convergence analytics

digital measurement in transition

2013

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About the Authors

Andrew Edwards has been a pioneer in the digital space since the 1980s. He introduced desktop publishing to the Yellow Pages, helped create "interactive television" with AT&T, taught advanced computer graphics at New York's Pratt Institute; and founded Renaissance Multimedia where he launched web sites for SoBe Beverage and Canon Digital Video. In 1998 he was awarded Deloitte and Touche's National Fast 500 Award. Today he is one of the most senior thought-leaders in the digital analytics space and a regular columnist for ClickZ (Incisive Media).

Edwards is a founder and former board member of the Digital Analytics Association (DAA), as well as a managing partner at Technology Leaders where he has provided digital analytics expertise to numerous F500 companies. Along with Rand Schulman, he founded Efectyv Marketing in 2012.

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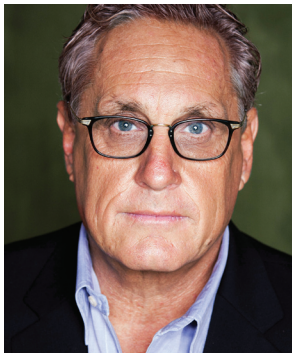

Rand Schulman is a pioneer in digital marketing and new media. He was founder and chief executive of one of the first SaaS-based web-analytics companies, Keylime Software which was acquired by Yahoo!. Schulman lead products and strategy at Webtrends, and was chief marketing officer of WebSideStory through its IPO, which was later acquired by Omniture/Adobe. Schulman was general manager of Unica's Internet Division, acquired by IBM.

Schulman was a co-founder, board member and is an emeritus board director of the DAA. He's been a trustee of the Direct Marketing Educational Foundation and is an executive-in-residence at the University of the Pacific for New Media and Marketing. He was named one of the top 100 BtoB Marketers by *BtoB Magazine* and is widely quoted and has numerous published articles on digital marketing.

He is currently board member and advises numerous mobile and social media companies - Viral Heat, Inbound Writer, SRI/Tempo, InsideView, Motally, Kontagent, Oomolo, and Covario/Rio as well as larger organizations and investors about disruptive marketing trends. Schulman is a managing partner with Efectyv Marketing along with Andrew Edwards.

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About the Sponsors

Cracking the customer code requires making the right offers at the right time to the right people through the right channels, essentially transforming an ocean of real-time data signals into right-time marketing."—Pelin Thorogood, president and chief executive, Anametrix.

Anametrix is a cloud-based, real-time, marketing analytics platform that transforms big data into actionable insights for right-time marketing. By collecting, analyzing and making sense out of data from virtually any engagement source, Anametrix enables clients to act on multichannel data to drive revenue and profitability.

The data explosion in social, mobile, digital and traditional media has created a whole new set of challenges for business. There's no longer a clear path to purchase in this multichannel world as consumers visit websites and brick-and-mortar stores; click ads; monitor their mobile phones for offers; research products and services online; and look for social mentions and recommendations. The volume and variety of the data on every aspect of the customer journey is so daunting that marketers often don't know which questions to ask—or how to do it in an efficient way to derive actionable insights.

Anametrix solves this challenge by presenting a holistic view of paid-, owned- and earned-media effectiveness to improve campaign results, lower acquisition costs, and expand customer lifetime value. The platform allows marketers to perform ad hoc analysis of consumer search and engagement patterns, demographics, social graphs and campaign activity, and correlate consumer response against corporate financial data. In addition to presenting real-time, cross-channel analytics dashboards and historical reporting, Anametrix delivers predictive analytics for easy forecasting. Armed with a deep understanding of their levers of change, marketers can reallocate their marketing mix to achieve the desired future.

Founded in 2010 by the trailblazing team behind WebSideStory, Anametrix has headquarters in San Diego, CA.

Rio SEO provides best-of-breed technology solutions for earned and owned digital media programs, specifically for SEO (search engine optimization) and social media marketing. Based in San Diego, Rio SEO is among the largest independent providers of SaaS-based SEO automation solutions and patented reporting tools. Rio SEO offers application modules for organic search and social media, including software tools for content marketing, campaign activation, auditing, reporting, change tracking, keyword competitive analysis, mobile site optimization, SEO execution, and local SEO automation. Rio SEO software clients include brand marketers, retailers, and digital agencies. More information about Rio SEO is available at www.RioSEO.com.

