

Veeva Crossix and Big Data: Transforming Healthcare Marketing Analytics

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Veeva Crossix big data pharma marketing analytics compliance case studies





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Introduction

Big data is revolutionizing how pharmaceutical companies market their products in the United States. In an era where healthcare generates massive amounts of data – from electronic health records (EHRs) and insurance claims to digital marketing impressions – savvy marketers are tapping into these data to reach the right patients and doctors more effectively. **Veeva Crossix** has emerged as a leading analytics platform at the forefront of this transformation. By integrating diverse real-world datasets and applying advanced analytics, Veeva Crossix enables pharma marketers to measure and optimize campaigns with unprecedented precision, all while adhering to strict privacy regulations. This report provides an in-depth look at how Veeva Crossix and big data are reshaping healthcare marketing analytics, from capabilities and use cases to real-world outcomes and compliance considerations.

Overview of Veeva Crossix in Healthcare Marketing Analytics

Veeva Crossix (formerly Crossix Solutions, acquired by Veeva Systems in 2019) is a data analytics platform focused on **healthcare marketing**. Its primary role is to help life sciences brands **plan**, **target**, **and measure** direct-to-consumer (DTC) and healthcare provider (HCP) marketing campaigns using large-scale health data. At the core of Crossix is a **massive** "connected" dataset: it draws from over 300 million patient lives in the U.S., incorporating prescription (Rx), over-the-counter (OTC), medical claims, clinical (EHR), hospital, consumer, and media data. This means Crossix can link advertising exposures to actual health events (like a prescription fill or doctor visit) in a **privacy-safe** manner. More than 200 pharmaceutical brands rely on Crossix services, underscoring its widespread adoption in the industry.

How Veeva Crossix Leverages Big Data: The strength of Crossix lies in combining health data (e.g. diagnoses, treatments, outcomes) with consumer and media data (e.g. demographics, web behavior, ad impressions). Using a patented technology called *SafeMine™*, a distributed data network, Crossix is able to connect health and non-health data without compromising patient privacy. All personal identifiers are stripped or anonymized, so that analytics can be performed on de-identified records. This allows Crossix to connect the dots between a



marketing campaign and downstream outcomes (such as new patient starts on therapy), giving marketers a clear picture of what's working. As Paul Shawah of Veeva noted during the acquisition, "What we'll be able to do is link patient data to healthcare professionals, so you start to better target HCPs based on the patients that they actually treat". In practice, Crossix can identify, for example, which physicians see a high volume of patients with a certain condition, or which patients started a medication after seeing an ad – insights that help tailor marketing strategies.

Role in Healthcare Marketing Analytics: Veeva Crossix serves as an end-to-end analytics solution for pharma marketing teams. It provides:

- Audience Planning and Segmentation: Crossix helps define high-value target audiences by mining large datasets. Marketers can create segments of patients (or HCPs) based on health characteristics (e.g. disease, treatment history) combined with consumer attributes. For instance, Crossix can find "individuals likely diagnosed with [a given condition] and currently treating with a competitor", enabling highly focused outreach. It can also segment HCPs by specialty and patient mix. This ensures marketing campaigns (whether digital ads, TV commercials, or rep outreach) reach the right people.
- Multichannel Campaign Activation: The platform supports targeting across channels –
 programmatic digital ads, social media, streaming and linear TV, point-of-care (POC) media,
 etc. Veeva Crossix provides pre-built "audience segments" that can be deployed in
 advertising platforms in a HIPAA-compliant way. It even specializes in targeted TV
 advertising, combining traditional TV's reach with data-driven precision. By activating
 consistent segments across channels, brands can execute coordinated omnichannel
 campaigns.
- Measurement and Attribution: Perhaps the biggest value is in measuring campaign impact. Crossix's analytics suite (formerly called DIFA™ Data Integration for Advertising) connects media exposure to health outcomes in near-real-time. It ingests data on who was exposed to an ad and checks that against de-identified health records to see if those individuals took actions like filling a prescription, visiting a doctor, or staying on therapy. This goes far beyond clicks or surveys it's actual behavioral outcomes. Crossix can attribute new patient starts, adherence (refill rates), and other key performance indicators (KPIs) to specific campaigns or tactics. For example, Crossix can measure if a digital ad campaign led to an increase in treatment initiations for a diabetes drug, or if a reminder ad on TV prompted existing patients to refill their prescription.
- Optimization and Insights: Because Crossix analytics are updated frequently (often inflight during campaigns), marketers and their agencies can optimize on the fly. If certain channels, creative messages, or audience segments are yielding better health outcomes, budget can be shifted accordingly. Crossix provides dashboards and reports that highlight which media placements are driving prescription lift or higher quality audiences, enabling data-driven decision-making. Over time, these insights also inform predictive modeling –



e.g. identifying which patient characteristics predict better response, or which HCPs are "high-value" based on patient impact.

In summary, Veeva Crossix functions as a **modern, big-data-powered brain for pharma marketing**, ingesting huge volumes of real-world data and outputting actionable analytics that tie marketing efforts directly to patient and business outcomes.

