

Trusted Automation and Intelligence

Powered
by Blockchain.



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Mission + Vision

Modum is developing solutions that deliver trusted insights to improve our customer's value chain automation. Our vision is to become an invaluable partner to our clients by turning untapped supply chain data into potential – insight, optimization, and automation – and valuable business. To achieve this, we build our solutions based on our overarching values: reliability and quality, customer success, trusted relationships, and agility and innovation.

History

modum.io AG is a Zurich-based start-up founded in 2016 by a group of entrepreneurs with backgrounds in technology and pharmaceutical manufacturing. Modum provides digital value chain monitoring solutions that enable compliance with regulatory requirements. In 2017, Modum held a token sale to fund the development of its first product. The team is currently collaborating with Swiss Post and SAP.

MODSense



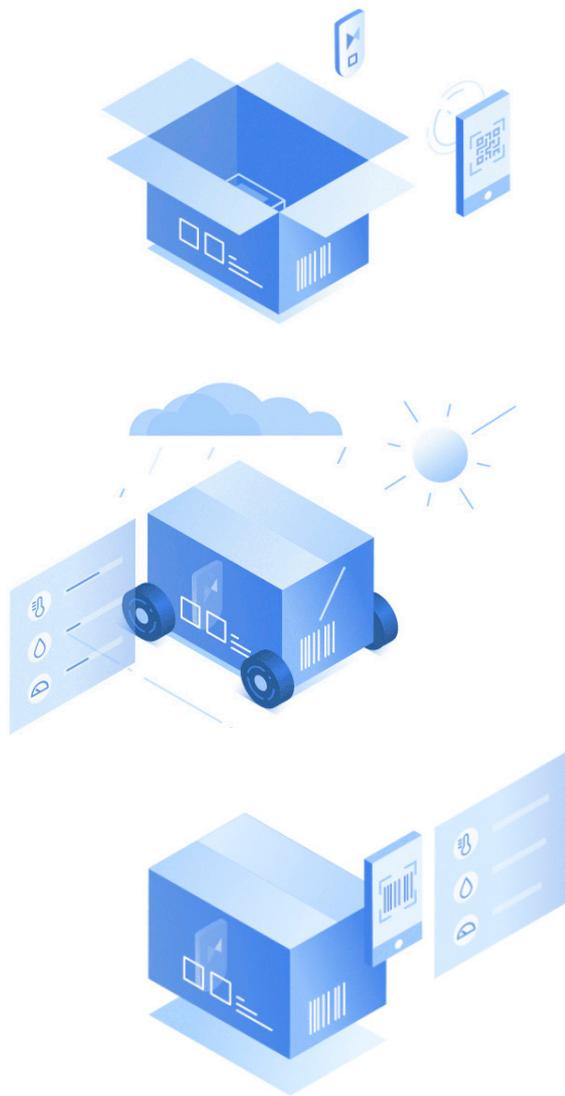
Trusted Sensing and Monitoring

MODsense, Modum's first solution, offers temperature monitoring for sensitive shipments. Users can pre-define dedicated quality requirements for each shipment and automatically evaluate performance and conformity upon readout.

The entire solution can be seamlessly integrated into existing workflows, track-and-trace systems, and ERP solutions.



Temperature Monitoring with MODsense



Step 1

Sending the Shipment

Product-specific temperature ranges are set in advance so that your logistics team can activate the MODsense T data logger using an NFC or BLE and connect it with the parcel by scanning the shipment ID.

Step 2

En Route

While in transit, the temperature logger measures the environmental conditions that the shipment is subject to. Stored locally, this valuable data is secure in the tamper-proof sensor during transit.

Step 3

Receiving the Shipment

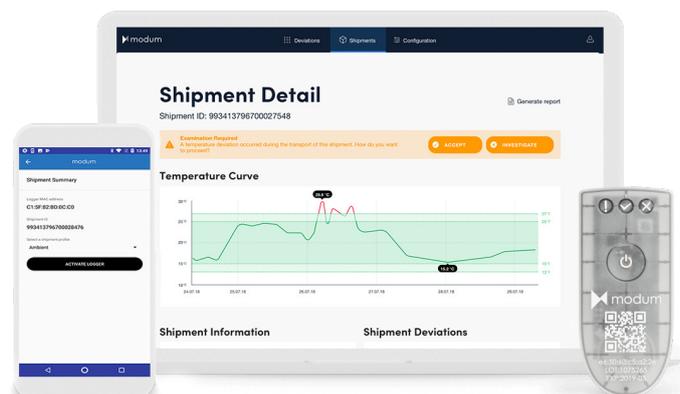
When the package is received, the shipment ID on the parcel can be scanned by the end user or a third-party logistics provider to perform an immediate read-out of the sensor. Authenticated data is automatically pushed to the blockchain and all stakeholders can be immediately notified of deviations.

