### the smart data manifesto





#### goodbye big data, hello smart data

#### abstract

This is a first in a series of eXelate white papers on the evolution of Big Data to Smart Data. Consumers have embraced a fully digital lifestyle across all screen types – PCs, smartphones, tablets, and TVs. Not only are consumers constantly connected, but they utilize an ever increasing range of services (web, video, social, messaging, apps, email) across screens. This multi-platform behavior has spawned a Big Data tempest and an entire ecosystem dedicated to deriving value from this new natural resource. Unfortunately, Big Data has yet to fulfill its promise of providing a clear and consistent business advantage. The era of Smart Data is here – data that is **accurate**, **actionable**, and **agile** – data that is ready to power Smarter Decisions. Smarter Decisions must clearly drive revenue or market share growth – the primary measures for marketing performance.

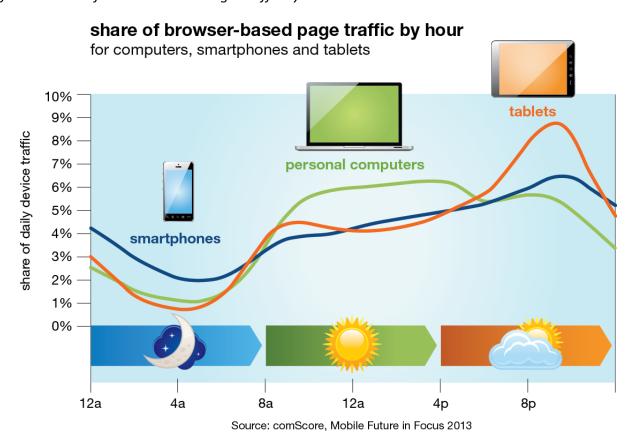


## situation: embracing a digital lifestyle



Consumers have fully engaged a digital lifestyle across all screen and service types. As Figure 1 demonstrates, a typical smartphone user gets up in the morning and checks email, social, and messaging (SMS) services. Next comes the TV in the background with a small dose of news via a tablet during breakfast. During the workday, the PC rules productivity scenarios with a constant drumbeat of smartphone usage throughout the day. Finally, at night, post-dinner, the TV is up and running while tablets are the second screen for general browsing and social networking. Gone are the days of a uni-screen experience.

Figure 1: Share of Browser-Based Page Traffic by Hour



To understand how consumers got here, we need to look at both screens (PCs, smartphones, tablets, and TVs) and services (messaging, email, browsing, search, video, music, and social). The advent of the PC in the late 90s came with the promise of being "in every home" combined with explosion of email and web browsing laid the foundation for today's consumer digital activity. In the late 90s and early 00s came early versions of smartphones disguised as PCs (iPaqs, Palm Pilots) and the iconic RIM Blackberry. Figure 2 shows the impact of the iPhone in 2007, as it redefined the smartphone industry and set a minimum bar for a mobile lifestyle. Once the momentum and expectation of mobile connectivity began for smartphones, tablets weren't far behind. The iPad, built upon the iPhone's success, has once again energized a new consumer device category. Now technology heavyweights like Amazon, Samsung, Google, and Microsoft are all pushing a cross-screen strategy to entice consumers to gravitate towards a one-vendor digital lifestyle.

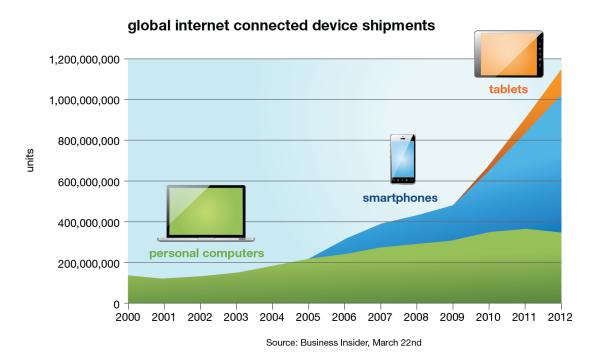


big data = noise

smart data = signal



Figure 2: Global Internet Connected Device Shipments

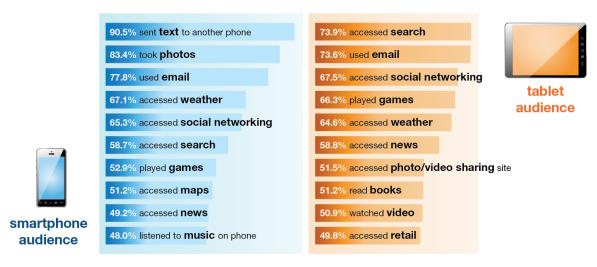


While consumers embraced new screens, services played just as important a role in accelerating the digital lifestyle. As email, messaging, and browsing continue to serve as core digital services – search, social, video, and music have become hot consumer activities. Whether executing a digital service via an app or through the browser, consumers continue to embrace multiple types of services in both smartphone and tablet scenarios – see Figure 3 below.