Big Data Technologies in Healthcare Marketing Analytics

Healthcare marketing analytics today relies on an array of **big data technologies** to turn raw data into strategic insights. Below we explore how big data is applied – through real-world data integration, predictive modeling, and patient journey mapping – and how Veeva Crossix exemplifies these practices:

• Real-World Data Integration: Pharma marketers now pull in data from across the healthcare ecosystem to understand and target patients. This includes pharmacy claims (for prescriptions), medical claims (doctor visits, diagnoses, procedures), electronic health records (lab results, clinical notes), as well as consumer data (demographics, socioeconomic status) and media exposure data. The challenge is integrating these disparate sources at massive scale. Veeva Crossix addresses this with its data platform that aggregates "Rx, over the counter (OTC), clinical, claims, consumer, hospital and media data and more" for 300+ million U.S. patients. Using cloud-based data pipelines and distributed processing (the SafeMine technology), Crossix is built to handle big data from day one - cleaning, mapping, and unifying datasets so that each de-identified patient has a longitudinal record of healthcare encounters and exposures. This integrated data foundation is what allows analysts to, for example, correlate seeing a certain ad with subsequently starting a therapy. Without big data cloud infrastructure and robust identity resolution (deidentification) techniques, such linking would be impossible at scale. Crossix's approach represents a "more modern way to collect data" compared to legacy methods, automating what used to require manual data aggregation. Table 1 below outlines key data sources used in healthcare marketing analytics and their use cases.

Data Source	Description	Use in Marketing Analytics
Prescription (Rx) Data	De-identified pharmacy claims showing medication prescriptions and refills.	Identify new patient starts, switchers, and adherence (refill rates). Measure prescription lift attributable to marketing (e.g. how many more Rx were filled after a campaign):contentReference[oaicite:15] {index=15}.

Medical Claims Data	Insurance claims for doctor visits, diagnoses, procedures, and hospital events.	Define patient populations by condition (via diagnosis codes) and track healthcare events. Connect marketing to clinical outcomes (e.g. doctor visit or lab test following an ad). Helps in patient journey mapping (diagnosis → treatment).
Electronic Health Records (EHR)	Clinical data from physicians' records (e.g. lab results, vital signs, clinical notes) – often available in aggregated form.	Provide deeper clinical context (disease severity, comorbidities). Can be used to tailor messaging (e.g. different outreach for patients with certain risk factors) and to evaluate outcomes like improved lab results post-intervention.
Consumer & Socio- demographic Data	Non-health data about individuals (age, gender, location, income, lifestyle segments).	Enrich patient profiles for better segmentation and targeting. For example, identify high-value segments (by socioeconomic status) for certain therapies, or tailor channel mix based on lifestyle (e.g. tech-savvy patients vs. TV watchers):contentReference[oaicite:16] {index=16}.
Media Exposure Data	Data on who was exposed to what ad, when and on which channel (impressions, clicks, website visits, etc.).	Essential for **attribution** – linking marketing touchpoints to health actions. By matching ad exposure data with de-identified patient IDs, platforms like Crossix measure which exposures led to prescriptions or doctor visits:contentReference[oaicite:17]{index=17}. Also used to calculate reach and frequency to targets (e.g. what % of target HCPs saw an ad).
HCP Engagement	Interactions with healthcare	Although focused on HCP rather than patient marketing, integrating this data helps map the full



Data	providers	influence network. Crossix is beginning to
	(sales rep	connect HCP data with patient outcomes (e.g.
	visits, medical	see which marketing messages and rep details to
	education,	a doctor preceded an increase in that doctor's
	etc.).	prescribing):contentReference[oaicite:18]
		{index=18}, enabling coordinated personal (rep-
		driven) and non-personal promotion.

Table 1: Key data sources in big-data-driven healthcare marketing analytics and how they are used. Each of these data types by itself is valuable; combined, they enable a **360-degree view** of the patient and HCP journey, allowing marketers to reach the right audience and measure true outcomes. Veeva Crossix's platform integrates all of these, providing "the industry's most comprehensive data set" in a privacy-safe way.

 Predictive Modeling and Machine Learning: With large integrated datasets in place, analytics teams leverage machine learning to uncover patterns and predict behavior. In healthcare marketing, this might mean predicting which patients are likely to start or switch therapies, which ones are at risk of discontinuing treatment, or which HCPs are likely to treat a specific patient population. Veeva Crossix uses predictive analytics to create its audience segments. For example, Crossix can score individuals for "likely condition diagnosis" or "likely on a competitor drug" based on their data footprint, allowing marketers to target those individuals with tailored messages. Similarly, models can identify the attributes of patients who responded to a past campaign, and find lookalikes in the data for future targeting. On the HCP side, algorithms might rank physicians by their influence on patient outcomes within a certain therapy area (e.g. which cardiologists have many patients with high cholesterol who aren't yet on the new drug). These predictive insights help optimize marketing spend by focusing on those patients and providers who are most likely to drive ROI. Importantly, because models run on de-identified data, they adhere to privacy constraints (the predictions don't reveal who a patient is - just that a certain anonymous ID is likely in a target group). Modern big data tools - from distributed computing frameworks to autoML (automated machine learning) - make it feasible to train and apply such models on tens of millions of records quickly, something that would have been prohibitively slow in the past. The result is data-driven decision support: marketers get recommendations like "Patients in Segment A are 3x more likely to initiate therapy than average allocate more budget to channels reaching them" or "Dr. Smith treats many patients who could benefit from this drug - ensure sales and marketing efforts are coordinated for him." This moves marketing from broad demographic targeting to intelligent micro-targeting based on real-world evidence.



