

Systems of Insight



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Today, the Vertex portfolio of commercial software largely supports customers' systems of record, which are systems that record transactions, master data, and

reference data.

Customers are moving to adopt systems of insights as part of their digital evolution and digital strategies.

Vertex has the opportunity to expand beyond systems of record to provide information to fuel a customer's system of insights. We could provide data, analysis, information, correlation, and benchmarking that can be combined with customer context to generate new information and help make decisions.

Systems of Record capture business transactions to log activity. For example, an eCommerce system like the one shown above can log the transactions at each step; in this case, starting at the lower left and moving clockwise, this system captures several data:

1. Location of the customer
2. The price charged
3. The debit card information
4. The shipping information
5. The shopping cart information
6. Checkout and packaging information

What are Systems of Insight?



Systems of insight are a combination of business context with systematically-collected and analyzed data that leads to new or deeper understanding, referred to as an insight.

Systems of Insight examine how business transactions are related to each other and to the outside world. As shown, the system captures not only logged records but trends over time, as well as relationships across the records. For example, activity in geographic regions give much more knowledge of how business is transacted and even why it occurred, allowing the business to make adjustments to better serve customers and business goals.

Insights, then, are "a revelation hidden in plain site" according to Julian Cole, advertising strategist. They come from the information you synthesize or correlate from data that's not apparent in its natural form. Insights can be

historical trends, real time events of what's happening now, and/or predictive of what could happen. Often they show up as a statement that changes how we view a problem.

Ultimately, a system of insights combines customer specific context, automation to collect associated data, as well as 3rd party data to derive analytics and create new information/insights to drive decisions. These systems feed agile business discipline, technology and services to continuously harness new, actionable knowledge that is implemented in software. This use of data is well beyond traditional Business Intelligence or data analytics.

What are Systems of Insight Good For?

Insights can enable companies to offer customization, hyper-personalization to interact with the user, or proactive communication of a possible occurrence of an activity. Companies can offer these services in several ways:

- By interpreting user data
- Segmenting it based on user demographics and behavior
- Hyper-personalizing their user interactions
- Offering proactive communication, customizable alerts and notifications

How do Systems of Insight Benefit Businesses?

- Increase revenue driven by insights on customer behavior
- Faster/better decision making driven by insights on the business
- Use case studies on how people are using insights
- Reduce inefficiencies and/or errors to optimize processes
- Improve targeting
- Improve customer experience
- Scenario planning of risk and/or impact modeling
- Decision intelligence that connects data, context, experience, and actions

How do Systems of Insight Work?

According to Forrester, a system of insight includes an Insight Team and the 5 components below:



- 1 Instrumented applications that implement insight and measure outcomes
- 2 A data flow pipeline to continuously capture and evaluate real-time data
- 3 A compute engine for analytic heavy lifting
- 4 An insight-to-execution framework that delivers insights to processes and applications
- 5 A big data fabric that can let your system grow and flex

Systems of Insight Impacting Business

According to Gartner, companies are using their data analytics and insight systems to ultimately improve decision making. Source: Gartner Research Circle Survey.

Gartner Decision Intelligence Loop




Every decision goes through the same five phases.

A System of Insight Drives Re-Engineered Decision Making Resulting in Decisions with these Characteristics:



Highly Optimized Decisions

Complex decisions increasingly need to be taken together with a variety of stakeholders, as they affect multiple stakeholders. Decisions should not be optimized for a single entity, which is usually one's own organization; they should be optimized to achieve positive outcomes for all affected stakeholders. *Make decision-making a collaborative process.*



Highly Automated and Augmented Decisions

Humans are better at understanding context, ethics and nonrational elements of decision making. Machines are better at logical, complex problem-solving and processing huge amounts of data. The best decisions are made by humans and AI working together. *Automate more deterministic decisions. For more complex decisions, seek to combine advanced analytics and human insight.*



Highly Future-Fit Decisions

Based on a wide variety of data, model multiple scenarios. Make sure that the final decision is future-fit — that the decision works out in multiple plausible scenarios. Keep your options open, take decisions in multiple steps. *Build decision-making that adapts to change. Use decision modeling and scenario planning.*



Highly Composable Decisions

In order to make decisions more context-sensitive, assemble components that work together for flexible decisions. Components include smaller decisions, decision process steps, actors involved, supporting technology and data sources. *Build decision-making that is fit for purpose, rather than sticking to predefined, static decision making.*

Competitor Activity

Avalara

Research did not discover any known public announcements that discuss utilizing this technology.

Sovos

Advertises data analytics as a critical component of value-added tax (VAT) compliance.

In terms of data analytics, it should:

- Integrate seamlessly with existing ERP and other back-office systems.
- Automate the entire analytics process.
- Translate extensive VAT knowledge into rules that validate data and complete missing information.
- Analyze all transactions (versus a small sample) to ensure your company is consistent in its checks and balances.
- Track changes and corrections to build a solid audit trail, offering an understanding of what was changed, when and why.