Tealium is the leader in enterprise tag management, serving some of the most demanding customers in the world. Tealium's vendor-neutral solution makes it easy for digital marketers to deploy and manage their third-party vendor tags, and then correlate the data those tags generate into an actionable source. Using Tealium, organizations can increase their digital marketing agility, reduce costs, and power their big data initiatives. The company differentiates itself through ease of use, scale and performance, and fanatical customer support. Tealium has more than 170+ clients on five different continents, including Petco, Lenovo, A+E Networks, Mattel, Fox Networks Group, Urban Outfitters, Perry Ellis, Nokia, NHL, Sony Online Entertainment, and many more. Tealium is funded by Battery Ventures, which has invested in market leaders such as Omniture, Bazaarvoice, ExactTarget, Akamai, and many more. Tealium has been recognized for its innovation by Forrester Research, Econsultancy, the Digital Analytics Association and others. For more information, please visit www.tealium.com.

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By Andrew Edwards and Rand Schulman

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About This Report

The new paradigm in marketing is "everybody is measuring everything". This report will show you how this major refocus of digital analytics will affect and challenge you as a practitioner, vendor or investor.

You'll find out how a combination of...

- big data
- cloud computing
- powerful algorithms
- custom data connectors
- sophisticated display layers

...has launched a new phase of marketing analytics with hundreds of vendors rapidly innovating as they compete in an unmapped new marketing terrain.

Based on our extensive survey, you'll find out:

- how many practitioners are measuring multi-channel and how they define it
- whether there's agreement on what "real-time" means in analytics
- what mix of tools are currently used to measure multi-channel
- how many vendors add professional services to their offering

Convergence Analytics: the confluence of digital marketing, big data, cloud computing, data connectors and sophisticated presentation-layer capabilities. You'll also discover the impact of connected data streams, the key capabilities of Convergence Analytics tools, the changing role of the analytics purchaser, plus survey findings, conclusions, recommendations and more.

Who Should Read This Report

The world's first Convergence Analytics report is a must-have for any vendor, practitioner or investor interested in this evolving market.

Look for quarterly updates focusing on specific verticals within Convergence Analytics.

Executive Summary

When the Wright Brothers built their flying machine, they took a cluster of existing technologies, combined them in an innovative manner and came up with something long-sought and never-before-achieved. They called it an airplane.

Convergence Analytics: that's our name for the confluence of digital marketing, big data, cloud computing, data connectors and sophisticated presentation-layer capabilities. The rush is on for nearly every company that ever measured anything for marketers (and many that never have) to claim they've got what it takes to provide the best single-view into all marketing data.

Think of Convergence Analytics as the marketing equivalent of "one ring to rule them all": many application vendors are claiming that within a single application they can, by connecting data from multiple sources, allow the marketer a 360 degree view of their customers' behavior as well as supporting data from resource planning, pricing, demographic sources and more. This has long been a request from the market, and now application vendors are able to combine technologies in an attempt to meet that request.

Convergence Analytics is still in its infancy as a discipline. But according to our survey results, there are a multitude of players in the market already, and many of them are pulling together data sources from web usage, call centers, client relationship management (CRM), campaign data, demographics, competitive data, and anything that gets captured off a click, keyword, mobile tap, or any number of other customer touch points. They're also using advanced data gathering and data normalization strategies to create a dashboard-like experience for the marketer.

For some, this will sound like "business intelligence" (BI) recycled and molded into a more shapely, marketer-friendly package. And to an extent they would be correct. Some entrants in the market, like Gooddata and Alteryx, identify with BI more clearly than others. Their predecessors if not their technology come from the quant arena, where power users build cubes and drilldowns in tools like Cognos and Hyperion. Others, like Adobe and Webtrends are coming from a web analytics background, adding more data streams to their traditional clickstream. Some, like XplusOne, have been combining data sets for years under the "predictive analytics" flag. And some, like Anametrix, have developed new platforms, with new applications and new approaches to solving the data-correlation dilemma for marketers.

As the trend towards convergence accelerates, we can expect to see more vendors expanding their connectivity, and vendors coming from non-traditional geographical locations (for marketing software) including the U.K. (Tagman), Sweetspot Intelligence (Spain) and Italy (Decisyon).

Everybody is measuring everything ... and telling the world.

RAPID CONVERGENCE

The goal, as always, is to drive web marketing towards its promise: and that promise has always been wrapped in the notion that, because it is measureable, it is therefore fundamentally more effective than older, more traditional marketing efforts. Digital marketing has always thrived on its ability to allow the marketer to learn quickly about how well their messaging is working in time to do something about it. And the assumption has also been that the marketer, armed with more up-to-date and detailed information about content performance, can then optimize those marketing efforts in a virtuous cycle of improvement leading to a more demonstrable return on marketing investment (ROI).

