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Customer 360 Management: The Future of the Customer Experience

How Customer Data Platforms (CDPs) Complement Data Lakes

We're hurtling quickly to a time when customer experience will reign supreme. The consulting company Walker predicted that customer experience would supplant product and price as the key differentiator by the end of 2020 and , Gartner in 2014 said within the next five years, customer experience would be how 89% of businesses differentiate. It's 2021, so times up!

The consumer or buyer's expectation is to have a friction-free customer experience, even as that experience spans an increasing array of channels and touchpoints that rely on complex business operations. Coordinating all touches along the journey is known as delivering a unified customer experience.

And it starts with unified data, which explains why solutions that help with this data unification are top of mind. Two of those solutions are Data Lakes and Customer Data Platforms (CDPs). We are increasingly seeing enterprises that aren't sure how these two technologies relate and differentiate. In our opinion, it is really a matter of understanding each technology's purpose and how to take advantage of them to best serve your enterprise.

The purpose of data lakes

Data lake technology came into being in 2010 as a method to centralize all types of raw/semi/un-structured data for the purpose of data mining and analysis. In the last few years, some enterprises used data lakes to unify customer data, but it's typically geared towards serve enterprise-wide data and IT. In other words, it's not tailored for the needs of go-to-market teams, like marketing, commerce, sales, service, and support. Because data lakes were designed as a repository for vast amounts of unstructured and structured data, they can prove difficult to work with for those outside of IT or data science.

Data lakes are a significant investment, not the least of which is the effort of identifying the sources of corporate data and what is of value. Data-Lakes do a great job of supporting "after the fact" analysis and reporting. However, they weren't designed to address customer experience needs like real-time identity resolution, consent preferences, or audience management tools. These capabilities are essential for analyzing disparate customer and prospect data and combining them into a unified customer view (including householding for B2C or contact-to-account mapping for B2B business models).

Limitations in the application of data lakes into CX:

Data lakes traditionally lack out-of-the-box integrations with go-to-market orchestration platforms. As an example, let's consider the integrations for Snowflake – a leading cloud data lake. Snowflake does not integrate with marketing channels and solutions that a marketer would need to run an effective campaign. Simply put, it's challenging – and can be quite resource-intensive – adding new data sources and connecting new channels to a data lake, requiring coding and integration to enable new data feeds. This is costly, time consuming, and extremely maintenance intensive.

Since data is placed into the lake without any up-front schema, resources are needed to apply advanced technologies to explore and gain insights from the data. This forces a business group like any revenue-oriented team to request data and reports from the IT department. If these requests are not an IT priority, the revenue team can sometimes wait weeks to receive their data and report.

For use in delivery applications, go-to-market teams have to prep the data received from a data lake in order to use it for activation in its downstream systems. An additional step of enriching and restructuring the data is required, such as validating email addresses and phone numbers, before the data can be used effectively by sales and marketing.
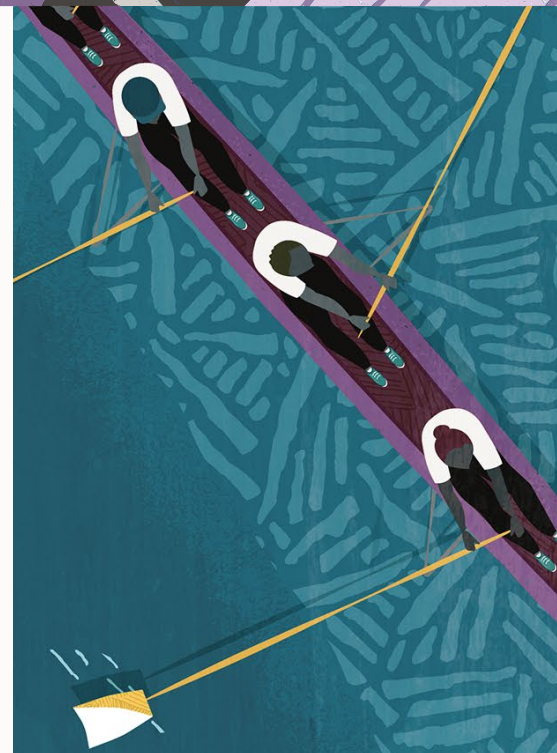
This isn't to deny the power of data lakes. They're just not tuned to the needs of CX teams focused on driving revenue, customer engagement, and functions such as advertising, marketing, commerce, sales, and service/support operations. There's no concept of creating – and easily acting upon – a single unified view of each customer in what is essentially an unstructured data repository.

