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Research Director

## Creating a Hospitality Information Supply Chain

Information clearly has value. In the hospitality industry, having the right information accessible to the right people at the right time delivers a competitive advantage, increases operational efficiencies and improves communications, among other benefits. Yet those in hospitality struggle with the analytical systems and processes they rely on to use information optimally.

Enterprise systems originally were designed to record the operational and financial data of an organization. Each system—such as finance, CRM and HR—stood on its own. Analytical systems were added separately from the operational systems for two reasons: to minimize the impact on the performance of the operations and to provide a place to combine information from multiple operational systems.

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However, a stand-alone analytics system is inherently problematic. Effective analysis must encompass all relevant data, which means data has to be combined from multiple systems. For example, analyzing guest segmentation without including loyalty across property lines can undercut a hospitality organization's determination to maximize the bottom line. Similarly, analyzing property workforce utilization rates based on human resources and work records without considering guest service needs could result in promoting the wrong workforce behaviors.

Data lakes are all used as repositories to consolidate data for analysis, and data must be mapped from source systems, and inconsistencies in the data must be resolved before meaningful analysis can begin. The billing system likely examines guest portfolio, but the entirety of guest stays should be considered. Even within a single system, the same guest could be represented differently—with varying stay records from a variety of booking systems, like Expedia or those systems used by credit card point travel systems. Such inconsistencies must be harmonized to create a set of master data that is the canonical representation of the guest for each data category. Only in this way can the resulting analyses encompass all data for a single guest or patron from multiple systems.

However, as data is consolidated for analysis it ceases to be governed by the source systems from which it originated. New data governance processes for hospitality must be put in place so the



organization can be sure the data is secure and trusted. In effect, the steps from source to analysis to governance constitute an information supply chain.

With the proliferation of cloud-based applications such as Salesforce, Workday and others, the problem of ensuring a trusted information supply chain is getting worse. Our analytics and data market research shows that over one-half of organizations (56%) are integrating eleven or more data sources in their analytics, with nearly one-third of those (32%) integrating more than 21 data sources. Changes in the nature of this information are making the challenge even more difficult.

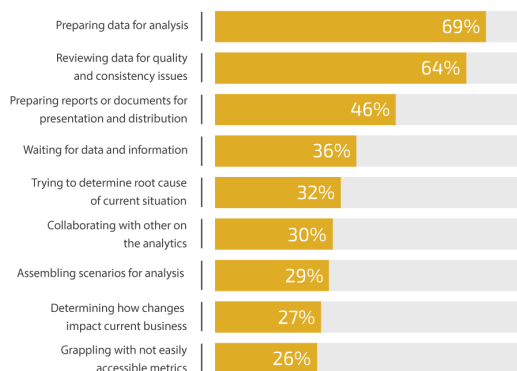
As hospitality works to combine all their data sources, they report struggling to access and prepare data for analysis. In their analytical processes organizations spend the most time (over two-thirds) preparing the data for analysis; reviewing the data for quality and consistency is second.

The world of information has become more complex, with increasing volumes and varieties of data and frequency of changes to it. These complexities frustrate those trying to address them by using technologies designed for a simpler world. When data sources changed less frequently and the data typically was coming from internal systems, structured extract, transform and load (ETL) routines include custom code. Today a more dynamic approach is needed. Business professionals cannot wait for IT departments to build and test data before they can analyze the data.

Creating a hospitality information supply chain is a big job that involves lots of moving parts. Don't try to do it all yourself with custom coding. Address the most common issue of accessing and preparing data for analysis by finding packaged systems that include connectivity to as many as possible of your data sources in hospitality. Use these tools to create repeatable, automated and governed processes to ensure the data is consistent and trusted. Hospitality organizations that address their data challenges head on with tools that automate the process can create a strategic advantage. We recommend that you create a hospitality information supply chain that adds value at each step and enhances your bottom line and effectiveness in your business processes.

### Majority of Time Spent Analyzing Data

64% cite reviewing data for quality and consistency



Source: Ventana Research  
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### Dave Menninger – SVP and Research Director, Ventana Research

David Menninger is responsible for the overall direction of research on data and analytics technologies at Ventana Research. He covers major areas including artificial learning and machine learning, big data, business intelligence, collaboration, data science and information management along with the additional specific research categories including blockchain, data governance, data lakes, data preparation, embedded analytics, natural language processing (NLP) and IoT.