• Patient Journey Mapping: Big data also enables detailed patient journey analytics. Pharma marketers want to understand the steps a patient takes from first symptoms to seeking care, getting diagnosed, starting a treatment, and continuing on therapy – and where along this journey they encounter or could be influenced by marketing. By stitching together data from multiple sources, one can map common pathways and bottlenecks. For instance, an analysis might reveal that for a given disease, there's a large drop-off between diagnosis and treatment (perhaps due to cost or patient concerns). Marketers can then design interventions (education, adherence programs, reminders) to address that gap. Crossix contributes here by connecting touchpoints to outcomes on the journey. For example, it can show that patients who saw a specific educational ad were more likely to talk to their doctor, or that those exposed to a support program had higher refill rates. It can also segment the journey by channel: e.g. patients who saw a TV ad first vs. those who encountered a digital ad did their paths differ? With big data, these analyses are not limited to small samples; they can encompass millions of patient journeys, increasing confidence in the findings. An executive at Crossix described their mission as providing data to answer the question "Are patients getting healthier?" through analytics that span marketing, adherence, and health outcomes. In practice, journey mapping supported by big data helps marketers personalize content to each stage: awareness campaigns to prompt check-ups for at-risk consumers, onboarding materials for new patients, and adherence reminders (like refill prompts) for existing patients. Notably, Crossix's data has shown that even traditional channels like TV ads can play a role in later stages of the journey for instance, a Crossix analysis found that linear TV ads improved patient adherence by reminding current patients to continue treatment and refill prescriptions. This kind of insight justifies investment in certain channels not just for acquisition of new patients, but also for retention of existing ones.

In sum, big data technologies empower a more **holistic and proactive approach** to healthcare marketing. By integrating diverse real-world datasets, applying predictive analytics, and mapping the patient journey, platforms like Veeva Crossix allow marketers to understand and influence behaviors in ways that were previously out of reach. The next sections will delve into the specific capabilities of Crossix and how they stack up against other solutions, as well as real-world results achieved through these big-data-driven analytics.

Capabilities and Advantages of Veeva Crossix vs. Other Analytics Providers

Veeva Crossix offers a rich set of capabilities that distinguish it in the healthcare analytics landscape. Below, we outline some key capabilities and discuss how they compare to more traditional approaches or other providers:



- Unmatched Data Scale and Diversity: Crossix boasts one of the industry's largest connected health data networks, covering hundreds of millions of patient lives. This scale brings a significant advantage analyses are more robust and segments more precise when drawn from such a comprehensive population. Traditional analytics providers, like some legacy data vendors, might rely on narrower datasets (for example, only prescription data from certain pharmacies, or only physician survey data). In contrast, Crossix's data platform aggregates far more data types and sources than many competitors, which is why it's described as "the industry's most comprehensive data set" for marketing measurement. Even large firms like IQVIA (a global leader in healthcare data) have historically focused on selling data assets (prescriber databases, sales data) and consulting, whereas Crossix built an integrated analytics solution with a modern tech stack. Industry observers note that in the U.S., "Crossix... is the more modern way to collect data" compared to older methods of data aggregation. This modern, cloud-based approach means Crossix can ingest data and update analyses much faster than traditional providers that might update datasets monthly or quarterly.
- Privacy-Safe Analytics by Design: A critical differentiator for Crossix is its focus on privacy and compliance (we discuss regulations in a later section). Crossix's patented SafeMine technology and privacy-by-design architecture ensure that all data linkages occur without exposing personally identifiable information (PII). Competing solutions also employ de-identification, but Crossix has built its entire business on being a "trusted intermediary" that can make connections others can't, precisely because it has refined the art of privacy-safe data blending. For example, a pharma company cannot simply take its own customer data and directly match it to patient pharmacy records due to HIPAA restrictions - they need a third-party like Crossix to perform that matching in a compliant way. Crossix has been doing this for years at scale, giving it a reputation for secure data handling. Other analytics providers like IQVIA or Komodo Health also have large de-identified patient datasets, but Crossix (now under Veeva) differentiates by tightly coupling the data with ready-to-use marketing applications and maintaining an arms-length approach that satisfies privacy concerns for marketing use cases. This means pharma IT and compliance teams can be confident that using Crossix segments or reports will not run afoul of regulations, as Crossix acts as a HIPAA-compliant buffer. In practical terms, Crossix provides audience segments and measurement results that are fully de-identified - marketers see insights (e.g. which segment responded better) but never see any patient identities. This capability to bridge data silos under strict privacy guardrails is a major advantage over trying to DIY such analytics or using general-purpose tools not tailored to health data privacy.