If the purpose of unifying data is to enable real-time decisions that help orchestrate a unified customer experience, then a data lake is not sufficient.

The purpose
of Customer Data Platforms

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CX leaders need to deliver contextually aware and highly personalized experiences that create deeper and longer-lasting relationships. To do this, they need to:

> Bring together unknown and known customer data with built-in identity resolution and enterprise data quality to build a single customer profile for each customer with the highest accuracy.

> Activate these profiles with intelligent decisioning throughout the customer journey.

> Know the consumer/buyer better than he/she knows him/herself via profile enrichment, while at the same time respecting his/her privacy.

> Build real-time engagements in the moment of interest with intelligent attributes (e.g. scored models: channel preference, best day/time send, propensity to buy/churn models, cross product catalogs, etc.)

> Provide timely, relevant, and consistent customer experiences whether automatically or through real-time human interactions (e.g. call center agents)

That's where a Customer Data Platform (CDP) becomes a clear choice to support CX go-to-market teams.

According to CIO Magazine 2018 article – "What's inhibiting the use of big data in customer engagement? Two bottlenecks stand between the data lake and using analytics for customer engagement:

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One is creating the golden record, the accurate and complete view of the customer,

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and the other is overcoming latency within the process – at the data, analytical and execution levels – to engage with the customer in real time through the correct channel or touchpoint."

A CDP makes it possible for organizations to ingest and link customer and prospect data and all its detail from virtually any source in real time – including third-party sources. It helps unify siloed data around a customer view, yielding a persistent "golden record" of all knowable data about customers. CDPs respect the fact that there are multiple competing sources of customer information. At point of engagement, it's critical to identify the fundamentally correct view of the customer's data. Plus, a CDP makes that record easily accessible on-demand in real time, so marketers, sales, and revenue ops can ensure personalized and highly relevant customer interactions at every touchpoint.

A CDP creates a persistent, unified customer and prospect database accessible to other systems (as defined by the CDP Institute) and serves revenue teams. It's a packaged platform that comes with prebuilt components and data models, enabling marketers and other business stakeholders to segment, analyze, and activate their data – with little to no significant IT involvement required. In fact, go-to-market teams can easily share and activate data – and change or add system sources – without disrupting the CDP. But, not all CDPs are created equal.

Oracle Unity Customer Data Platform fuels real-time CX

Oracle Unity is an enterprise-grade CDP that unifies the front- and back-office. It focuses on the entire customer experience (CX) rather than simply helping execute marketing related use cases. Not only is it important to identify and consolidate the key data used to engage the customer, it's crucial to ensure that that data can be used in real time both by business users and at point of engagement. Behavioral indicators become key real-time traits, typically not tracked by a data lake, that identify intent and context as the customer moves between engagement channels.

Oracle Unity offers the enterprise an easier way to prepare data via its user experience (UX) and 360 APIs for orchestration purposes, while providing a machine learning (ML) framework to deliver next best action or next best offer type of capabilities. Unity is designed to make all CX touchpoint applications (whether Oracle CX or 3rd party CX) smarter by giving them real-time access to the holistic customer profile. This enables real-time decisioning and actionable intelligence. In effect, it makes existing application investments more valuable by infusing them with more brains/intelligence.

In the world of data lakes, preparing this data and making it actionable in real time is nearly impossible. That's why marketers and CX professionals are increasingly turning to technologies like CDPs to allow customer data to come to life and create hyper personalized experiences that are critical in today's experience economy digitally and in real time.

