

Semiconductor Post-Silicon Validation

Accelerating test analysis and semiconductor outcomes

CUSTOMER

Semiconductor engineering
validation organization

DATA CHALLENGE

Engineering Test Data and
Analytics Management

OBJECTIVE

Data and analytics
automation and collaboration

SOLUTION

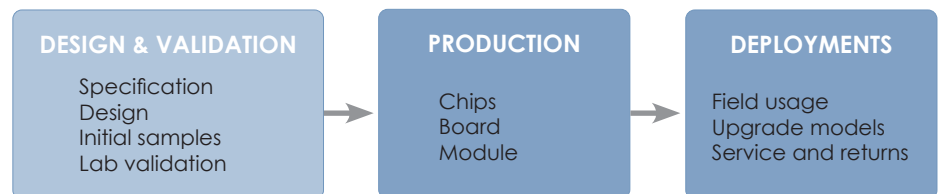
Viviota Time-to-Insight
Analytics Studio™ and Viviota
Time-to-Insight Repository™

RESULTS

Automated data and
analytics workflows and
increased collaboration
across globally distributed
engineering teams

Engineers in the semiconductor industry are challenged to keep up with tight deadlines and ever-increasing complexities in chip design, production, and market requirements. One key investment area in the engineering process, where real efficiencies can be uncovered, is the post-silicon validation process. To speed this process, engineering teams are working to become more agile in their approaches using more frequent, but smaller, test and iteration cycles in the pre-production process and looking at a broader set of data from across the product lifecycle to give designers and engineers a more holistic view of the products they are developing.

SEMICONDUCTOR PRODUCT LIFECYCLE



SUMMARY

In examining the semiconductor design and validation process further, validation engineering has significant room for acceleration to shorten lab validation cycles. According to a study at National Instruments, validation engineers spend more than 40% of their time managing the test results data and associated analytics. This creates inefficiencies for the engineer diverting their efforts from high-value correlation and causation analysis, and limits the ability to take advantage of high-end analytics techniques including simulation or AI/Machine Learning.

DATA CHALLENGE — ENGINEERING TEST DATA AND ANALYTICS MANAGEMENT

Semiconductor validation teams need better software for managing validation data and supercharging their analytics. Engineers need ways to accelerate test and iteration cycles in the pre-production process. To do this they need access to a broader set of data from across the product lifecycle.

OBJECTIVE — DATA AND ANALYTICS AUTOMATION AND COLLABORATION

A system that optimizes the data and analytics workflows of globally distributed engineering team, providing the data and analytics management tools validation engineers need to accelerate their processes.



MAKING SENSE OF SENSOR DATA

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SOLUTION — VIVIOTA TIME-TO-INSIGHT ANALYTICS STUDIO™ AND VIVIOTA TIME-TO-INSIGHT REPOSITORY™

Time-to-Insight (TTI) Analytics Studio™ and Repository software provides validation engineers with the broader set of data and advanced capabilities they need to accelerate processes and analytics across global organizations.

TTI ANALYTICS STUDIO™

Accelerate data and analytics management and analysis at the edge

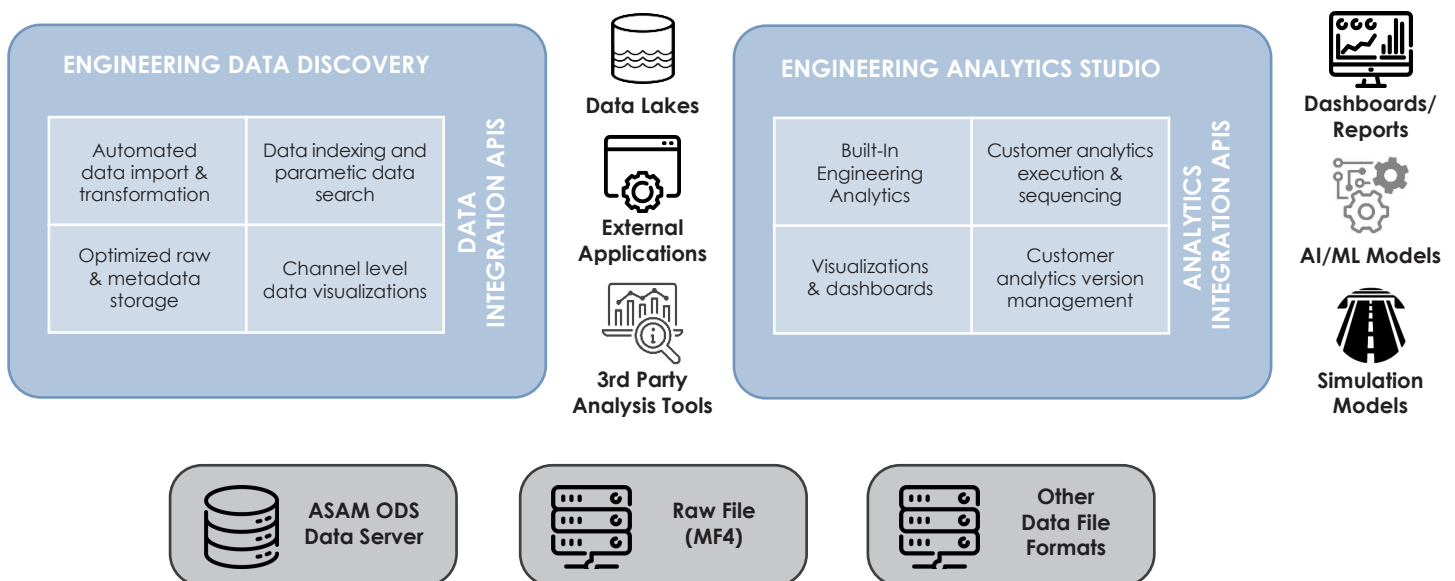
- Create automated workflows that can work across any engineering dataset
- Analytics automation accelerating data processing and reporting
- Engineering events management allowing engineers to spot anomalies
- AI/ML and analytics code management tools
- Integration with simulation tools

TTI REPOSITORY

On-prem or cloud, optimizes data and analytics workflows of globally distributed engineering teams

- Share searchable metadata for global teams with access to raw data
- Data storage options spanning edge, data center and cloud
- Elastic compute options with dynamically balancing
- Manage analytics logic, scripts and models for scalability
- Support collaboration across teams
- End-to-end automation for R&D, production, field operations and service

VIVIOTA TIME-TO-INSIGHT



RESULTS

Collaboration across global engineering teams leveraging data and analytics assets providing efficiencies at lower cost.



MAKING SENSE OF SENSOR DATA

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