- End-to-End Campaign Analytics (Planning through Measurement): Crossix offers an end-to-end solution, whereas many other providers cover only pieces of the puzzle. For instance, some companies specialize in audience targeting (e.g. Swoop or DeepIntent provide segments of patients or programmatic ad platforms for health ads), and others in measurement (e.g. Nielsen measures ad impressions or offers lift studies; IQVIA might do a retrospective analysis of prescription lift). Crossix uniquely combines both: it has pre-built audience products (such as Crossix Reach segments for consumers, HCP segments, and even Targeted TV segments for linear advertising) and a measurement suite (Crossix DIFA for digital/TV campaign measurement, Crossix Audience Insights, etc.). This integration is beneficial - the same data definitions are used in targeting and in measurement, ensuring consistency. In fact, Crossix advocates "target what you measure, and measure what you target" as a best practice. By using Crossix for both, marketers can align their campaign execution with how success will be measured (as shown in a case study where an agency unified to one Crossix segment and saw significantly better results). Competing offerings often require piecing together solutions: for example, using one vendor's patient list to target and another vendor's data to measure outcomes, which can lead to gaps or mismatched assumptions. Crossix's all-in-one approach simplifies the tech stack for pharma IT departments and provides seamless analytics.
- Real-Time and Granular Measurement: Compared to traditional Marketing Mix Modeling (MMM) or other legacy analytics that deliver insights post-campaign, Crossix provides near real-time feedback on campaign performance. Its cloud-based DIFA platform ingests media exposure data continuously and matches it to health outcomes data as it becomes available (e.g. daily or weekly prescription feeds). Agencies like Havas have leveraged this to make "timely, data-driven media optimizations" during campaigns. This agility is a big competitive edge - historically, pharma marketers had to wait months for a study to tell them if a DTC campaign drove new prescriptions. Now, with Crossix, they can see early indicators within days or weeks (for example, audience quality metrics or interim Rx lift), and adjust creative or media spend accordingly. Other providers are catching up - for instance, IQVIA offers an "impact assessment" tool and there are point solutions like DeepIntent's real-time optimization DSP - but Crossix's solution is notably channel-agnostic and comprehensive. It measures cross-channel, cross-audience impact in one place, whereas others might focus on a single channel (e.g. a point solution for measuring only digital ad clicks to script lift). Crossix can measure TV, digital display, online video, search, social, and more side by side, giving a unified view of marketing ROI. Furthermore, the granularity (patient-level linking) allows slicing results by audience segment, geography, etc., for deeper insights.



• Integration with Veeva Ecosystem: Since becoming part of Veeva, Crossix is positioned to integrate with other Veeva commercial cloud tools. Veeva is well-known for its CRM used by pharma sales reps and its content management for medical communications. The vision is that Crossix data can enhance these systems – for example, informing a sales rep which of their target doctors have patients responding to a DTC campaign, or feeding into Veeva CRM suggestions on where reps should follow up. While respecting the separation of patient and HCP data (discussed later), having Crossix within Veeva potentially offers an advantage that competitors can't easily match: a fully integrated pharma commercial platform combining sales, marketing, and data. IQVIA, as a competitor, has its own suites (it offers an Orchestrated Customer Engagement CRM and data offerings), but many pharma companies use Veeva's CRM and are now able to get Crossix analytics from the same vendor – a one-stop shop. This can simplify vendor management and data integration efforts for IT teams. Additionally, Veeva's focus on life sciences means Crossix benefits from domain-specific innovation (for instance, new analytics firms might not prioritize).

In comparison to other analytics providers: IQVIA, for example, has enormous data assets and consulting services, but customers sometimes note it can be less nimble or more siloed (different datasets not seamlessly connected). Crossix's modern data platform was built to break those silos and automate data integration (as noted, "instead of having manual operators, [Crossix's] is far more automated" in data collection). Swoop (now part of WebMD) and Epsilon offer patient targeting based on data, but they may not have the breadth of clinical data Crossix does, nor the same measurement capabilities - they often partner with a measurement firm to show results. Nielsen and Kantar bring media expertise and can measure things like brand awareness or TV reach well, but they historically lacked direct linking to health outcomes; many pharma marketers end up using Crossix alongside Nielsen - Nielsen to verify how many saw the ad, Crossix to see what those viewers did afterward. Komodo Health is another emerging player with a large patient dataset and analytics (including patient journey tools), which could be considered a competitor on the data front, but it hasn't been as focused on marketing campaign measurement as Crossix. In summary, Veeva Crossix's key advantage is in being a purposebuilt, healthcare-specific big data platform that covers the entire marketing cycle under one roof, with proven methodologies and privacy safeguards. These qualities set it apart from more fragmented or traditional approaches in the market.