A Powerful Duo:
Data lakes + Customer Data Platforms

Don't think of CDPs as a replacement for data lakes. Rather, they're an evolutionary step and a complement to data lakes. And, in many cases, enterprises already have – or need both.

Both data lakes and CDPs are persistent stores implemented by IT that host customer data as part of big data infrastructure. But the similarities end there.

> IT-managed data lakes ingest enterprise-wide data – typically first-party data from internal sources – without altering the data form.
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> On the other hand, a CDP should unite first-, second-, and third-party data and enable a real-time flow of data into and out of the system.

With easy integrations to all channels along with built-in tools for even business users, a CDP makes it easy to view, pull, and analyze data and arrive at audience insights. Because of this – along with the addition of second- and third-party data – CDPs help enterprises improve their targeting and customer experiences. Moreover, easy channel integrations that yield net-new data pave the way for faster time to market and expanded customer reach.

Improve the customer experience to drive customer retention. Derive and deliver timely customer intelligence to optimize complete brand experiences.

Increase customer engagement with hyper-personalization by combining customer attributes with real-time triggers. Act on customer signals using a combination of event triggers and attributes to enable sophisticated decisioning.

Drive customer lifetime value by leveraging connected customer profiles across the enterprise for a consistent experience with open API to make data and intelligence available across CX and beyond Oracle ecosystem including Oracle CX partner ecosystem.

Reduce wasted media spend on advertising audience activation through better targeting. Use behavioral insights from existing customers to find more customers who look like your best customers.

Expand business growth with actionable analytics. Oracle Unity provides a virtuous loop with actionable analytics (e.g. campaign analytics that provides deep forensics that leads to precise targeting of new opportunistic as well as problematic sub-segments/audiences to improve marketing performance). This additional form of analytics dramatically cuts down the time to apply insights to drive business value, by making the insights actionable into marketing orchestration.

Make all CX touchpoint applications smarter by giving your teams real-time access to the holistic customer profile. This allows all CX applications to enable real-time decisioning and actionable intelligence.

Support a democratic approach to AI. Oracle Unity supports bringing the outputs of ML models built on a data lake easily. In addition, it provides support for running models directly into it. Thus, the choice of where/how to build ML models is up to customer.

Using data to guide CX

Structured Data:
Historical Asset Portfolios
Spend Data
Transactions
Financial Goals

Unstructured Data:
Real-Time Behaviors
Lifegoals
Sentiments & Emotions
Communication

Oracle Unity Customer Data Platform
Intelligence Layer (AI/ML)