Figure 3: Top Mobile Media Activities

#### top mobile media activities

by share of smartphone and tablet users



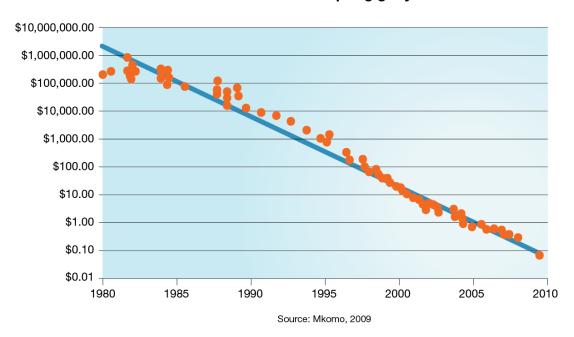
Source: comScore, Mobile Future in Focus 2013



Behind the scenes, the Big Data ecosystem has been trying to keep up with the digital consumer. Falling costs of data storage have made it easier to capture, maintain, and act on consumer data. Even the staid data storage industry has played a role in keeping pace as demonstrated by Figure 4, which shows a declining cost per gigabyte for hard drives. Lower costs for storage enable lower costs for Big Data services and more storage capabilities within mobile devices.

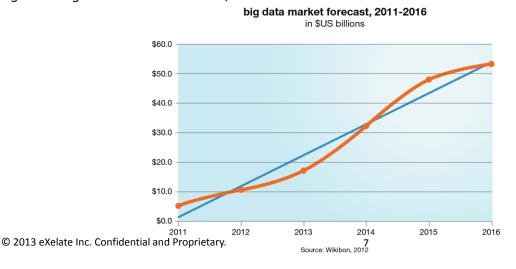
Figure 4: Hard Drive Cost per Gigabyte

#### hard drive cost per gigabyte



The technology industry has gone through multiple cycles with terms like CRM (90s), Data Warehousing (00s), and Big Data Analytics (Now), to capture the concept of deriving value out of consumer data. Software companies such as salesforce.com and Oracle have embraced the concept of capturing, storing, and analyzing customer data – as have professional services providers like Accenture and Deloitte, who seized the opportunity to monetize the deployment of CRM, Data Warehousing, Business Intelligence, and now Big Data Analytics. Figure 5 shows why all these tech titans are chasing Big Data – the Big Data Market will reach \$50B by 2016.

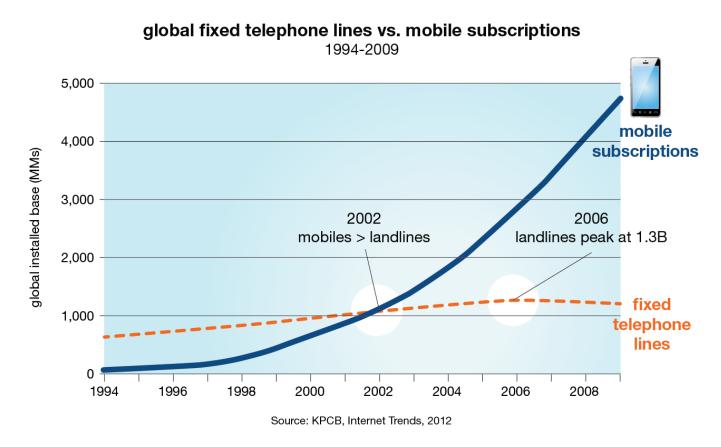
Figure 5: Big Data Market Forecast, 2011-2016





While often overlooked, the proliferation of broadband access through landline and wireless options played a key role in meeting digital demand – Wi-Fi routers all the way to LTE connectivity have become the digital lifeline for consumer connectivity. Network operators moved quickly to provide bundled packages that included TV, voice and internet connectivity. Industry leaders like Verizon and AT&T expanded their multi-screen portfolio to include wireless services – providing end to end connectivity options for consumers and businesses. Figure 6 shows that in early 2002, mobile subscriptions passed fixed phone lines. The more connections consumers have, the more data they provide.

