Maven Wave™

DATA IS YOUR COMPETITOR'S SECRET WEAPON

INNOVATION-DRIVEN DIGITAL TRANSFORMATION

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Can you guess the year?

- The first web browser is available to the public
- A gallon of gasoline was $1.05
- Motorola manufacturers the first digital hand-size mobile phone
- Microsoft Windows 3.1 was announced
- Johnny Carson hosts his final Tonight Show
- Father of Data Warehousing, Bill Inmon publishes "Building the Data Warehouse"

Answer: The year is 1992.

What is the significance of 1992? This is the year when enterprises started building data warehouses and enterprise reporting solutions. Maven Wave regularly sees companies trying to compete with analytic solutions built on architecture design principles from the 90s. A lot has changed in the past 25 years!

Today everyone has a mobile device, if not more than one. We can push a button to order laundry detergent, talk to a smart speaker to ask it to turn on music, and open a hotel room with our mobile phones. So why do companies expect that their traditional data warehouses are going to meet the needs of today's digital enterprise? Let's look at just how much analytical trends have changed:

- Everything is connected. It is estimated that over the next three years, connected devices will more than double, from 20 billion in 2017 to 50 billion in 2020.
- Data volumes are exploding. This makes it more of a challenge for companies to find that "needle in a haystack" impactful analytic answer.
- The majority of data created is unstructured. Device data, social data, and internet data are mostly unstructured and far exceeds the size of traditional transactional systems.
- Predictive analytics and machine learning are the techniques companies are using to innovate, respond to market conditions, and service their customers.

Data-Driven Competitors Are Winning

Coca-Cola: Product Development Based on Customer Preference Data

Coca-Cola Freestyle, which is a self-service soft drink fountain, allows consumers to mix different Coke product flavors. Every day the world consumes nearly 2 billion servings of Coca Cola's drinks. This also means that the company generates mountains of data from these machines – from production and distribution to sales and customer feedback, the company relies on a solid data-driven strategy to inform business decisions at a strategic level.

Coca-Cola has taken advantage of all this data by monitoring, tracking, storing, and analyzing the data generated from these self-service drinking fountains. Once the data was collected, they identified a trend that a significant amount of customers were mixing cherry flavor with Sprite. The data was significant and compelling enough that Coca-Cola started to bottle, market, and sell Cherry Sprite to local grocery stores. The launch of Sprite Cherry and Sprite Cherry Zero marks the first time insights from Coca-Cola Freestyle inspired the national rollout of a new beverage.

Take a moment to think about this use case for a second. In the 1980's and 1990's, how would Coca-Cola been able to do this? Product creation was a function of intuition, focus groups, or executive decision-making. These techniques resulted in some failed product launches. For Coca-Cola, the most notable example was the launch of "new Coke". In 1985, Coke announced that they were changing the formula for the world's most popular soft drink in an effort to re-energize the brand, which resulted in serious consumer backlash. At that time, product creation wasn't influenced by the vast amounts of data. Today, the cost to create new products based on data is quicker, cheaper, and less risky.

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Domino's: A Technology Company That Happens to Make Pizza

With all the local entries into the pizza market over the last 10 years, it might seem surprising that Domino's has grown their market share. The company is thriving, with a stock price that continues to skyrocket. In 2010, the company's stock price was $8.76 per share. Fast forward to today and it's approaching $160 per share, an increase of 1726% (HBR).

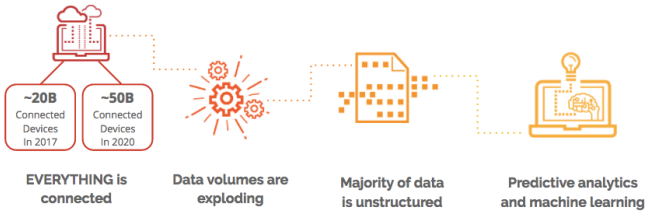
How did Domino's get to this point? It all started with a digital transformation initiative back in 2010, by shifting their focus to be customer obsessed and leveraging data to make key business decisions. They established a digital-everywhere strategy that was rooted in data. This focus has changed how customers order (using the Domino's app, or directly via Twitter, or even by texting an emoji),how they monitor the status of their order, and how Domino's manages its operations. These strategies didn't get baked out of the oven, they were identified by data and analytics to drive and validate these strategies!