MODsense Software

A Complete Solution with Dashboard and Commissioning Apps.

The MODsense web app allows your team to automate monitoring processes using the MODsense T temperature logger. It is an environment to define quality requirements that offers shipment management and quality assurance tools, providing data exports and audit reports.

The MODsense commissioning apps allow for immediate activation of the temperature logger via mobile app, mobile SDK, and NFC.



Powered by:



MODlink



Sharing trusted events
across data silos

- Enables a supply-chain ecosystem to share trusted events by connecting the independent data silos of stakeholders without exposing private data.
- Bridges data access gaps between enterprises, allowing process automation and new insight.
- Provides access to blockchain-secured data pools in compliance with regulatory requirements.
- A solution that assures quality, integrity, and efficiency within the supply chain for all involved parties, enabled by blockchain.

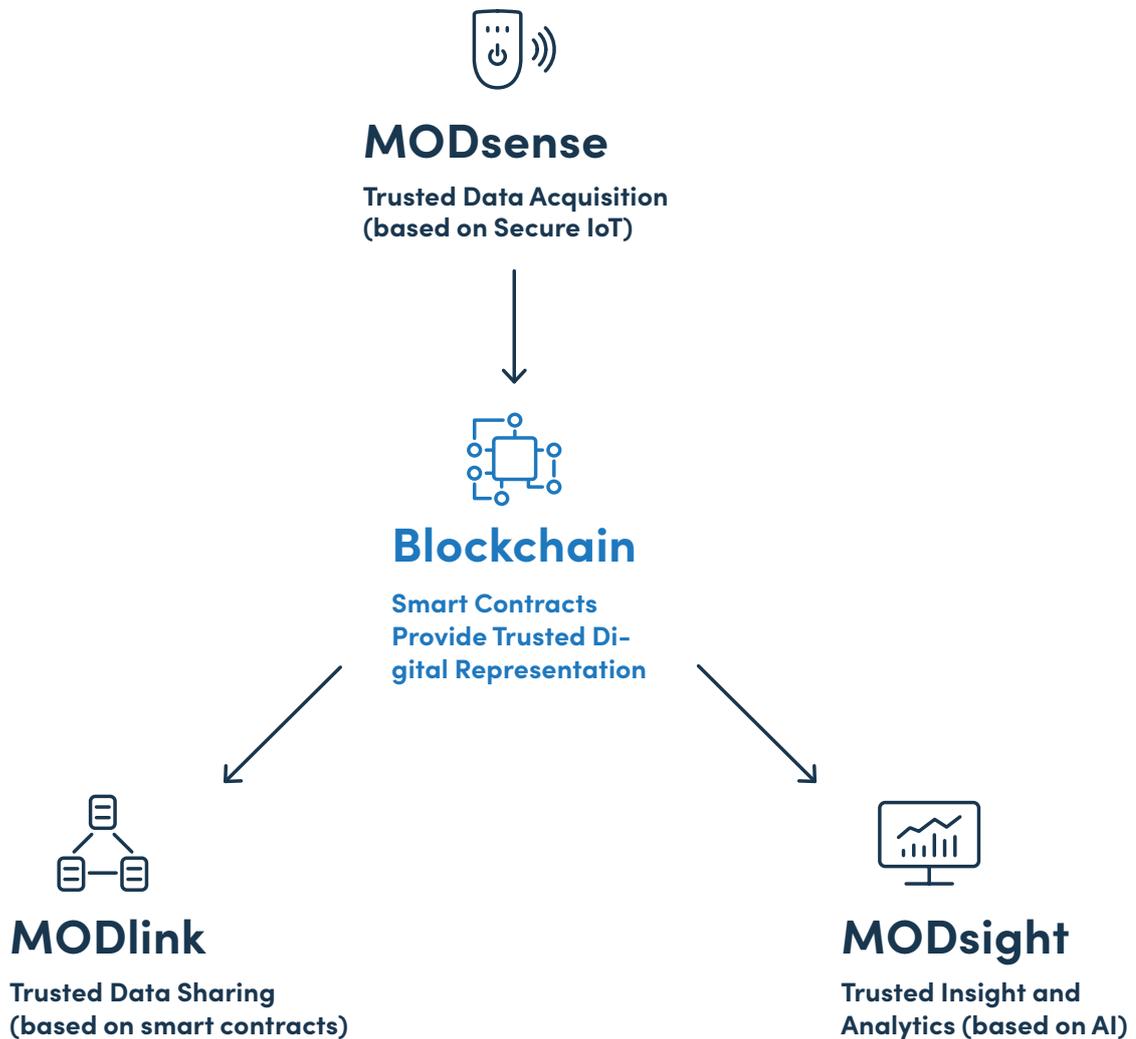
MODsight



Predictions and analytics
based on trusted data

- Using acquired data, MODsight provides aggregated insights through advanced analytics and predictions.
- Scenario analysis is used to provide support in understanding the root-cause of trusted events.
- Predictive models help to improve the value chain, reduce costs, and optimize risk management.
- Runs on leading cloud platforms to facilitate integration into your IT ecosystem.

How it Works Together



How We Use Technology

IoT Devices

- Smart sensing for a wide range of environmental conditions.
- The latest connectivity options enable seamless process integration and real-time notifications.
- Cryptographically secure hardware ensures data authenticity and that data cannot be manipulated

Blockchain

- Monitored data is verified on the blockchain.
- Temperature parameters create a unique smart contract for each shipment, it is verified at readout to ensure data authenticity.
- Storing data sets on the blockchain ensures that they have data integrity throughout their useful life and cannot be altered.

AI

- Self-learning models replace the manual modelling of shipment scenarios with a large variety of feature sets.
- Machine-learning methods facilitate high accuracy prediction and pattern recognition.
- Easily retrainable models adapt to changes in business scenarios.

How Modum Helps

Creating valuable data and insights that support your initiatives.

Within global supply chains, future demands will require increased trust between partners, the ability to monitor throughout dynamic routing, easy information sharing, manipulation-proof data with automated readout, process automation within a regulatory framework, and real-time monitoring. Our solutions address these needs today.

GDP Compliance