Figure 6: Global Fixed Telephone Lines vs. Mobile Subscriptions



Finally, one must also acknowledge the advent of new business models – paid, free, and hybrid. Paid digital services like internet connectivity (ex: home broadband), music (ex: iTunes), and video (ex: Netflix) expanded on standard business models; however, Google's free search service provided a frictionless must-have utility powered by advertising. Free services have caught on with consumers and Facebook is now leading the charge with daily consumer usage. Hybrid business models also exist, but tend to be the exception, not the norm – companies like LinkedIn have led the way in this space.

With consumers embracing a digital lifestyle, marketers have become increasingly excited about the numerous opportunities available with all of the data being generated – enter the promise of Big Data. Industry analysts and consultants have done an admirable job sizing out the market, describing the market, and providing guidelines on how to win with Big Data – but has opportunity been seized? This crossindustry embrace happens only once a decade - but when it does, expectations and hype soar – business performance often does not.

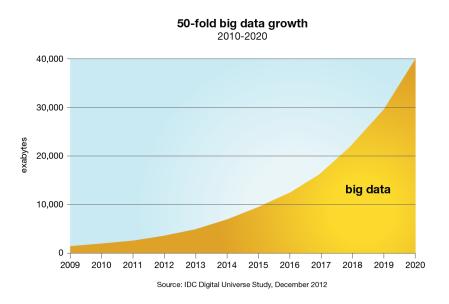


# issue: the big data tempest



Has the advent of Big Data created an opportunity or a massive tempest? Is it harder now to find signal within a never-ending fountain of data noise? The amount of data and the rate at which it is growing in speed and type is unprecedented. Figure 7 shows a 50-fold growth in Big Data from 2010 to 2020. Does volume equate to value?

Figure 7: 50-Fold Big Data Growth



Many believe that the jury on Big Data is still out. Not only are the benefits unclear, but how to achieve those benefits with the right mix of strategy, people, and operational execution remains a mystery. There are some industries like finance, insurance, advertising, and healthcare, better situated to take advantage of Big Data while others are still hoping to cobble together the true business advantage. Figure 8 shows the wide range of benefits US executives *hope* to achieve with Big Data.

Figure 8: Big Data Benefits



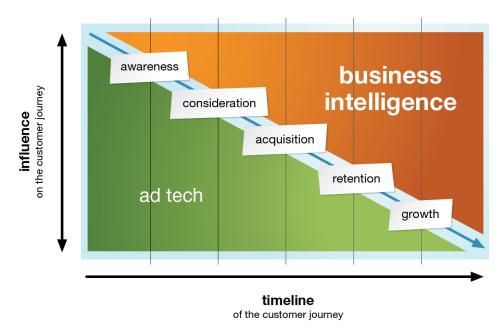


Source: eMarketer, 2012

Even the Ad Tech industry has embraced Big Data along with the classic Business Intelligence vendors. Each industry plays a role in guiding consumers through a purchase funnel via the utilization of Big Data at each major touch point. Figure 9 shows a consumer journey from awareness through growth and the role ad tech and Business Intelligence play, outside and inside an enterprise firewall.



Figure 9: The Full Purchase Funnel



Fast forward to today's BI market. One sees a thick ecosystem of software (Microstrategy, IBM, Alteryx, Domo) and services (Accenture, Deloitte), providers who are chasing a multibillion-dollar market dedicated to helping businesses analyze and optimize performance. BI has evolved from simple reporting to predictive analytics, demonstrating a hunger to answer as many customer questions as possible – all behind or at the firewall. It is important to note that a majority of this spend is controlled by enterprise CIOs who are dedicated to maximizing the value of technology investments, but who are also sometimes at odds with CMOs.

Enter the ad tech and digital advertising ecosystem, built to fulfill the needs of the CMO – specifically, the needs of advertisers to improve awareness, consideration, and eventually acquisition of customers through digital channels. When a potential customer is in the awareness and consideration phase, ad tech nudges the customer forward to acquisition. But this ecosystem must realize it is only part of the customer journey. With billions of dollars being spent on improving digital funnel performance from customer awareness to consideration to acquisition, companies across the ad tech industry are wondering if there is more they can do to meet the needs of advertisers worldwide – and not just play outside the firewall.