Problems with Traditional Data Warehouse Environments

Maven Wave still sees many companies running their analytics platforms on the design and architecture principles Inman and Ralph Kimball defined back to the early 1990's. However, these platforms no longer serve the needs of today's enterprise.

Traditional analytics environments are great at looking at what happened yesterday and operational reporting, but these analytics are not helping companies be forward-thinking and innovative. This architecture is missing some of the key components of today's modern analytics platform:

- Real-time data ingesting doesn't work in this architecture. It is not fast enough to handle massive data volumes.
- Lack of external and unstructured data integration. The majority of data being created today is unstructured, creating a significant challenge.
- The time to deploy new functionality takes too long. The notion of taking months to add in a new data source or data elements does not meet the needs of the digital enterprise. Innovation is happening way too fast for that.
- Hardware and software costs are still high. The maintenance costs of these on-premise solutions are not competitive with the fees of cloud providers.
- Lack of predictive and machine learning capabilities. This architecture doesn't contain all the data necessary for machine learning to be accurate and impactful. The infrastructure costs of enabling on-prem machine learning become too much to warrant the cost/benefit.



Many companies are having difficulty taking advantage of their data to innovate because of the challenges associated with traditional data warehouse environments. Some even report that their Data Scientists spend up to 70% of their time doing ETL and/or prepping data. This is not an efficient use of their time or skills in developing a competitive advantage.

For companies managing traditional analytics environment, 80% of resources are dedicated to infrastructure; programming, maintenance, monitoring, handling scale, and performance tuning. Meanwhile, only 20% of resources are spent analyzing valuable insights, resulting in the inability to innovate and make decisions quickly.

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Flip the Script: Today's Modern Data Platform

It's now possible to flip the 80/20 rule to focus 80% of resources on insights to drive better business outcomes. This is what successful companies are doing with data analytics by utilizing a modern analytics platform.

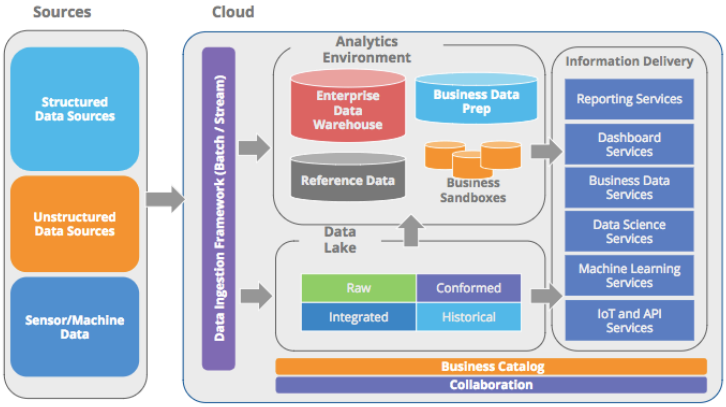
In our experience, the modern data analytic platform enables the critical analytic capabilities necessary to compete in the digital world:

- **Real-time IoT data and streaming** capabilities are critical in understanding the entire picture for analytics and machine learning.
- **Unstructured data support** is required to get the "entire picture." It's important to include social data, log information, application usage data, etc.
- Provision **purpose-built analytics environments** (sandboxes) quickly. Test theories, new ideas, and don't be afraid to "fail fast".
- **Elastic scale infrastructure** to quickly scale and up down for analytic workloads. Predictive analytics can now take advantage of the advances in technology performance and executing on all datasets.
- **Machine learning capabilities** are essential. The data growth is exploding and companies that are winning in this space are using machines to find the "needle in the haystack", not leveraging people to dig through spreadsheets. The volume of data growth and the importance of evaluating all data sets with your insights is mandatory.
- **Self-service analytics tools** empower the business with self-service tools to build/run their own analytics. After all, business stakeholders know the data better than IT does.
- Cloud providers have developed **Machine Learning APIs** that took them years and years and millions of dollars to build/test/performance tuning. Leveraging these powerful APIs jumpstart your learning and insights.

