



“**Forge** changes the game ... no longer do I hunt for P&IDs. The tool’s functionality speeds up tag search and validation and are key in making AF creation and maintenance a snap”

Digital Solution Technical SME, Largest Private Agriculture Manufacturer

## What is **FORGE**?

**Forge** is an AI-powered AF model acceleration platform that transforms P&IDs into structured, validated PI Asset Framework models. By automating extraction, tag mapping, and data validation against PI Data Archive, Forge reduces manual modeling effort and eliminates downstream rework.

## Features

### AI Mapping Engine

Pattern-based tag discovery and mapping validated against PI data.

### Adaptive Symbol Library

Learns and standardizes company-specific P&ID symbols for reuse across projects and sites.

### Validation Workflows

Pre-deployment checks for tag integrity, data availability and duplicates.

### Semantic Search

Turn static P&IDs and engineering documents into a fully searchable knowledge base.

### Version History

Update redlined drawings with full governance and tracking.

## Accelerating AF Model Builds

*Powerful features speed up tag search accelerating time to value*



### Connect to PI Data Archive

Securely connects to PI Data Archive to load tag metadata and run data integrity checks.



### Extract Assets from P&IDs

Automatically identifies equipment and instruments from drawings.



### Intelligent Tag and Attribute Mapping

Tag and attribute mappings using AI-based scoring algorithm.



### Embedded Data Validation

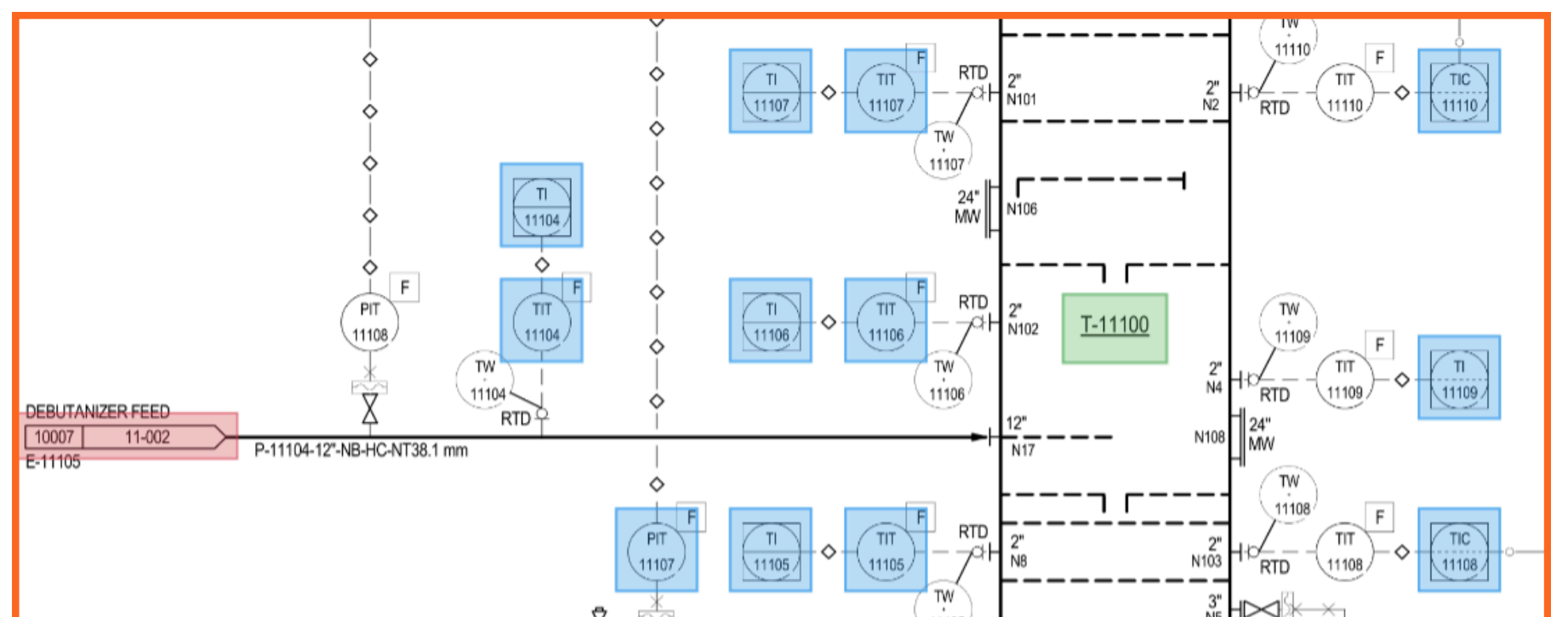
Confirms data freshness before deployment.



### Generate AF-Ready Model

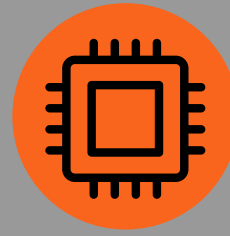
Exports in PI Builder format compatible with PI AF.

Figure 1: Automatic symbol detection technology quickly processes drawings



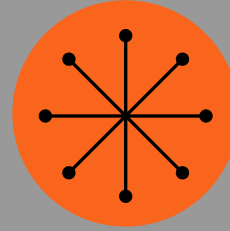
Automatically harvest assets from engineering drawings

# Advanced Technology



## Future Proof

Extensible, modern architecture evolving with your needs, saving IT costs



## Scalable

Containerized for fast, secure, deployment and updates



## Secure

On-prem deployment, industry compliant controls, data encryption and threat analysis keep your data safe

## Related Products

- Osprey
- Compass
- Asset Framework Accelerator

## About Tycho Data

Tycho Data is a next-generation industrial data management company helping organizations derive value, trust and use their operational data. Industrial teams spend significant time preparing, validating, and troubleshooting OT data before it can be used for operations, analytics, or AI.

To learn more visit [www.tychodata.com](http://www.tychodata.com)

Figure 2: AI-Mapping engine quickly maps tags and attributes to instruments

INSTRUMENT	ATTRIBUTE	TAG
! PDI11110	Differential Pressure A	PDI11110.PV;UOM=psi
! PDI11111	Differential Pressure B	PDI11111.PV;UOM=psi
! TIC11110	Temperature Controller PV	TIC11110.PV;UOM=degF
! TIC11108	Reflux Temperature	TIC11108.PV;UOM=degF

Automatically map tags with advanced scoring algorithm

**78%** Faster PI AF Builds

**93%** Faster Search for engineering drawings

**150** Hours Saved per user each year

## TYCHO DATA



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