

Pulsar’s AI analytics platform play

Industrial IoT in action:
Case study #5







Case series: Industrial IoT in action

In this article series, we present five case studies of how companies with different value chain roles managed the competition over new value enabled by the industrial internet of things (IIoT) in their industries. The cases illustrate different viewpoints on the challenges in claiming a fair share of value pools from digital-driven and data-based services. These value pools are often focused on optimization and maintenance of industrial equipment. Some companies call it digital or connected solutions, some data-driven business, others servitization or X-as-a-Service.

In this case (#5 of 5 in the article series), we learn how platform provider Pulsar expanded their data platform business into AI-enabled analytics services across manufacturing industries.

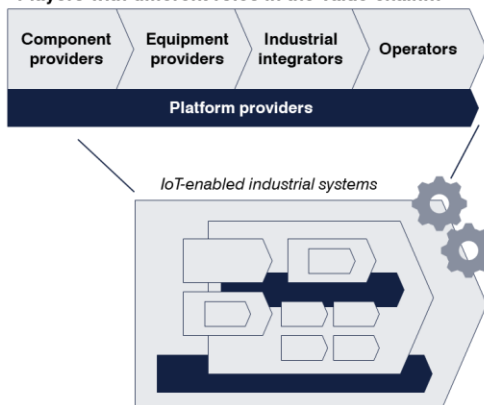
“In most industrial sectors we see players with different roles in the value chain competing for the same data-based and service-oriented value pools, which creates a lot of friction.”

CASE SERIES AUTHORS

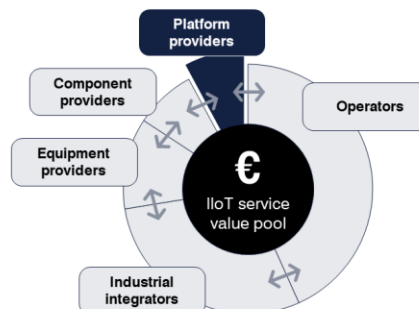
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Case	IIoT play	IIoT competitiveness aspects
Pulsar Platform provider Manufacturing industries	AI analytics platform Approach: New business discovery & development	<ul style="list-style-type: none"> • Generalist platform pitfall – industry-specific without over-customizing • Customer fears of platform dependency and margin erosion • Platform contributor concerns of commoditization and disintermediation

Players with different roles in the value chain...



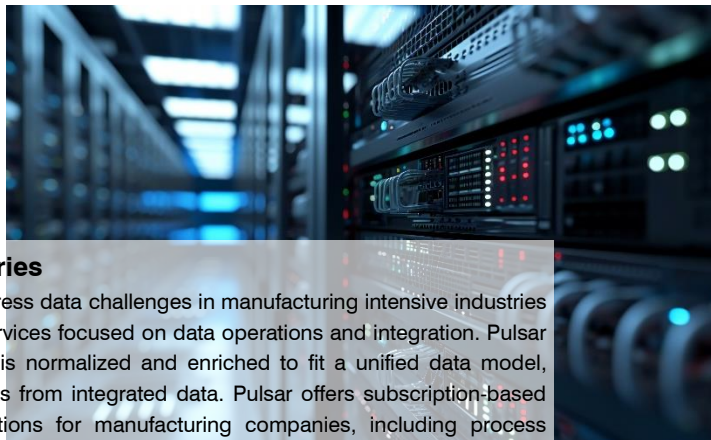
...compete for the same data-based and service-oriented value pools.



Case 5 figure: Illustrating Platform provider role aspects on IIoT competitiveness

Platform provider role, cross manufacturing industries

Case 5: Pulsar



AI analytics services scalable across industries

Pulsar was born a digital company. It was founded to address data challenges in manufacturing intensive industries and has grown rapidly, offering industrial software and services focused on data operations and integration. Pulsar enables streaming of data into its platform, where data is normalized and enriched to fit a unified data model, thereby facilitating easy access to and actionable insights from integrated data. Pulsar offers subscription-based access to its platform, supporting a range of applications for manufacturing companies, including process optimization and maintenance.

Building on the success of its data platform services, Pulsar was looking to vertically integrate and expand the business into AI-enabled analytics services. This move repositioned Pulsar from enabling customers to use their data, to also provide analytics services.