Imagine a major wireless company; let's call it Horizon Wireless. Horizon's marketing team wants to acquire as many customers as possible, retain them as long as possible, and grow (upsell, cross-sell) their customers – all to maximize customer lifetime value. In order to meet these goals, Horizon utilizes the ad tech ecosystem to raise awareness and drive consideration for potential customers; however, once Horizon acquires customers, BI plays a larger role in retaining and growing them.

That said, the lack of Big Data quality and its inability to adapt to changing business conditions continues to puzzle leaders across industries. Having Big Data often leads to Big Decisions – they just might not be the right decisions. Is there a smarter way to take advantage of the Big Data Tempest?



# solution: the era of smart data

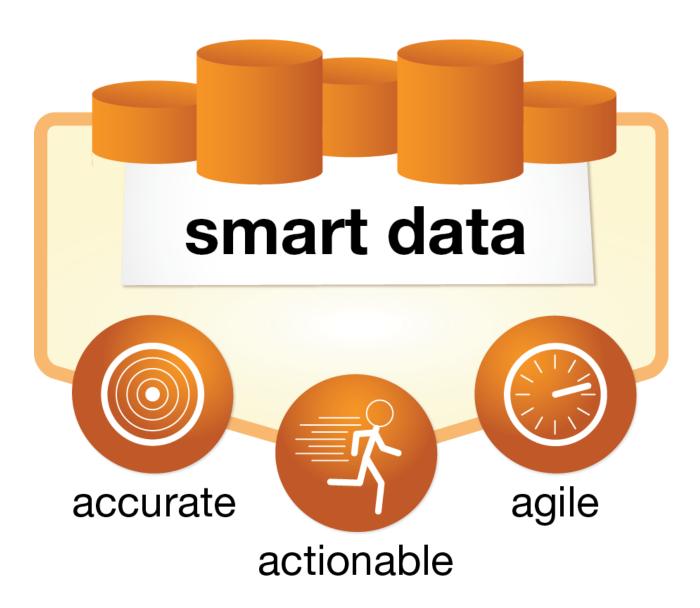


The time to embrace Smart Data to power Smarter Decisions is now. It's time to push past Big Data and Big Noise and set the expectations for Smart Data and Smarter Decisions.

So how is Smart Data really different than Big Data? What makes Data Smart? Three key attributes do – for data to be Smart, it must be **accurate**, **actionable**, and **agile**.

- accurate data must be what it says it is with enough precision to drive value. Data quality matters.
- **actionable** data must drive an immediate scalable action in a way that maximizes a business objective like media reach across platforms. Scalable action matters.
- **agile** data must be available in real-time and ready to adapt to the changing business environment. Flexibility matters.

Figure 10: Smart Data is accurate, actionable, agile





utilizing eXelate data can lead to up to 1.8X improved audience targeting performance over traditional targeting methods



## Smart Data must be **accurate**- it must deliver on its promise for high quality information

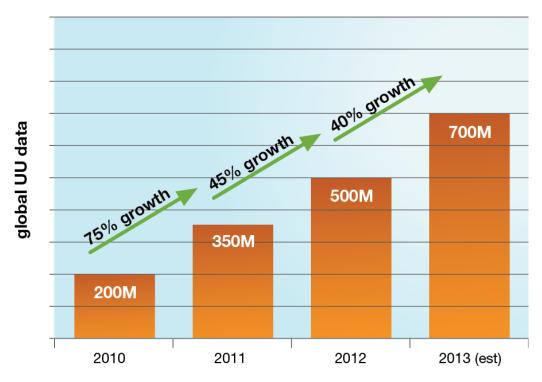
For Smart Data to be **accurate** it has to be validated through a 3<sup>rd</sup> party benchmark on a consistent basis while Smart Data customers consistently evaluate their ROI. eXelate leads the digital data industry with the highest standards of accuracy as proven with studies with comScore and Nielsen – leading 3<sup>rd</sup> party measurement companies. Utilizing eXelate data can lead to up to 1.8X improved audience targeting performance over traditional targeting methods.

## Smart Data must be **actionable** – it must have the ability to drive scalable action that creates value

The days of analyzing reports for days and then acting upon them are gone – taking action that maximizes reach and activity is critical to success. For a Marketer, actionable data must drive revenue or market share growth – core value drivers for marketers across industries. As Figure 11 demonstrates, eXelate's Smart Data drives action for customers by providing over 700M global users across 8,000 segments ready to receive a more relevant digital experience (ad, offer, service). eXelate customers use Smart Data to drive higher quality and higher scale audience targeting which turns into revenue and market share growth.