Case Studies: Impact on Campaign Performance and ROI

Nothing illustrates the power of big-data-driven marketing analytics better than real-world examples. Several case studies have demonstrated how Veeva Crossix analytics can significantly improve campaign outcomes – from better HCP targeting to higher patient conversion and adherence. Below are a few examples and their outcomes:



- Boosting Patient Conversions with Unified Targeting: One biopharma brand ran a digital streaming video ad campaign for a common medical condition but saw disappointing results initially. Using Crossix analytics, the team discovered that their multiple audience segments and KPIs across different media partners were fragmenting the campaign. They decided to simplify and unify the targeting selecting a single high-value segment via Crossix: patients likely diagnosed with the condition and on a competitor's treatment. By aligning all media partners to this data-driven segment ("target what you measure") and focusing on the key outcome, the campaign performance turned around. Results: a 17% increase in audience quality (tens of thousands more qualified patients reached) and an impressive 46% year-over-year increase in conversion rate for the campaign. In other words, far more people who saw the ad went on to take the desired action (such as starting therapy), once the audience was optimized. This case shows how Crossix's big data segments and measurement identified a mismatch and then guided a fix that led to substantially better ROI without any increase in spend.
- Improving HCP Targeting Efficiency: In a campaign aimed at healthcare providers (HCPs) for a biologic drug, a major media agency leveraged Crossix's measurement to optimize their media buys. By analyzing which placements were effectively reaching the intended HCP list and leading those doctors to engage (e.g. visit the brand's HCP website or prescribe the drug), they reallocated spend toward the higher-performing channels. The outcome was striking the campaign achieved a 56% reduction in cost-per-targeted-HCP (meaning it became much cheaper to reach each relevant physician, by over half) while website visitation by target HCPs increased 5× (500%) and site engagement rates spiked by 54%. These are dramatic efficiency gains: the client got far more of their target doctors onto the website and interacting with content, at a fraction of the previous cost. This example underscores how Crossix data can be used to trim the waste in HCP marketing (eliminating spend on channels or placements that aren't reaching the right MDs) and concentrate efforts where they matter, thereby boosting engagement. Notably, these improvements were realized year-over-year, showing sustained impact as the campaign strategy was refined with data.
- Driving Patient Adherence and ROI via Cross-Channel Synergy: Crossix analyses have revealed that marketing isn't just about acquiring new patients - it can also help keep current patients on therapy, which is a huge factor in overall brand success. A Veeva Crossix "Trends in Health Advertising" report highlighted that linear TV advertising, often seen purely as a mass awareness tool, actually helped increase patient adherence by reminding patients to continue treatment and refills. In one case, an endocrinology drug brand measured the ROI of its TV ads in two ways: (1) considering only new patient starts, and (2) considering new starts plus continued therapy (refills) among existing patients. When including the adherence benefit, the ROI was 55% higher - the campaign ROI jumped from about 1.1:1 to 1.7:1. In practical terms, that means for every \$1 spent on TV, the return in prescription revenue went from \$1.10 to \$1.70 once they factored in that ads prompted more refills and persistence. This case validates that big data analytics can capture the full value of a campaign. Traditional metrics might have missed the adherence effect, but Crossix's linkage of exposure to pharmacy data picked it up, making a strong case to continue investing in TV as part of an omnichannel strategy for both acquisition and retention of patients. It also illustrates ROI improvement: by connecting marketing to actual outcomes (new scripts and refills), the brand demonstrated a significantly positive return, which is key for justifying marketing spend to stakeholders.



• Lowering Cost per Conversion in DTC Campaigns: In another example from an agency partnership, a DTC (direct-to-consumer) digital campaign for a biologic therapy was optimized using Crossix data. Over the course of 2019, the agency shifted media investments toward placements that Crossix showed were reaching the right patients (those likely to convert). As a result, the cost-per-gross-conversion (i.e. per patient start) dropped by 47% – essentially cutting the cost of acquiring each new patient in half. This kind of efficiency gain is crucial in high-cost therapeutic areas, where each new patient can be very expensive to acquire via advertising. By using big data to focus only on patients who are both eligible and more likely to take action, the campaign wasted less money on "low-yield" eyeballs. The nearly 50% improvement indicates a much higher ROI for the campaign after optimization.

These case studies collectively show **tangible impacts**: double-digit percentage improvements in key metrics like conversion rates, engagement, and cost efficiency, and significant ROI lifts. In all cases, the common thread is that **data-driven insights led to better decisions**: whether it was unifying audiences, reallocating media spend, or recognizing cross-channel effects. For IT and analytics professionals, these examples also highlight the importance of robust data infrastructure – only with a platform like Crossix (that can ingest and analyze large, complex health data quickly) could these optimizations be identified and acted upon in time.

Furthermore, these outcomes have business implications beyond just marketing department KPIs: more prescriptions filled, more efficient use of budget, and patients potentially getting on therapy and staying on it, which for pharma companies means improved revenue and for patients could mean better health outcomes. It's a win-win enabled by big data analytics.

Key Adoption Metrics and Market Trends

The use of big data in pharma marketing analytics is no longer niche – it has become mainstream as companies see the value. Here are some key statistics and trends that provide context on adoption and the evolving market:

• Widespread Adoption by Pharma Brands and Agencies: As mentioned earlier, 200+ pharma brands leverage Crossix analytics. These include many of the top 20 pharmaceutical companies. Additionally, major media agencies (like Havas, Publicis Health, etc.) have partnerships to incorporate Crossix into their planning and reporting. The Havas Media Group example, where Crossix was used to drive better outcomes across multiple campaigns, shows that agencies see this as a must-have capability to deliver value to clients. In fact, by 2020 Havas cited "double-digit growth in targeted reach" and various performance improvements as a result of using Crossix data. This indicates that data-driven marketing is becoming standard practice in pharma. No longer is campaign success evaluated only by traditional metrics like reach or clicks – now data on actual health outcomes is expected. Veeva's integration of Crossix also signals that commercial teams (sales, marketing, analytics) are unifying around data-driven approaches.