Perhaps the most salient factor in Convergence Analytics today is the speed at which companies from every sector are converging on it and the similarity of the problems they seek to solve. In a phrase, it seems that everybody is measuring everything: and telling the world.

Google introduced the beta release of their Universal Analytics application on March 22, 2013. This has the potential to significantly alter the landscape of Convergence Analytics, where currently there are no dominant SaaS brands.

Putting this in context, we should recall that when Google released its free Google Analytics tool, it radically altered the landscape in web analytics, and arguably drove a consolidation of brands to IBM and Adobe. Today there is only one major independent web analytics company (Webtrends), and they too have added no small number of Convergence Analytics components in order to remain competitive.

We expect Google's Universal Analytics, along with Google Tags and Attribution, to combine for even more influence than Google Analytics, as there are few entrenched mid-level players in the convergence space today as compared with the web analytics space when Google Analytics was launched.

Our advice to both vendors and buyers is to avoid overly complicating analytics until the business goals and processes are well defined. Expertise will become more important than ever. Google has nurtured a broad certified partner network that helps make its tool a standard throughout the industry. Most successful enterprise level deployments of Convergence Analytics will depend on a cadre of experienced people across organizational silos. Talent is in short supply so you will have to rely on the vendor, hire your own or use third parties to provide experience to implement aggressive, real-time, predictive cross-channel analytics that yield return on investment (ROI).

> [The introduction of Google's] Universal Analytics application ... has the potential to significantly alter the landscape.

How close are we getting to that goal of a single view for all the data? Who are the players? Of what should the buyer beware? This report will help provide guidance for marketers and business executives who want to better understand the trends and highlights of this emerging market.

The report is based in part on survey responses from over a hundred different vendors and over five hundred digital marketing practitioners as well as our experience as operating executives in the field. A few key findings are as follows:

MAJOR DATA POINTS: MARKETERS

82 percent of marketers are measuring multi-channel data ("MC").

37.5 percent say MC means web, social and mobile only.

35.6 percent say MC means web, mobile, social, marketing spend, sales, back-office data, off-line channels (store, TV, radio, print).

About half say they require "real time" data, but there is little consensus on what "real time" means.

60 percent say they are either using a BI tool now or plan to soon.

> All say they require "real time data," but there is little consensus on what "real time" means.

Over 90 percent use web analytics tools but only 57 percent are using it for multichannel optimization; while 40 percent use other tools to perform this work.

Company size of respondents were evenly split between $1-10m and above $10m.

MAJOR DATA POINTS: VENDORS

Many marketing services companies considered themselves vendors, even if they did not appear to have a branded software offering in the market.

70 percent say they collect real time data, but there is little consensus on what real time means.

70 percent say they offer a dashboard; however, 45 percent say data cannot be queried through their dashboard; and 30 percent say they have no direct access to a datamart or database.

75 percent say they "join" information from a variety of sources but only 56 percent use APIs or software connectors.

55 percent say they have an analysis layer (software/algorithm).

32 percent say they have predictive algorithms.

50 percent say they have automated "extract, transform, load" capability.

35 percent have no self-service component in their offering while fully 84 percent offer professional services to their customers.

Respondent vendors were evenly split on how long implementation takes, ranging from one day to over a month.

Please see "Appendix A" for full report results.

Foundations (Underlying Technologies)

Marketing analytics is probably as old as the first time anyone put up a bigger sign than the one they had before. Digital analytics is born of what was once universally called "web analytics", itself the grown-up version of log-file analysis. Log-files are still generated by every server today but they have been surpassed in utility by a combination of web-user tracking technologies focused on html-embedded javascript commonly known as "tagging".

PAGE-TAGGING

Until recently, tagging itself was considered the *sine qua non* of customer analytics (at least as it related to the web). The intense focus on web marketing produced an explosion of digital measurement, much of it based on tagging. The names that were made famous in the web analytics era include Omniture, Webtrends, Coremetrics and more recently and most famously, Google Analytics. With Google Analytics, digital customer measurement became a familiar concept to a very broad segment of marketers.

NON-CLICKSTREAM DATA

Siloed in older parts of the organization have long been non-web-based (and untagged) customer databases that included CRM, direct mail customer lists, point-of-sale analytics, and survey data. Many of these, until the last few years, required massive on-site computing power and specialists dedicated to making sure iron boxes stayed cool and more specialists to ask the iron boxes questions the iron boxes could answer.