Personalized Offerings

New Revenue Streams

Increased Loyalty

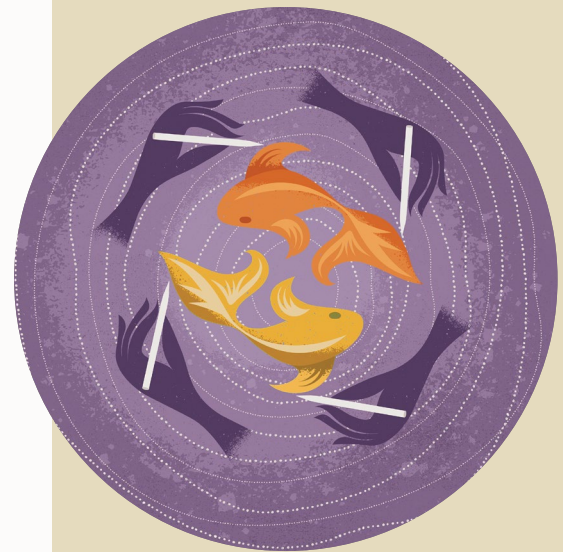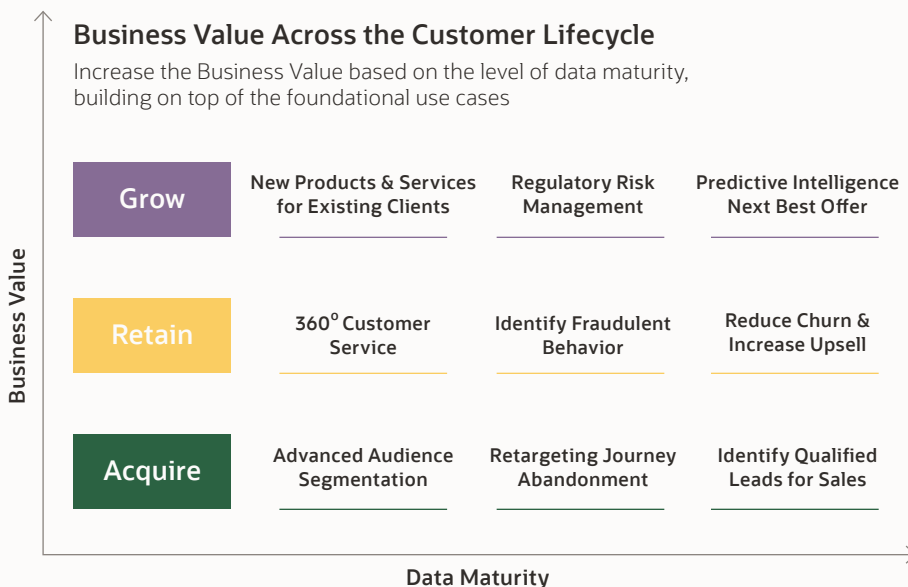Reduced Attrition

Higher Conversions / ROI

Data lakes are a key source of data for CDPs, and vice-versa CDPs can help improve the quality and completeness of data in a data lake.

The good news – data already accessed and centralized within a data-lake accelerates the ability to ingest the needed data for real-time CX into the CDP. In addition, once a CDP is implemented and running, data and profiles can be exported in real time to any end-point system, including the data lake. Thus, any pre-existing reporting/analytics supported by the data lake are kept intact, and the speed to iterate and expand on human-based insight detection can be accelerated within the data lake (i.e. let Oracle Unity act as a real-time customer data-distribution hub).

In essence, CDPs enable the alignment between revenue teams and IT when it comes to an enterprise's data and technology ecosystem. While revenue teams can use CDPs to capitalize on data to drive business growth, IT teams can enjoy the benefits of CDPs and data lakes working in harmony to serve the business.

Potential use cases – data lake + CDP

There are multiple potential use cases that we have identified as opportunities to deliver immediate Impact to the enterprise.

Business Value Across the Customer Lifecycle

Increase the Business Value based on the level of data maturity, building on top of the foundational use cases

Grow	New Products & Services for Existing Clients	Regulatory Risk Management	Predictive Intelligence Next Best Offer
Retain	360° Customer Service	Identify Fraudulent Behavior	Reduce Churn & Increase Upsell
Acquire	Advanced Audience Segmentation	Retargeting Journey Abandonment	Identify Qualified Leads for Sales

Business Value (y-axis) / *Data Maturity* (x-axis)

Typically, Oracle recommends a data design thinking workshop to:

Prioritize a phased CX strategy, with expected goals/benefits from real-time data activation

Dive into personalization and analytics use cases, understand any limiting factors and prioritize by impact and priority to the enterprise

Develop a 'before' and 'after' architecture to map out how data can support desired use cases between the data lake and the CDP

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In the Experience Economy,

a brand's experiences matter more to customers than the products or services that are sold. Brands who collect real-time data signals and use them to build the most authentic and relevant experiences, will be the ones creating emotional connections and long-lasting relationships with consumers. Now is the time for CX leaders to position themselves at the forefront of the longer-term shifts in consumer behaviors that result from this crisis. Data is the foundation that can allow you to orchestrate a truly consistent, connected brand experience for customers and achieve the type of long-term hyper-growth that the elevated experience makes possible.

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Click here to read about Oracle Unity,
Oracle's Customer Data Platform for real-time customer experience.