



ABOUT US

In order to achieve a successful Digital Transformation (DX), it is necessary to form a smart organization and have balanced knowledge across the enterprise based on the data management foundation of big data and artificial intelligence. In addition, total digital capabilities, including domain knowledge, must be strengthened through interactive learning across data, systems, facilities, and processes.

Whether you are struggling with digital transformation or looking for a more efficient and successful digital transformation, we are here to help you as a digital partner with specialized knowledge and infrastructure.

Through our AI and big data platforms A^2 Lab (A Square Lab) and B^2 Lab (B Square Lab), as well as various product configurations such as A^2 (A Square), C^2 (C Square), D^2 (D Square), and E^2 (E Square), we provide the direction of digital information integration to areas that require advanced knowledge of customers and markets as well as manufacturing, process, facility, quality, and productivity improvement, and we will share the success of sustainable digital transformation (DX) with our customers.



COMPANY STORY

Company Name	IMPIX (Inc.)
Date of Incorporation	October 1st, 2000
CEO	Lee Sangho
Intellectual Property Rights in Possession	22 Domestic Patent Applications, 2 Accreditations, 2 Registered Designs, 8 Registered Trademarks
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Smart Manufacturing Platform OWP Introduction

OWP (One Way Platform), a smart manufacturing platform that optimizes smart factory construction according to the company's situation and stage

OWP does not replace existing facilities with new ones, but uses IoT and applied technologies to create a flat surface that can collect, store, and analyze production facilities and sensor data. OWP is a platform that enables the collection, storage, and analysis of production equipment and sensor data. and analyze production equipment and sensor data. In order for smart factories to be effectively utilized by field personnel, operation managers, and decision makers In order to be over-utilized, it includes functions to analyze and visualize data for real-time onsite monitoring, predictive maintenance of facilities, production history tracking, quality analysis, total efficiency management, etc. where anyone can easily use analytical indicators based on process data.



Intelligent Information System



Artificial Intelligence Platform A²Lab Configurations

Collect, store, and process manufacturing data to learn and verify AI models to predict quality and build process optimization AI models, as well as develop quality image analysis models through streaming analysis and analyze the causes of each type of abnormality. and analyze the causes of each type of abnormality.

Examples of composite index calculation, prediction model execution, alarm occurrence, and action guidance for alarms Data mining can be performed through mapping, and trend prediction, failure monitoring, alarm & action guidance inquiry, and facility maintenance timing can be performed. Action Guidance query, prediction of equipment maintenance time, Tag trend query, extraction of detailed analysis utilization enables visualization analysis through data.





Intelligent Information System



Big Data Platform B²Lab Configurations

To detect meaningful data, it is necessary to go through the process of insight and optimization of data. The big data platform B2Lab helps to optimize machine learning by establishing basic statistical models for exploratory data analysis and identifying data structure through the process of data exploration, an analysis technique to identify data features and structural relationships, and selecting data preprocessing models that can learn quickly and make accurate predictions.





Discover and resolve potential problems with your data



Process various patterns and revise hypotheses or generate new ones

Main Characteristics



Real-time scalability and reliability



Process data with the right structure for statistical inference and predictive models



Provide an operating system for integrated management



Metaverse Factory

Impix's Metaverse Factory is a virtual smart factory that combines manufacturing AI and Metaverse, and is a representative combined technology system in the era of the 4th industrial revolution based on the value chain (manufacturing domain, virtual platform, virtual augmented equipment).

It is a manufacturing solution that enables real-time process monitoring, remote control troubleshooting, and non-face-to-face technology sharing by connecting manufacturing facilities located in places with difficult access procedures such as clean rooms and dangerous processes to a remote virtual space without spatial constraints on the metaverse. By utilizing augmented reality (AR), virtual reality (VR), and extended reality (XR) equipment and metaverse solutions, it enables factory operations that can be controlled in both directions. You can expect to optimize operations and improve quality using virtual simulation on the metaverse.

3 Data processing, extractior Modeling Analytics Visualization 3D Automatic Storage Facilitie Synchronization **Decision support** Virtual worl Real wo Process Quality Manage Prediction collaboration Status

Supporting real-world decisions with virtual worlds

Key Features of Metaverse Factory

- Bi-directional Control | Bi-directional facility control via HMI linkage control and video, voice, and TXT based interaction chat function support
- Visualization of information | Eliminate sunk costs caused by information asymmetry by sharing intuitive quantitative data with each organization, and promote joint manufacturing optimization across all sectors of the company (virtual factory data, operational infrastructure). connectivity, and operational infrastructure)
- Integrated Resource Control | Maximize the value of each manufacturing resource through integrated control based on One Platform, reduce labor, and optimize work environment. labor, and optimal work environment (meta-control, large data communication, robot intelligence)
- Virtual Simulation | Pre-verification and execution of optimal operating conditions to eliminate trial and error opportunities in production operations Cost minimization (digital edge computing technology)
- Solution scalability | Establish a plug & play environment to expand new solutions and continuously improve production efficiency (Solution expansion framework, interoperability standards through Metaverse Standards Forum (MSF))



Bringing a real-world manufacturing plant into the virtual world



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