

The openIDS framework is designed to enhance data interoperability and integration across the insurance ecosystem while maintaining neutrality regarding technology implementation.

The potential of the openIDS framework in the insurance industry can be better understood by examining a parallel transformation in online banking. Mastercard, for instance, has successfully positioned itself as a consultancy, data aggregator, and provider of financial products and services, enabling institutions of all sizes to empower consumers through open banking. If widely adopted, the openIDS framework could drive a similar shift in insurance, granting policyholders greater control over their data. Notably, Mastercard reports that *55% of U.S. consumers are willing to share access to their bank accounts in exchange for improved loan terms or interest rates*. This indicates that if insurers offer consumers enhanced data transparency and control, they may see comparable engagement, leading to more competitive pricing and personalized policies

How the openIDS Framework Advances Beyond Current Insurance Industry Standards

We are not starting from scratch, the *Cloverleaf Analytics* data model, now serving as the foundation for openIDS, was developed over a decade ago through real-world application across dozens of insurers. By identifying the core attributes shared among all property and casualty insurance policies and claims, Cloverleaf built an extensible framework that supports seamless data interoperability. *Perr&Knight*, a leading US property & casualty consulting firm, has leveraged this model to enhance the cost-effectiveness of statistical reporting, actuarial analysis and insurance data modeling for their customers, further demonstrating its scalability and efficiency. This proven, adaptable structure aligns with openIDS's mission to establish a standardized yet flexible approach to insurance data exchange.

Extensibility

02

A critical advantage of the openIDS framework is its ability to support seamless data interoperability and integration across the insurance ecosystem. By leveraging **extension points** off the core model, openIDS provides a flexible yet standardized approach to data exchange, ensuring that all parties can communicate efficiently using a common foundation, while also allowing for additional customization as needed and/or desired pursuant to the openIDS governance.

Interoperability

Through a Shared Core

03

The openIDS core model establishes a **universal data foundation** serving as the common language for all participants—insurers, reinsurers, brokers, regulators, service providers, and cross-industry partners. By standardizing key data definitions and structures for wide-adoption, openIDS securely and efficiently allows all parties to **transmit, receive, interpret, analyze, and make better-informed business, security, and other critical enterprise-level decisions**, as well as increase opportunities for innovation. In addition, tremendous amounts of time, resources, and money will be saved – particularly by eliminating the unreasonable and disjointed operation of unavoidable-by-default proprietary data format transformations.

However, while the openIDS core model defines essential insurance data elements (such as policy details, coverage terms, claims statuses, and risk factors), it is not rigid. Instead, openIDS' open framework is designed to accommodate **extension points** that allow industry participants to include additional data elements specific to their business needs without breaking interoperability. These additional data elements would be incorporated through the openIDS governance.

Healthcare offers a compelling example of the value and opportunities multiplied by collectively building and adopting universal industry data standards. The *Fast Healthcare Interoperability Resources (FHIR) standard* has revolutionized data exchange, enabling significant efficiencies—*Mayo Clinic*, for instance, has reduced data processing costs by 30% through its adoption. A *2024 Mayo Clinic presentation* highlights how FHIR is accelerating their digital transformation by leveraging cloud technology, natural language processing (NLP), and generative AI (GenAI). This approach has unlocked faster, more comprehensive insights, enhancing data accessibility and usability across the healthcare ecosystem.

Not surprisingly, incredible catalytic opportunities for commercial products and services have been seized by establishing the FHIR data standard. A profound innovative example is *Apple's harnessing of the FHIR standard* in collaboration with healthcare providers enabling, from one app, an iPhone user to download their medical data from hundreds of hospitals. Open data standards present boundless potential for cross-industry innovation, partnerships, and new revenue stream growth.

Extension Points for Customization 04

The extension mechanism within openIDS enables organizations to **add data attributes**, **business-specific classifications, or regulatory-specific fields** while maintaining compatibility with the core model. This ensures that:

- **All parties communicate through the standardized core**, guaranteeing interoperability and reducing integration complexity.
- **Custom data elements can be appended** in a structured and predictable manner, ensuring that proprietary enhancements do not disrupt the integrity of shared data exchanges.
- **Organizations retain flexibility** to include industry-specific, regional, or business-driven data elements while still adhering to a common standard.