MODsense supports cGxP rulesets and fulfils cold-chain regulations. All measured events and activities within the supply chain are stored as secure and immutable data, which can be easily formulated into reports for audits.

Transparency

The blockchain ensures secure data and allows it to be easily shared. All stakeholders — including sub-contractors — can access this, improving their operations and identifying themselves to increase overall transparency.

Trusted Data

Modum provides easy, quick, and immediate access to trusted data within supply chains. This data is the basis for insights into your organization, which, through analytics and prediction tools, can drive process optimization.

Manipulation-Proof

With MODsense, data manipulation is not possible because of cryptographically secured loggers. More effective than other serialization efforts, trusted data — stored immutably — sets a new standard of security for anti-counterfeit initiatives.

Use Cases

Addressing Concerns in the Healthcare Sector

Modum provides an innovative solution for the regulatory-driven issues that supply chains face, particularly in the healthcare sector.

Cold Chain

As temperature-sensitive medicinal products travel to the end user, external conditions, specifically temperatures, can reduce their efficacy and quality. Temperature-controlled packaging can maintain desired temperature ranges. However, in order to fulfil Good Distribution Practice (GDP) regulatory requirements, a monitoring solution is required. MODsense works easily with your existing processes to ensure quality and compliance.

Clinical Trials + Personalized Medicine

As compounds used in treatments and trials become more complex, agencies are improving their monitoring documentation to support stability claims and label parameters. MODsense allows for customized measurement criteria that supports product-specific monitoring and our robust temperature logger can ensure that unique temperature ranges can be recorded.

Vaccines

According to the World Health Organization, the temperatures that vaccines are exposed to must be monitored, recorded, and reported, from manufacturer's point of origin to the point of vaccination. Upholding quality standards is challenging in the final phases of the supply chain. MODsense is designed for monitoring a high volume of shipments efficiently and effectively.

Functional Foods

Often categorized as neither a drug nor a dietary supplement, functional foods can be subject to unique reporting requirements and quality concerns. MODsense collects digital data that is verified in the blockchain, allowing manufacturers and distributors the flexibility to record and report but also to analyze. The unique insights gained by using MODsense not only improve your business processes but also quality for the consumer.

Further Applications



Food & Beverages



Electronics



Medical Supplies



Art + Valuables

