OpreX™ Data Model Broker

Design Diagram Converter

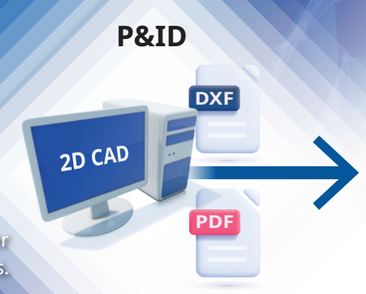
Bulletin 36M10C10-01EN

Make smarter use of your P&ID data

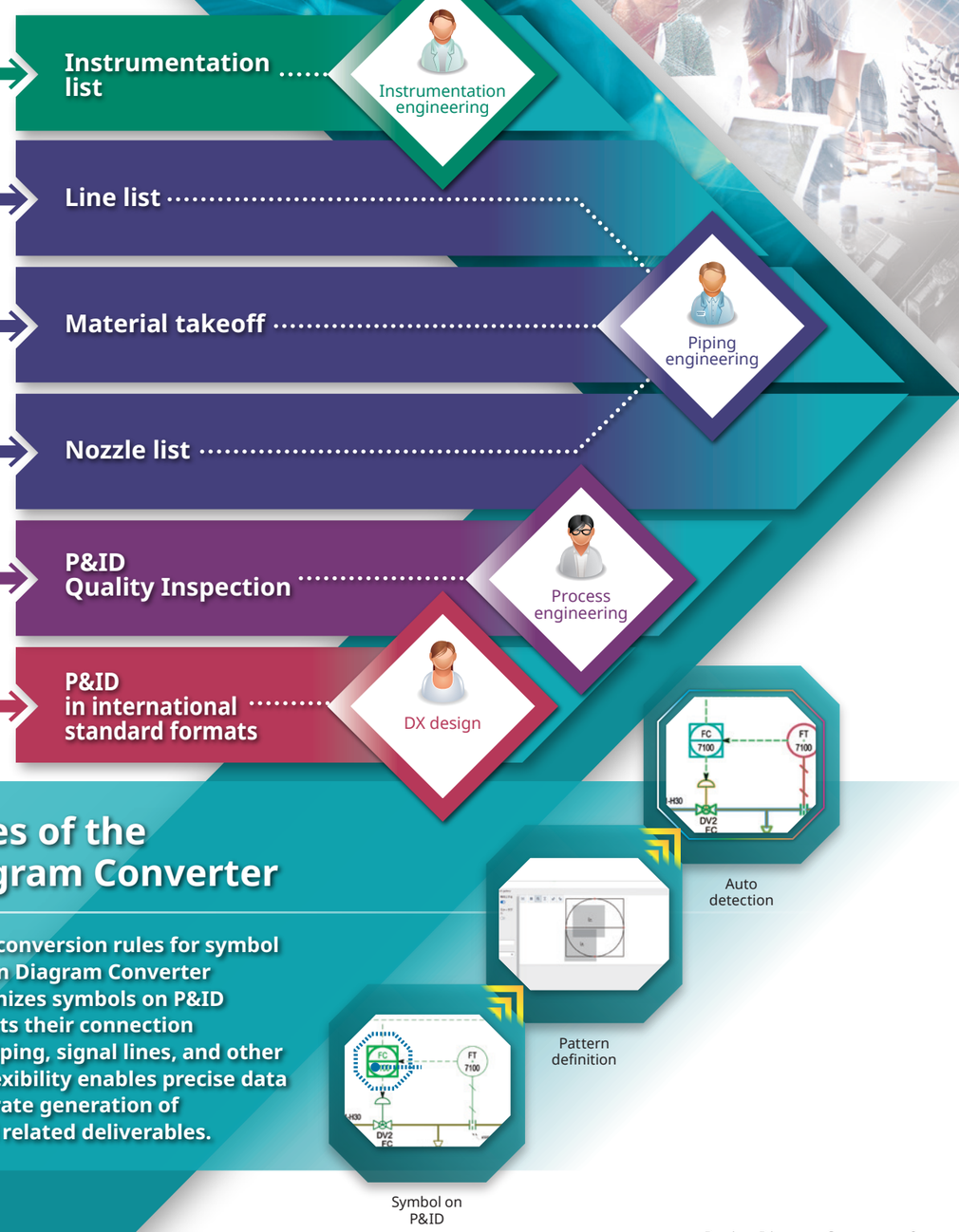
- Manually creating instrument lists, line lists, and other deliverables can be time-consuming, especially when managing extensive data with limited resources.
- Misinterpreting diagrams can result in costly rework and project delays.
- Integrating P&ID information into other systems is challenging because, while humans can interpret the diagrams, computers cannot. This limitation often forces teams to enter the data manually.

Design Diagram Converter solves these issues.

Design Diagram Converter is an application that automatically extracts P&ID data and generates instrument lists, line lists, and other deliverables in international standard formats. By automating tasks once performed manually—such as diagram data extraction and list creation—it greatly enhances efficiency and reduces workload.



