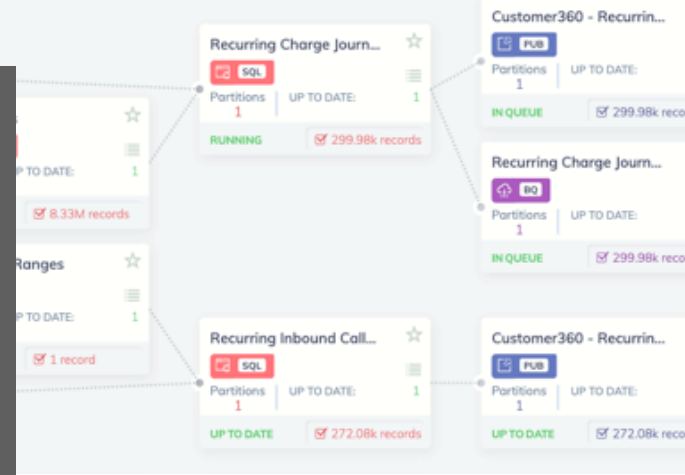# HOW HNI DRIVES MANUFACTURING DIGITAL TRANSFORMATION WITH DATA PIPELINES

A New Team, a New Mission, and a Move to the Cloud

> *"We wanted to avoid having to pipeline manually by date, chain the workflows together, build the mappings, and all that stuff. We didn't want to do it ourselves. We had the skills to do it and we actually contemplated doing it, but with the right tool, we could bring business value to the organization in two months, versus five months or more."*
>
> **Tom Kozlowski, VP Decision Science, HNI**

HNI Corporation--a global leader in workplace furnishings and residential building products, with $2.2B in revenue and 8,500 employees--decided to begin its cloud journey and start moving data to Microsoft Azure several years ago. HNI was already running some applications on Azure, and using Oracle applications in Oracle Cloud. The mission of their data science team is to create business value across all of HNI so they had the challenge of finding a comprehensive product that runs natively in Azure and is easy to adopt by people with different backgrounds.

Even with a broad skill set of data engineers, data scientists, and data analysts, as the team at HNI continued to scale, they required a platform that could scale with them. They set out to find a solution that minimizes cross-functional dependencies, reduces time-to pipeline production, and frees up time to focus on logic versus the infrastructure

The data science and analytics team at HNI, in the midst of a planned five-year transformation from seasonal bulk orders by big distributors to customized orders by dealers, individuals and enterprises, needed to do a refactoring of the management of the supply chain by taking control of the data from ordering systems, ERP, and fulfillment systems. Due to the COVID-19 pandemic and disrupted office and work-from-home environments, instead of slowing down, HNI is forced to actually speed up changes to how it does business, requiring a solution with flexibility and speed as a cornerstone for transformation.

> *"Like many manufacturers, we're going through this digital journey to be able to sell directly to retailers and customers. As part of this digital transformation we are building not just catalog and ordering applications, but also applications across the customer experience. For example, one web app allows installers to scan a barcode on the product, and get the exact assembly and installation instructions."*
>
> **Tom Kozlowski, VP Decision Science, HNI**

HNI'S NEW MISSION

MINIMIZE CROSS-FUNCTIONAL DEPENDENCIES

REFOCUS ON THE LOGIC VERSUS THE INFRASTRUCTURE

REDUCE TIME-TO-PIPELINE PRODUCTION

Ascend as a Solution

When HNI found Ascend, it revolutionized the speed and ease by which the data team gets pipelines up and running. This, in conjunction with Ascend's ability to expose the data as an API that is fast enough to be consumed directly by dashboards, empowered HNI's data team to launch pipelines in hours, avoid dumping results into a database with yet another API on top, and as Tom says, "allowed [them] to have a nice visual way to represent [their] dataflows with an engine behind it that scaled".

Faced with ever-growing data--down to the wheels on the chair, the bolts in the wheel, the nuts on the bolts, and where each component comes from and when they are expected to be produced and shipped--the team taps into the ERP to pull it directly into the HNI data lake on Azure. From there, the team used Ascend to ingest it into their pipelines of transformation logic that processes and analyzes it for demand, cost, and delivery impacts.

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Tom Kozlowski, Decision Science, HNI

"With Ascend, we crunch through all the dealer quotes and the production schedules to pinpoint hotspots in our supply chain. Our capacity planners use those analytics to adjust schedules and move production and shipping around."

Tom Kozlowski, Decision Science, HNI

Fast Forward to Ascend & Azure

On the customer side, HNI is now testing more real-time order tracking with an application built on Azure -- an initiative is led by the digital customer team, with the data science team not far behind. That application will also track shipping and logistics, the loading of each trailer, and the path to customer fulfillment. The data team created a separate environment for Ascend to run inside HNI's Azure subscription, which was also easier to pass through the security team. All data and analytics will reside in Azure. Much of the legacy IT stack is still on prem, but all elastic workloads are going to Azure. The Azure Synapse data warehouse will also be connected to Ascend, and Ascend output feeds Power BI which is managed by the existing BI team in an adjacent environment on Azure for ad hoc reporting and dashboarding, for business users that don't know SQL or and programming languages.

The HNI analytics and data science team has a complete Azure environment to build solutions from QA to production, with Ascend in its own environment that others like the BI team can use as well. The existing integration teams are comfortable using their current tools to move relational data from on prem and from Oracle Cloud to Azure Data Lake, it's a process they've been using for a couple years or more. But some are now also exploring Ascend, to become familiar with more modern big data products.