Below is a chart that compares a traditional analytics environment with the Modern Data platform with the list of critical analytical capabilities that successful companies are leveraging to create a competitive advantage with data.

Features	Traditional Analytics Env	Modern Data Platform
Real-time (IoT) streaming		
Unstructured data support		
Provision "purpose built" analytics environments quickly		
Elastic Scale Infrastructure		
Machine Learning capabilities		
Ability to store ALL data at a low cost		
Self-Service Analytic Tools		
Leverage Cloud APIs (Speech, Image, Geo, etc)		

Below is a diagram of the Modern Data Platform.



How Companies Are Driving Innovation with a Modern Analytics Platform

The companies that are using data (ALL the data, not just their own) are winning. This includes partner data, social data, public data, and more to predict what is going to happen in the future. The days of looking at what happened yesterday, last month, and last year are table stakes. Spending significant resources and time on fixing "rearview mirror" data analytics to be accurate does not push the enterprise forward. And many times, this exercise is nearly impossible to solve due to lack of legacy application quality controls and lack of focus on standards for data entry and monitoring.

Companies that are using data as a competitive advantage are leveraging artificial intelligence and machine learning to have computers identify correlations and develop predictions. It's time to rethink how you manage, store, and leverage your data as a corporate asset. Below are a few examples of companies utilizing a modern platform and analytics to thrive.

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Automobile Manufacturer

An automobile manufacturing company started collecting connected car data and performing diagnostics to predict the likelihood of a recall occurring. Once marketing and engineering had access to the data, they realized they could use the same data for multiple purposes. Upon review of console usage data, they found that customers are using a small subset of the console interface features. The company had invested a lot of time developing the console technology, but it wasn't being fully used. Based on this insight, the company reevaluated how they invest in product development to enhance the customer experience and meet their expectations. This valuable insight would take months and significantly more money to uncover had they not migrated to a modern data platform.

Humana

Humana recently announced a partnership with Amgen, this collaboration will focus on the enormous amounts of health claims data that Humana collects on its roughly 9 million customers for preventive health. The company plans to analyze the data to detect health problems earlier and intervene before they become more serious — and costly to the patient, the hospital, and the insurer.

In addition, the company recently deployed an AI application to aid call center representatives and customers. This application helps agents recognize when a conversation is hitting a snag, slowing down, or escalating in real-time. The agents are so focused on trying to solve the customer's problem that they miss subtle cues in the conversation. That's when the tool alerts them in real-time about how the representatives can improve and course correct while they are still interacting with the customer. At that point, they can recover the call and turn it into a positive experience. As a result, Humana is already seeing improved issue resolution scores.

Maven Wave Approach

Now is the time for companies to think about modernizing their analytical environments. Rearview mirror analytics is not producing the ROI that the modern data platform and predictive analytics can enable. Your competitors are likely already doing it and building powerful, disruptive insights with data. Some have even started new revenue streams.

Maven Wave bridges the journey from rear view mirror analysis to predicting outcomes. The combination of predictive analytics and machine learning empowers companies to monetize insights and embrace disruption. Maven Wave leverages geospatial capabilities, natural language processing, image recognition as well as sensor and IoT data, to accelerate our client's abilities to predict events and execute real-time decision making, ultimately improving business outcomes.

We recommend getting started with an innovation blueprint. Start small with a finite business use case to build momentum by delivering new insights. Measure results first, then iterate and expand to other business use cases, saving both time and money:

- Start with a small but impactful business case
- Gain momentum
- Measure and internally sell
- Stay committed

Contact us for more information on implementing a modern data platform to drive new insights and improved business outcomes.

CONTACT

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