Scanned paper diagrams are not supported.



Product Features

Reduces workload by automating tasks that were previously performed manually.

Improves and standardizes work quality by minimizing human errors through task automation.

Promotes data utilization for engineering DX by generating data compatible with other systems, enabling system integration and collaboration.

Key Features of the Design Diagram Converter

Using customizable conversion rules for symbol detection, the Design Diagram Converter automatically recognizes symbols on P&ID diagrams and extracts their connection relationships with piping, signal lines, and other components. This flexibility enables precise data extraction and accurate generation of instrument lists and related deliverables.

Auto detection

Pattern definition

Symbol on P&ID

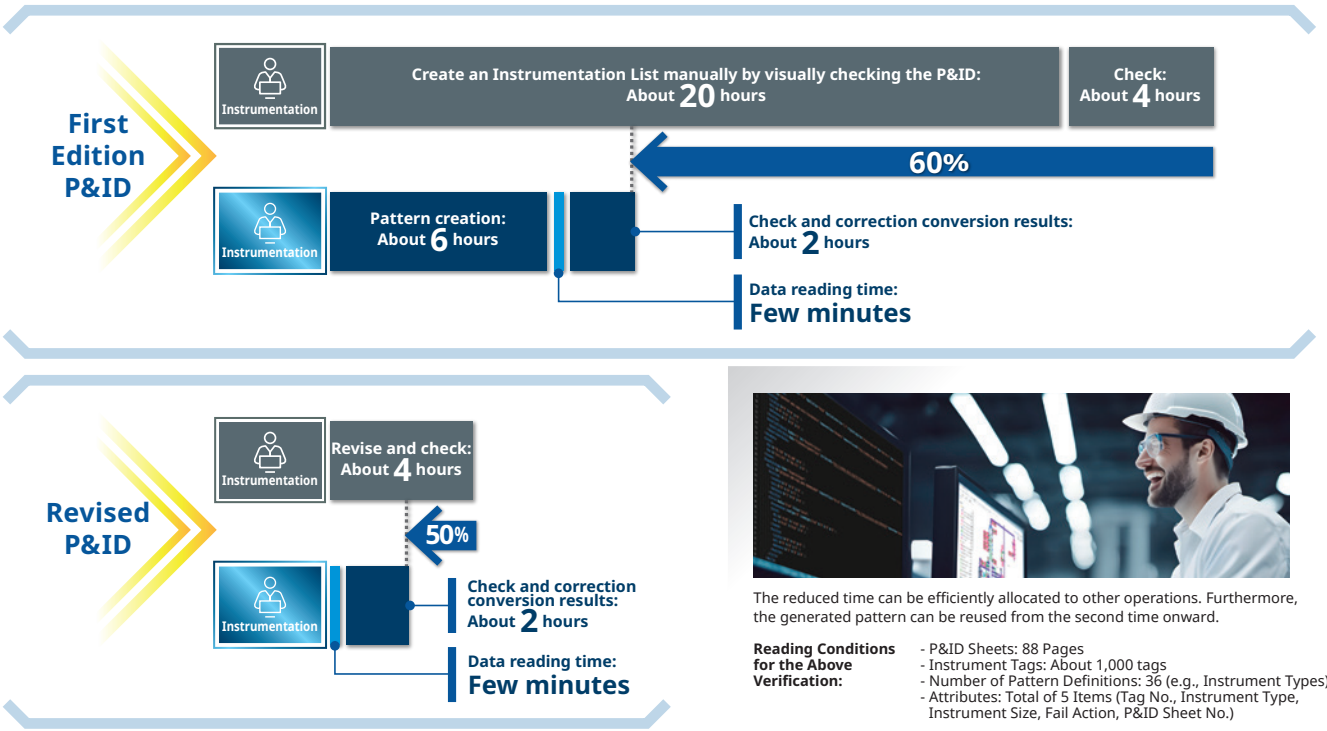
Are you facing challenges like these?

- Generating various lists from P&ID requires considerable time.
- Inconsistencies have been observed between P&ID and the corresponding lists.
- Efforts are being made to utilize P&ID data more effectively, but several issues have been identified.

Design Diagram Converter assists you.

Case Example: Workload reduction in Instrumentation List Creation

Compared to the conventional manual creation of Instrumentation List, Design Diagram Converter reduces man-hours by 60%. Furthermore, when revising P&ID, previously configured settings can be reused, requiring only verification work.



The reduced time can be efficiently allocated to other operations. Furthermore, the generated pattern can be reused from the second time onward.

Reading Conditions for the Above Verification:
- P&ID Sheets: 88 Pages
- Instrument Tags: About 1,000 tags
- Number of Pattern Definitions: 36 (e.g., Instrument Types)
- Attributes: Total of 5 Items (Tag No., Instrument Type, Instrument Size, Fail Action, P&ID Sheet No.)

OpreX Data Model Broker is a platform designed to enhance the interoperability of various design data by interpreting and structuring their semantic content and interrelationships, enabling data extraction and transformation customized to specific objectives.

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