Industry frictions

Pulsar identified four key frictions to overcome if the platform-based AI analytics services should gain traction across manufacturing industry sectors (agnostic), and compete with big digital and hyperscalers' platforms:

- **Generalist platform pitfall – industry-specific without over-customizing.** Pulsar's AI-enabled analytics services must offer features and insights tailored to industry-specific requirements, yet avoid excessively customizing the services and underlying platform to the point where scalability is affected. Facing competition from specialized IIoT providers (e.g. equipment providers) with bespoke solutions, Pulsar's agnostic platform must demonstrate how specific needs of certain industrial applications are served, while still remaining scalable across manufacturing industries.
- **Customer fears of platform dependency and margin erosion.** Customers may be concerned about relying too much on platform providers' services and integrating platform capabilities too deep into the core of their businesses. Thereby creating a risk of redistributing profits away from the customer to the platform provider, potentially commoditizing the customers' own contributions. Customers may have concerns about becoming overly reliant on a single platform provider, potentially leading to vendor lock-in and limited flexibility.
- **Platform contributor concerns of commonization and disintermediation.** Equipment providers and system integrators fear loss of data ownership, commoditization of domain knowledge, and risk of disintermediation when platforms aim to automate or streamline processes traditionally held by industry incumbents. Pulsar must establish ways to complement and augment the capabilities of existing value chain players, rather than replace them, and ensure the platform becomes an enabler of enhanced and value-adding services rather than a substitute.

Fact box: Manufacturing industries

Manufacturing industries encompasses a wide array of activities focused producing finished products for consumer use across various categories, including electronics, automotive, textiles, machinery, and consumer goods. Example Players in the industry are Operators: General Motors, Sony Corporation and Procter & Gamble, Integrators: Siemens, Rockwell Automation and DMG Mori, Equipment providers: Haas Automation, Fanuc and Parker Hannifin, Component providers: Würth and Belden, Platform providers (in addition to Pulsar): Autodesk, PTC and Dassault Systems.

Navigating reactions and finding balanced approach

Pulsar initially struggled with generalist platform pitfalls. Coming from an industry agnostic background, they faced customer feedback that insights were not industry-specific and deep enough, hence they did not lead to immediate actions and benefits. Pulsar realized they had to better utilize and integrate domain knowledge, focusing on industry-specific challenges and opportunities.

Leveraging its entrepreneurial spirit and proficiency in data, Pulsar set out to develop and train AI models on large amounts of industry-specific data, capturing patterns, best practices, and decision-making processes that typically require human expertise. Doing so, Pulsar' intention was to democratize data and analytics. Pulsar's new services would make advanced capabilities previously exclusive to industry incumbents with years of accumulated knowledge, accessible to a broader range of companies including smaller players that may not have the resources to develop such expertise themselves.

However, there was a backlash as partner companies with domain expertise feared that by inputting their specialized knowledge into Pulsar's platforms would commoditize their competitive advantage. If similar or even superior insights could be obtained through AI-driven platforms once contributors' knowledge had been encoded into algorithms or analytics models, the proprietary value of incumbents knowledge diminish, potentially making their roles less critical or even obsolete. This also triggered discussions around data ownership. Equipment manufacturers and operators alike had concerns about who would own the data their machines and factories generated, and who could access the derived insights from the analytics.

Pulsar needed a balanced approach; emphasizing mutual benefits, fostering trust in data governance, and protecting value chain players' specialized domain knowledge, while still creating deep industry insights using their AI platform. This inclusive approach sought to reinvent but preserve industry dynamics, fostering a data-sharing ecosystem that benefitted every contributor and stimulated collective growth and innovation.

Looking ahead

Pulsar's story illustrates the challenges for platform providers of catering to the nuanced needs of diverse industry sectors while maintaining scalability. If Pulsar's AI-based analytics platform and process optimization and maintenance services can reach the same success as their data platform is still to be determined. What is clear is that codifying domain knowledge and offering it as a service can shift where and how value is created and captured in industry value chains.

Fact box: Platform provider role

Platform providers deliver the digital infrastructure required across the value chain. This can encompass a broad range of technologies and services including industrial software suits, cloud services that enable scalable storage, processing analytics capabilities, connectivity solutions that allows communication between devices, and data platforms that facilitate the collection, analysis, and utilization of large volumes of information. These platforms are used for the operation, monitoring, and management of industrial systems.

Note: While Konsert has an established relationship with Pulsar, we did not directly engage in a consulting capacity for the specific AI-enabled Analytics Initiative.



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