- Sheer Volume of Data Analyzed: A recent Veeva Crossix annual report analyzed over 53 billion digital ad impressions and 115 billion TV impressions, representing \$6+ billion in media spend in a single year. These figures give a sense of scale Crossix isn't being used for a few pilots here and there; it's monitoring and measuring a substantial portion of all pharma advertising in the U.S. Moreover, the fact that they collate this across "hundreds of health-related campaigns" means they have benchmarks and insights across the industry. For instance, Crossix can tell a client how their campaign's performance compares to industry norms or competitors (in aggregate). This kind of benchmarking is another advantage of a large user base and data pool it becomes a virtuous cycle where more participation yields richer insights.
- Omnichannel Marketing Growth: Pharma marketing mix is evolving, and big data analytics is both driven by and enabling this change. Traditional TV advertising is still heavily used - pharma spent an estimated \$5.5 billion on linear TV ads in 2022 - because it provides broad reach. But digital channels are growing rapidly: streaming TV (connected TV) investment grew 34% year-over-year, and newer channels like digital audio (podcasts, music streaming) saw even faster growth (Crossix measured 50% more campaigns using audio in 2021 than prior year). Pharma marketers are diversifying tactics: according to Crossix data, online video, streaming, and audio impressions all increased by double digits. This diversification makes cross-channel analytics critical - you need to ensure each new channel is actually contributing value. Crossix trends reports highlight that streaming can significantly extend reach for niche audiences (e.g. a 49% increase in reach for an oncology campaign when adding streaming to linear), whereas for mass-market conditions the incremental reach is smaller (~5%) and thus spending still skews to TV. Marketers armed with such data can allocate budgets more rationally across channels. The trend is clear: an omnichannel approach (combining TV, digital, social, audio, in-person) is becoming the norm, and only big-data analytics platforms can effectively measure the combined impact. Another trend is programmatic advertising for HCPs - by 2021, programmatic was the top method to reach HCPs digitally, surpassing direct site buys. Programmatic relies on data (to decide which ad to show to which user in real time), and Crossix provides much of that data for health audiences, as well as measuring the results. As third-party cookies are phased out and privacy regulations tighten in the broader advertising world, having a large reservoir of first-party health data (like Crossix's) becomes an important strategic asset for reaching patients and HCPs in a compliant way.
- Better Integration of Sales and Marketing (Personal and Non-personal promotion): Another notable trend is the push for orchestrated customer engagement coordinating sales rep visits (personal promotion) with digital and media campaigns (non-personal). Here, data is key. A Crossix analysis noted that while 80% of target HCPs might be reached by digital marketing alone, the highest priority HCPs received a combination of sales calls + digital, which led to the highest saturation of messaging. In other words, targeting an HCP through multiple channels consistently can amplify impact. This insight is leading companies to use analytics to align their marketing and sales targeting. Veeva Crossix's ability to link HCP and patient data in a privacy-safe way means it can support this alignment: for example, identifying that certain physicians have been exposed to digital ads and also have recently met with a sales rep, versus those who haven't allowing adjustments in strategy. The overall market trend is toward data-driven orchestration: ensuring each stakeholder (patient or doctor) gets the right mix of touchpoints. This requires breaking down data silos between marketing systems and CRM systems an area where Veeva is investing (e.g. products like "Omnichannel Boost" to connect DTC, HCP, and field data).

• Outcome-Based Marketing Mindset: Pharma companies are increasingly demanding to see hard outcomes from marketing – such as increases in new patient starts, adherence rates, or treatment initiations. This is partly a cultural shift (scrutiny on ROI) and partly enabled by analytics like Crossix that make such outcomes visible. Key performance indicators for campaigns now often include metrics like "incremental prescriptions" or "change in adherence %," whereas a decade ago they might have been limited to clicks or reach. For example, a marketer can now say, "This campaign generated a 1.7:1 ROI based on total prescriptions", which resonates with commercial leadership more than impressions delivered. Industry reports and conferences frequently highlight using real-world data for ROI measurement and optimization. The availability of statistics like a 46% lift in conversion rate or a 55% improvement in ROI in case studies sets new benchmarks for what's achievable. This creates competitive pressure: if one brand is doing it, others don't want to fall behind. Thus, the trend is that big data analytics is becoming a standard tool in pharma marketing, not just an experiment.

In summary, the adoption of platforms like Veeva Crossix reflects a broader transformation in pharma marketing toward data-centric strategies. The market trends – omnichannel engagement, personalized targeting, ROI accountability, and privacy changes – all point to the need for sophisticated analytics on large datasets. Veeva Crossix's growth and the stats around it underscore that the industry is embracing these tools to keep pace with a more digitally driven, outcomes-focused marketing environment.