Figure 11: eXelate Global Unique User Growth 2010-2013

#### global UU growth 2010-2013





## Smart Data must be **agile** – it must be real-time and flexible with changing business conditions

The days of waiting weeks to prompt business decisions are gone – real-time is here to stay and grow. Consumers are making decisions in real-time – data must follow. eXelate's data is available in real-time to feed 75+ media platforms worldwide – it is structured to deliver action immediately, no waiting. Smart Data should shift and adapt to changing technical requirements and business conditions. As summarized in Figure 12, eXelate's data models adapt to changing business conditions by utilizing performance feedback loops and first party seed data.

Figure 12: eXelate Agile Smart Data





## How do you know if your Big Data may not be Smart Data? Look for these clues:

- 1. Data Quality do you have constant data quality issues? Are people always questioning the accuracy of your data?
- 2. Data Scale Big Data isn't set up to scale and grow your business. Are people struggling for clear business cases based on your data but failing to provide compelling evidence? Is the data driving Revenue or Market Share? Is there a Cost reduction business case to be made?
- 3. Real-time Does your Big Data run in batch and do you have to wait hours to act on results?
- 4. Lack of Validation do you have a 3<sup>rd</sup> party consistently evaluating your data accuracy?
- 5. Actionability can you point to the clear business action the data can drive daily?
- 6. Many Resources Needed to Execute- Does your Big Data require a massive army of consultants, platforms, and vendors to fulfill your Big Data strategy?
- 7. Inflexible Data- Is it painful for your data to adapt to new platforms (like mobile) and changing business conditions?

Figure 13: Big Data or Smart Data?

#### your **big data** may not be **smart data** if you:





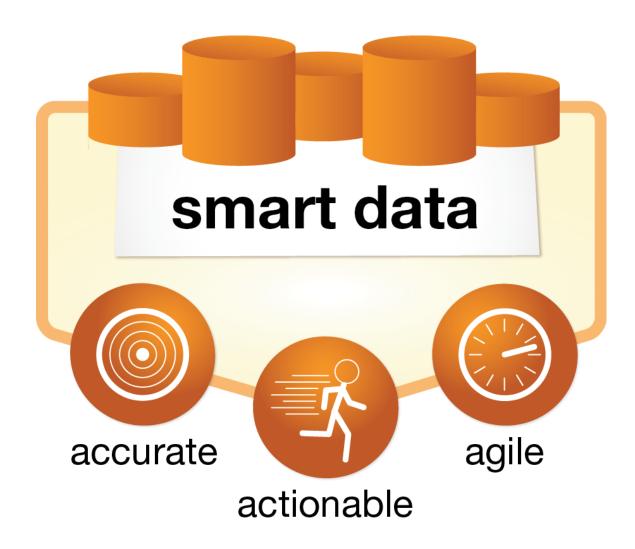
## summary: smart data powers smarter decisions



Consumers have embraced the digital lifestyle and aren't going back. While the industry has kept pace in delivering digital value to consumers, the promise of Big Data has yet to be realized due to challenges with data quality, inaction, and inflexibility. The end of Big Data is here and it is time to embrace Smart Data as an industry standard and expectation.

This is a first in a series of eXelate white papers that will delve into the different components of Smart Data – Accurate, Actionable, and Agile. These white papers will review the why, how, and what of each Smart Data component while also providing best practices for industry professionals.

### Goodbye Big Data. Hello Smart Data.





#### **About eXelate**

eXelate is the smart data company that powers smarter digital marketing decisions worldwide for marketers, agencies, platforms, publishers and data providers. eXelate's smart data platform provides accurate, actionable, and agile data and analytics on online household demographics, purchase intent, and behavioral propensities. Through the collection of trillions of directly measured online data points and distribution partnerships with information leaders such as Nielsen, Nielsen Catalina, MasterCard Advisors, Bizo, and more, eXelate makes online, offline, and custom modeled data sets actionable across 500M online consumers worldwide. As members of the NAI, IAB, trustE, Council for Accountable Advertising, OPA and Evidon's Open Data Partnership, eXelate is a leader in privacy compliant advertising practices. For more information, please visit <a href="http://www.exelate.com">http://www.exelate.com</a> or follow @eXelate.





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