For example, an insurer operating in multiple regulatory jurisdictions can use the core model for **common policy and claims data** while leveraging extensions to include **jurisdiction-specific compliance fields**. Similarly, reinsurers may require additional **risk exposure metrics** that are not universally needed but can be incorporated through predefined extension structures.

Agreement on Extension Standards 04

To maximize adoption and usability, openIDS supports **collaboratively agreed-upon extensions** that can be standardized across subsets of industry participants. This collaboration and agreed-upon extensions will be incorporated through openIDS community specifications process (described below) to maintain the necessary governance. This allows insurers, brokers, and regulators to develop and adopt shared extensions without forcing proprietary modifications into the core model. These standardized extensions could cover:

- **Regulatory reporting requirements** for different markets.
- **Industry-specific risk factors** for specialized coverage lines (e.g., cyber insurance, climate risk).
- **Emerging data types** such as IoT-generated risk insights or AI-driven underwriting parameters.

By ensuring that extensions are **structured, documented, and governed within the openIDS framework**, organizations can seamlessly integrate and evolve their data models while maintaining alignment with industry-wide standards.

The extensibility framework of openIDS is designed to support both standardized extensions, which can be adopted industry-wide, and organization-specific extensions that meet proprietary needs. This ensures that as insurers develop new coverages or regulatory bodies introduce new reporting requirements, the data model can evolve without disrupting existing integrations. Additionally, by fostering a collaborative environment where industry participants contribute to the development and refinement of extensions, openIDS remains a living standard that grows in alignment with industry advancements.

Future-Proofing Data Integration 05

As the insurance industry evolves with **emerging technologies, new risks, and regulatory changes**, the ability to extend standardized data structures without disrupting interoperability is crucial. The openIDS extension framework provides a future-proof foundation by:

- Allowing **incremental adoption** of new data models without requiring full-scale rework.
- Supporting **both legacy and modern systems** by enabling phased transitions to newer integration standards.
- Facilitating **multi-party collaboration**, ensuring that insurers, reinsurers, and regulators can align on evolving data requirements efficiently.

By leveraging a **shared core with agreed-upon extension points**, openIDS strikes the balance between **standardization and flexibility**, enabling seamless data interoperability while allowing organizations to customize data structures to fit their needs. This approach fosters greater collaboration, reduces integration costs, and ensures that the insurance ecosystem remains adaptable to future innovations.

An Evolving Standard

05

The lack of standardization in insurance data formats is not a new problem. Many previous attempts have been made to introduce a comprehensive data standard, but they have often failed for various reasons. Some standards were proprietary, closed-source solutions that required membership or fees to use. Others tried to address every possible scenario, making the model overly complex and difficult to maintain as the industry evolved.

openIDS is different by design. It is a non-proprietary and open standard and available for review, use, and modification under an open source Apache2 license – it is never **controlled by a single, commercial entity or acquired by an opportunistic vendor**. Open standards provide a blueprint for business and engineering stakeholders to implement projects in different ways across different codebases and platforms. All participants are welcome to participate and contribute to the process and standard development. Participants work together to collectively discuss, debate, define and finalize and promote these standards. As standards are put into use, the openIDS community will work together to update and maintain this critical infrastructure for the insurance ecosystem.

openIDS focuses on the common elements among different lines of insurance, ensuring that those shared elements can be exchanged according to the standard. Extensibility is critical to the standard and one of the goals of the standard development process is to include extensions to the core that can be adopted as part of the standard as the industry, technology and regulatory environments evolve.

openIDS leverages the *Community Specification development process* created by the *Joint Development Foundation (JDF)* at the LF. This is a lightweight, efficient process for a community to develop, reach consensus on and deploy standards to the wider insurance ecosystem. The overall process includes defining:

- The Scope of the standards
- The License and how it is configured
- The Governance of the WG and the process to make edits, changes and updates
- How Contributors and Contributions will work together

The Community Specification development process will begins the creation of a standards organizing committee within the *openIDS Working Group* (openIDS WG) to lead and manage the standards development process.