Regulatory and Data Privacy Considerations

Any use of patient and health data in marketing analytics must navigate a complex landscape of privacy regulations and ethical considerations. In the U.S., healthcare data is protected primarily by the **Health Insurance Portability and Accountability Act (HIPAA)**, which sets rules for the use and disclosure of Protected Health Information (PHI). Pharmaceutical marketing analytics, including Veeva Crossix's services, operate under strict guidelines to ensure compliance with HIPAA and related laws. Here's how privacy and regulatory concerns are addressed:



- HIPAA and De-Identification: Under HIPAA, using patient-level health information for purposes like marketing is generally only permitted if the data is de-identified (or if patients have given explicit consent, which is impractical at scale for marketing). De-identification means removing or obscuring all personal identifiers (name, address, etc.) such that individuals cannot readily be identified. Veeva Crossix's entire model is built on handling de-identified health data. They obtain data from pharmacies, insurers, data aggregators, etc., where patient identities have been coded (e.g. replaced with an encrypted ID) by the data source or a trusted third party. Crossix then uses these coded IDs to link data sets together without ever "knowing" the actual identity of the person. This is often done via a one-way hash or an anonymous matching service - sometimes referred to as a privacy-safe identity resolution. For example, a pharmacy might use a hashing algorithm to turn "John Smith, DOB 1/1/1960, SSN XYZ" into a random ID, and a hospital might do the same for their records; if the hash matches, Crossix knows those records belong to the same individual without ever seeing John's personal info. HIPAA provides two standards for de-identification: the Safe Harbor method (removing 18 types of identifiers) and the Expert Determination method (a statistical certification that risk of re-identification is very small). The exact method Crossix uses is proprietary, but it certainly falls under one of these, ensuring that the data they work with is not considered PHI anymore. This is why Crossix can lawfully aggregate and analyze patient data for marketing outcomes - because it's no longer personally identifiable. Additionally, Crossix likely has business associate agreements and data use agreements in place with providers of the data to codify allowed uses.
- Privacy-Safe Data Linking: Crossix's SafeMine™ technology (as mentioned) is a key enabler for compliance. It's described as a "patented distributed data network and technology" that connects health and non-health data with privacy safeguards. "Distributed" in this context means no single party holds all the identifiable information - pieces of the puzzle are matched behind the scenes. For instance, a third-party might hold the key that links an anonymous health data ID to an anonymous digital ad ID, facilitating a match without revealing identity to either side. This way, Crossix can tell that a certain ad impression corresponds to a certain patient record without anyone ever seeing identifying info in one place. These technical measures are audited and tested to ensure they meet regulatory standards. Importantly, Crossix's outputs to clients are usually aggregated (e.g. a report might say "X% of exposed patients started a prescription" or "Segment A had Y new prescriptions"), which further protects individual privacy. They do offer some patient-level data feeds (for advanced analytics by clients' data science teams), but even those use anonymous IDs that the client cannot decode to actual identities. By building these privacy measures into the platform from the ground up, Crossix maintains compliance not just with HIPAA, but also with other laws like California's CCPA/CPRA (which gives consumers rights over personal data - though de-identified data is typically exempt) and adheres to industry self-regulatory principles for digital advertising.



- Patient Consent: In healthcare, patient consent is required to use identifiable health information for purposes beyond treatment, payment, or operations. However, in marketing analytics, the approach (as noted) is to avoid PHI altogether by using de-identified data, thus obviating the need for individual consent in a legal sense. That said, the ethical use of patient data is still a consideration. Companies like Crossix are careful to ensure that their data can't be used to pinpoint or target a specific individual in a way that would violate privacy or expectation. For example, even though Crossix might identify that a certain anonymous user likely has a specific condition, the marketing use is in aggregate (serving an ad to a segment) and not, say, contacting that person by name. From the patient's perspective, their data is being used behind the scenes, but not in a way that exposes their identity or personal medical details publicly. In effect, the "consent" is handled at the data collection points e.g., a pharmacy's privacy policy might allow de-identified data to be used for research/analytics. Another aspect is opt-outs patients can often opt-out of their data being included in these datasets (for instance, some data vendors honor an opt-out if a consumer requests via a site like optout.prescribers.org or similar mechanisms used for data brokers). Pharma companies ensure their vendors like Crossix abide by such opt-outs to respect patient choice.
- Regulatory Compliance and Audits: Veeva Crossix, being a major player, likely undergoes regular audits and has to comply with frameworks like the E.U.-U.S. Privacy Shield (though invalidated, companies follow successor guidelines), and when operating in global markets, GDPR. It's worth noting that Crossix's services are mostly U.S.-centric; outside the U.S., data privacy laws can be even stricter (e.g. in Europe, using health data for marketing would face heavy constraints). Indeed, experts have expressed skepticism that Crossix's approach can be easily scaled internationally due to those regulations. This suggests Crossix's capabilities remain heavily focused on the U.S. where a combination of opt-in data sources and the HIPAA de-identification pathway allow such analytics to thrive. Within the U.S., Crossix ensures all data is used in compliance with HIPAA and other applicable laws, and clients in pharma usually have their own compliance teams vet the methodology. In many pharma companies, there's a rule that patient data and HCP data must be **kept separate** – sales teams are not allowed to see patient-level data linked to doctors, for instance. Crossix helps here by serving as a "safe haven" - it can link patient and HCP data internally to find correlations (like which doctors treat which patients), but it will only expose the insights in a compliant way. For example, it might tell a pharma marketing team "Doctors in decile 1 have X% of patients from your DTC campaign" without ever sharing who those patients are. This two-cloud approach (one for HCP CRM, one for patient analytics) is likely enforced to keep a firewall that regulators and internal policies require.