Presumably their data analytics offering can do all of these things. It still looks like a system of record (specifically supporting audit needs) rather than a system of insights – i.e. not focusing on trending, learning and correcting errors in the future.

Thomson Reuters (TR)

TR has a variety of businesses, many of which tout analytics capabilities fully integrated in the offerings. These are suggested to be used to determine insights.

According to Thomson Reuters, "Partnering with Inflo takes our already robust Enterprise Cloud Audit Suite to the next level, providing audit firms with the tools they need to execute effective, high-quality audits while freeing up time to focus on valuable, client-focused activities," said Scott Spradling CPA, vice president, Audit and Accounting Segment with the Tax Professionals business of Thomson Reuters. "The data ingestion alone, using advanced robotic process automation and backstopped by Inflo's expert data science team, will transform the profession's use of data analytics by solving the data ingestion hurdle for firms of

every size."

Inflo claims to provide: [Intuitive analytics](#) software to replace traditional audit effort, helping auditors automate simple tasks, perform more interesting work, and deliver more value to clients – all in one easy-to-use platform. Includes a comprehensive suite of analytics, graphical visualizations, journal entry routines, revenue testing, and client reports - all fed by automated data acquisition from any client system.

Other examples:

- [ONESOURCE Determination Reporting & Analytics](#) views detailed transaction tax results ... create custom reports, perform ad-hoc analysis, or even share data with other business applications and data analytics tools, turning your data into insights that can be shared across your business.
- [Get access to all your indirect tax data for faster analytics and reporting](#) Provide instant access to the indirect tax analytics your business needs without delays due to tax team or IT intervention ... rather than waiting days or weeks for tax data analytics that are outdated on arrival.

Stripe (TaxJar)

Stripe's TaxJar site does not list data analytics as an offering. The closest thing appears to be their reporting function, Product Sales Tax Reports:

TaxJar does your sales tax accounting for you. Our platform automatically compiles orders from your e-commerce channels into one dashboard, giving you and your team access to all your transactions, as well as state-by-state reports with city, county, and special district breakdowns. We even provide reduced and exempt item taxability reporting for easy review. With TaxJar, you'll always have the most up-to-date view of your company's sales tax information.

Wolters Kluwer

Offerings include:

- [TeamMate Analytics](#), focused on audit support. Uses Excel.
- [OneSumX for Business Analytics](#): A powerful visualization and analysis tool enabling a more efficient and thorough use of your data. The OneSumX Business Analytics solution allows an interactive ad-hoc analysis, providing answers to your questions in minutes.
- [Advanced Analytics & Dashboarding](#): Advanced intelligence; self-service. Quickly predicts the future.

Alignment and Impact to Vertex

Given that many Vertex customers, current and future, are on their own journeys of digital transformation. As noted by Forrester and Gartner, they are implementing analytics on a path to insights. In order to be the Insight provider of choice, the key is for Vertex to fit into our customers' digital journey. As they change their focus from reporting the past to real-time monitoring of the present and adding predictive capabilities for the future. Clearly, Systems of Insight will be needed in service to better decision making.

Multiple initiatives at Vertex are already helping to move towards insights and System of Insights, including:

- Enterprise Data Architecture (CRM and Financial data lake with analytics)
- Tax Research Modernization
- Data fabric / data mesh / data platform POC
- Cloud data lake and Vertex Indirect Tax Intelligence (ITI)
- Emerging Technology Pilots

Future differentiated assets and capabilities:

- Instrumented applications
- Insights themselves
- Insights Team (data, tech & business, cross-discipline)
- New interaction models with digital citizens
- New algorithms to model and derive insights, model impacts, and make decisions

Conclusion

This focus on Systems of Insight implies that Vertex product offerings need to fit into our customers' systems of insight. Our data needs to be relevant to customer goals – from improving tax compliance to repurposing data, enriching it and solving problems for additional business components.

Vertex has the opportunity to:

- Provide access to data, insights, and knowledge for companies to connect into their own systems of insight
- Create new insights through the understanding of data and connecting it to additional context, even beyond tax
- Create its own systems of insight across the enterprise to help the business make better decisions

Sources

- [Council Post: Platform Design: Evolving Your Systems Of Record To Systems Of Insight](#)
- [Gartner Research Circle Survey, "Reengineering the Decision," 2020](#)
- [There's no Sales, Service or Marketing – there's only The Customer Journey.](#)
- [Data Analytics Critical Component VAT Compliance](#)
- [Thomson Reuters announces partnership with Inflo for Data Analytics](#)
- [Inflo Products](#)
- [Search results from Tax.ThomsonReuters.com](#)
- [TeamMate Analytics for Audit](#)
- [OneSumX for Business Analytics](#)
- [Advanced Analytics & Dashboarding](#)