This White Paper aims to ignite interest and boost requisite founding participation. OpenIDS welcomes all insurance industry stakeholders to come explore openIDS as it advances in organizing the community, generating input/issues/insights, and reaching consensus on the goals, objectives, challenges, and opportunities.

Currently, openIDS operates with a lean governance structure, scaled appropriately to match the project's current complexity and production demands. As the community grows and standards development accelerates, openIDS is expected to scale accordingly—likely collaborating more directly with the Joint Development Foundation (JDF) to expand the reach, enhance opportunities, and strengthen governance of the standards.

Use Cases

05

The generation of a new standard, in kind, opens new avenues for industry interactions and more consequential exchanges. It also amplifies the scope of improvements and efficiencies of existing interactions. Here is a list of some of the opportunities made available through utilization of the openIDS standards:

- ***Regulatory Reporting*** - The standard makes it possible for multiple regulatory reporters to serve companies without the companies having to transform their statistical data into multiple formats.
- ***Foster Innovation*** - Allow new vendors to compete in the insurance space and make it more competitive and reduce costs.
- ***Data Calls*** - Having the data available in a standard format makes it possible to implement common queries to access data without a need to transfer fine grained data that may contain PII or company IP.
- ***Rating as a Service*** - Services can be made available for use by PAS vendors and carriers to calculate premiums without costly implementations. The openIDS serves as the format for transmitting policy and claims data to the rating service.
- ***Other Policy and Claims Services*** - any service provider that needs policy and/or claims data can use the openIDS as the transmission format.
- ***Aggregated Data Dashboards*** - As data becomes cheaper to share and more companies share data with trusted intermediaries, those intermediaries can provide analytics platforms on the aggregated data. These can be made available to Regulators, Insurance Companies and others in the industry.
- ***Loss Cost Development*** - Advisory organizations will have access to more data and will be able to develop more accurate loss costs.

Conclusion

05

The shift from proprietary data formats to open standards isn’t just an upgrade—it’s a revolution for the P&C insurance industry. By cutting inefficiencies, lowering costs, and enabling true interoperability, open standards unlock smarter operations, faster innovation, and a more resilient future.

For all insurance industry stakeholders including: insurers, reinsurers, vendors, and regulators alike, this is the moment. Open standards are not just the future—they're the foundation for a connected, agile, and future-proof ecosystem.

The momentum is building. The community is growing. The future of insurance data exchange is being written right now.

Join the movement. Shape the standard. Lead the change.

If you missed it, check out the first White Paper of this two-part series here.

Learn More / Get Involved

07

Open means all are welcome!

Feel free to drop into a call or explore previous call recordings / notes.

01

openIDS WORKING GROUP CALL

THE WORKING GROUP MEETS VIRTUALLY EVERY TWO WEEKS ON THURSDAYS AT **11-11:45AM EST**

MEETING CALENDAR

02

openIDS WORKING GROUP
Recordings & Transcripts

CALLS, AGENDAS, AND RECORDINGS / TRANSCRIPTS ARE AVAILABLE TO ALL.

MEETING AGENDAS & RECORDINGS

03

WHITE PAPER WORKING GROUP

This white paper is the work product and collective effort of the openIDS community. The goal is to continuously and collaboratively produce educational industry content defining the opportunity space and approach challenges in the development of standards for the entire insurance ecosystem.

MEETING INFORMATION

Come write the next openIDS White Paper with Us!

04

openIDS WIKI

The openIDL WIKI is a collaborative environment and information repository where openIDS participants can find information, collaborate, and share. Meeting agendas, links to recordings and documentation can be found on the WIKI.

openIDS WIKI

05

openIDS WEBSITE

The openIDS website is a hub for new and existing community members and participants to learn more about the mission and work of the organization, find out how to participate, and bring the work of openIDS to their own organizations.

EXPLORE SITE

06

openIDS GITHUB

COMING SOON.

Join the movement. Get involved. Help shape the future of insurance data exchange. This isn’t just an idea – it’s happening now. We invite you to be part of it.

openIDS COMMUNITY

FURTHER INFORMATION & CONTACT

MEMBERSHIP

WHY OPEN SOURCE?

openIDS OVERVIEW

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