- Data Governance and Stewardship: Beyond laws, there's an onus on companies to be good stewards of sensitive data. Crossix and its parent Veeva, as well as pharma clients, all have governance committees and safeguards to prevent misuse of data. Use cases are carefully scoped e.g. using data to target ads is acceptable if de-identified, but trying to re-identify a patient or contact them directly would be illegal and against policy. Crossix only provides allowed linkages for instance, they might refuse to create too granular a segment that could effectively single out a person. They also implement suppression rules (not showing ads about certain conditions in sensitive contexts) to avoid any perception of privacy intrusion. All marketing content itself is reviewed to comply with FDA regulations on advertising, but that's separate from data still, an analytic insight might be useless if you can't execute it due to promo regulations. So teams work hand-in-hand with legal/regulatory. In short, a robust framework of contracts, technology measures, and corporate policies ensures that big data is used responsibly in healthcare marketing. The result for the end user (the patient or doctor) is ideally a benefit more relevant information when needed delivered in a way that respects their privacy.
- Example HIPAA-Compliant Targeting: To illustrate, Veeva Crossix or similar data partners create something like a "health audience segment" (say, women ages 45-64 on diabetes medications but not on Drug X). They do so by analyzing de-identified data to find people who fit that criteria. When that segment is deployed in an ad campaign, no identifiable info is used platforms match ads to cookies or device IDs that correspond to that segment via encrypted tokens. The pharma company sees only aggregated results. This process has been vetted legally: as long as it's properly de-identified and there's no re-identification, it's considered HIPAA compliant. Indeed, data partnerships in pharma marketing often tout themselves as "HIPAA-compliant targeting" solutions.

In conclusion, **regulatory and privacy considerations are central** to healthcare marketing analytics. Veeva Crossix's success is not just due to technical prowess with big data, but also due to the trust it has built by rigorously complying with privacy laws and ensuring patient data is handled ethically. For IT professionals in pharma, understanding these safeguards is crucial – it's not only about what the data can do, but also about doing it the right way. With HIPAA as the guardrail, Crossix and similar platforms demonstrate that it's possible to leverage detailed health data for marketing insights **without compromising patient confidentiality**. This enables pharma companies to pursue data-driven marketing strategies confidently and responsibly.

Conclusion

The convergence of big data and healthcare marketing, exemplified by Veeva Crossix, is fundamentally changing how pharmaceutical companies approach their commercial strategies in the U.S. market. By unlocking insights from vast and varied data – linking what were once silos of medical, consumer, and media information – pharma marketers can now target more precisely, engage customers across channels more personally, and measure outcomes more definitively. This data-driven evolution brings clear benefits: patients receive more relevant education and support, healthcare providers are approached in a more informed way, and marketing investments yield better returns as efforts focus on what truly works (and waste is minimized).



For IT professionals in the pharmaceutical industry, the rise of platforms like Crossix also highlights the increasing importance of **data infrastructure and analytics capabilities** within commercial operations. Integrating large datasets, maintaining compliance, and delivering timely intelligence require robust technology frameworks and expertise in data science and engineering. It is no longer enough to have separate CRM, sales, and marketing systems – the future lies in **connected data ecosystems** that can drive intelligent orchestration of all customer touchpoints. Veeva Crossix, as part of a broader industry cloud, hints at this future where insights flow seamlessly from data to action: a marketer can identify an opportunity, deploy a campaign, and see the impact reflected in sales – all through interconnected systems.

Furthermore, as the case studies show, embracing big data analytics in marketing can directly impact key business metrics like conversion rates, prescription volumes, and ROI. In an increasingly competitive pharma landscape (and one where every dollar is scrutinized), these capabilities become not just nice-to-have, but essential. Companies that leverage big data effectively will have an edge in reaching patients and providers in meaningful ways, improving adherence, and ultimately driving better health outcomes – which is the end goal for all stakeholders involved.

Of course, this transformation must continue to be navigated carefully, balancing innovation with privacy. Regulations will evolve (for instance, new federal privacy laws or changes to HIPAA could emerge, and the industry will need to adapt). But the trajectory is clear: **data-powered marketing analytics is here to stay** in healthcare, and it will only grow more sophisticated with advances in AI and real-world data availability. Veeva Crossix's journey – from an independent startup to a key piece of Veeva's platform used by hundreds of brands – exemplifies the momentum of this trend.

In closing, the integration of big data into healthcare marketing analytics – as led by solutions like Veeva Crossix – is delivering a more **scientific**, **evidence-based approach** to marketing. It enables pharma companies to **connect marketing to business outcomes** and patient outcomes in ways not previously possible. For IT and marketing professionals alike, it's an exciting development that elevates the strategic value of data. As the industry continues to harness these analytics, we can expect more personalized and effective marketing campaigns that ultimately help the right patients get on (and stay on) the therapies they need, driving success for both public health and pharmaceutical enterprises.

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