



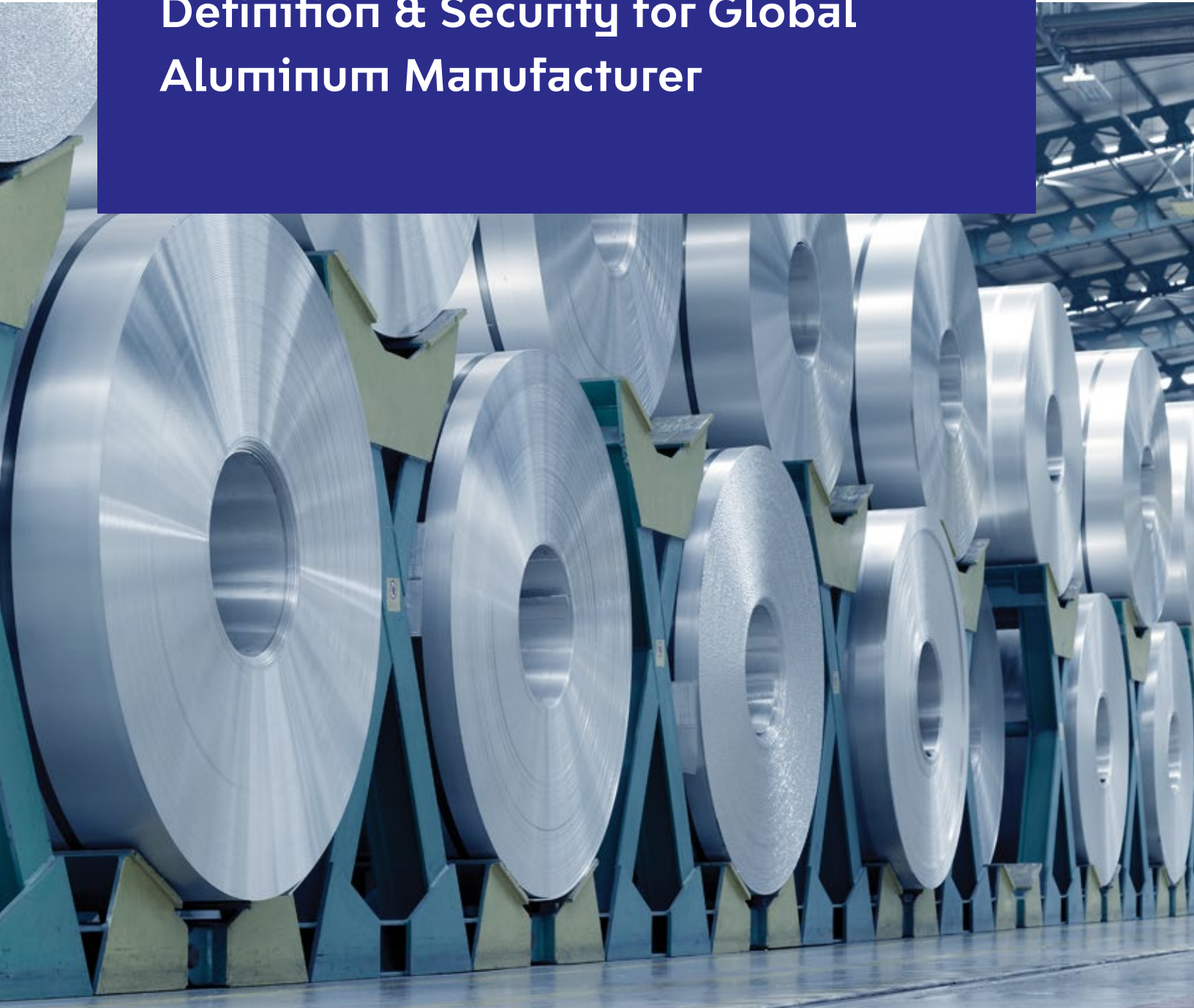
Let's Solve



A Larsen & Toubro  
Group Company

## Case Study

# Operational Technology Dataflow Definition & Security for Global Aluminum Manufacturer





## Client

The client is world's largest aluminum rolling company and among the biggest producers of primary aluminum in Asia.



## Challenges

**The client had a set of challenges identified below based on a discussion with various business function stakeholders:**

- Lack of asset management for systems in OT network leading to manual intervention in plant operations lowering overall efficiency.
- Lack of security in Process Control Network (PCN) and constraining new IoT use cases using IT-OT convergence.
- Unavailability of centralized monitoring at plant level making it difficult to analyze operations and provide information and insights to operators and plant personas.
- Legacy infrastructure on OT network not supported by OEMs.
- Siloed data for analysis and reporting which included data stored in standalone devices, thereby lacking collaboration and constraints in providing a consolidated view of plant operations.



## LTI Solution

LTI helped the client to converge IT and OT environment and processes to securely deliver data and gain competitive advantage, while still maintaining the highest level of data security. To achieve this, an overarching data strategy was prepared defining the governance and of collection, storage and use of OT data important for business stakeholders. Based on this assessment, recommendation for OT security initiatives to strengthen organization's OT Security posture were proposed while extending visibility to identify site level risks.

- ✓ LTI commenced the engagement by performing an assessment of all tools and systems that were currently being used. This AS-IS state of each plant was documented after holding discovery workshops with stakeholders while understanding the operations and data capturing methodology.
- ✓ Identified top business challenges with a current state post site audits and value discovery workshops.
- ✓ Studied the variations in format, granularity and time periods of plant data
- ✓ Quantified the benefits of correlated and complete operational data by mapping to business KPIs corresponding to selected areas of intervention - connectivity, automation and analytics.
- ✓ Designed a well-integrated data architecture defining the collection of data from multiple resources, cleansing to eliminate errors and normalizing the data to bring a coherent picture.

## The IT-OT convergence architecture facilitated:

- Democratized data across organization.
- Robust data governance comprising of quality, security and lifecycle management of data.
- Standardized OT network architecture across plants with proper segregation of OT and IT networks.
- Faster and accurate data-driven decision-making culture across organization through centralization and standardization of data.
- Ability to leverage best of the tools and technologies in data architecture definition and access to data.





## Business Benefits

- ✓ A well-defined roadmap to embark on an enterprise-wide data journey.
- ✓ Differentiated positioning with data consistency and coherent view for business insights.
- ✓ Improved yield, capacity utilization and equipment availability with accurate data on production KPIs.
- ✓ Collaboration among manufacturing, IT and automation teams providing faster access to plant data impacting performance.
- ✓ New architecture provided seamless upgradation to advanced data approaches – digital twin simulations and advanced analytics – thereby enhancing adaptability and reducing time-to-market.

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