THE END OF SOFTWARE

Moore's law played no small role in deprecating the in-house server farm. As processor speed got cheaper, it became possible for server-farm-specialists to rent out virtual server space, and then virtual functioning software, to whomever could come up with a small monthly fee. Software companies retired their CD presses and, relying on the enhanced broadband networks that now encircle the globe, have made call-and-response via browser interfaces as routine as corn flakes for breakfast. The results have been dramatic. Rare is the business today that does not pay someone for some remote processing and/or remote storage. For mid-sized businesses and many large ones, outsourced software or "software as a service" (SaaS) has become the rule with rare exception. Old, un-wired databases are getting hooked up or getting siphoned dry. The market for in-house software has shrunken to a fraction of its former size.

VISUALIZATION

At the same time, mostly everyone has taken for granted that understanding data is now a visual experience. Few practitioners today would consider poring over long lines of numbers. The visor and the sharpened pencil have given way to the "user interface"; the ledger to the dashboard; careful matching of paper documents to the custom report.

SOCIAL MEDIA

Finally, social media has run like a fever through marketing departments globally. While much misunderstood as a marketing tool, and while its business impact is difficult to ascertain even with measurement, social media is so prevalent that it wins a place at the table because of sheer bulk. Much as you cannot have a zoo without an elephant, you really can't have digital marketing these days without social media.

DATA OVERLOAD

And yet, a major complaint today is of an overload of disorganized information with not enough capability to rapidly deploy it towards decision-making. This complaint has been heard by software developers, especially those already in possession of some kind of tracking technology. And many applications have been responding to the marketers' ever-increasing need to an intelligent approach to data correlation and visualization. While they each have a different approach, they all seem to offer something we're calling Convergence Analytics.

ARCHETYPES

Some fairly archetypical companies in this rapidly evolving landscape include Adobe with its suite of analytics tools; Gooddata, a BI-type vendor with a focus on marketers; Domo, a well-funded BI-focused vendor specializing in elegant visualization; SweetSpot Intelligence with both workflow and convergence capabilities; Anametrix with a mix of data connectors and dashboard overlays; Ensighten with a robust and extensible tag management platform; iJento with its well-modeled open schema for connectivity; Greenplum, a unified analytics platform; Rio SEO with a tool that goes significantly beyond what its name implies; and Google. Google offers serious SaaS tools in many categories of convergence analytics and the muscle to make each offering a major market player.

Please see the "Convergence Analytics: Sample Vendors" section for a more complete list of vendors in the broadly defined market we call "Convergence Analytics."

Marketing Analytics Today: Rapid Changes, Difficult Decisions

RETURN ON MARKETING INVESTMENT

The outstanding goal in all marketing analytics (and a key driver to the Convergence Analytics market) is the continuing search for a return on the investment of marketing dollars; and the customers' desire to see more data from their organization in more comprehensive ways. This goal has proven more elusive than many had hoped, and remains the single most important factor in any analytics equation. Convergence Analytics is driven partly by a general dissatisfaction with an earlier generation of digital analytics tools. And both customers and vendors have been forced to change in order to meet this challenge.

BIG DATA

Additionally, the advent of "big data" as a buzzword has sent waves of fear and doubt through the digital marketing field like almost nothing before it. When experts use the words "big data" what they are really saying is that much more data is being collected today than ever before; and that the tools to access it and make sense of it are more powerful and sophisticated than ever.

The very largest companies will continue to build in-house big-data solutions because they have already been doing this for years. Until very recently, this type of data interaction was within the domain of only the largest and most capable organizations. Now, with new capabilities available to developers and more awareness on the part of marketers in every type of organization, the field becomes broader—and more confusing.

> Multiple digital platforms ... have made the notion of "web analytics" seem almost Jurassic.

MULTIPLE PLATFORMS

Social media venues, plus multiple digital platforms for mobile interaction have made the notion of "web analytics" seems almost jurassic. And with increasing measurement of non-clickstream data with tagged and social data, the notion of "digital analytics" may be on its way towards obsolescence.

CONVERGENCE DRIVERS

Convergence Analytics applications are the analytics industry's response to the above broad categories, but we can also describe additional drivers to some degree as shown below:

Arguably, these drivers may include:

The maturation of web analytics

- falling somewhat short of promise
- encountering a saturated enterprise market

The hegemony of Google Analytics

- offering a superior set of free tools driving the competition to rapid innovations

A confluence of enabling technologies

- cloud computing
- powerful algorithms
- instant display layer technology

A blend of product and service

- enabling the rapid addition of capabilities to SaaS products based on customer requests
- flexibility of offering meaning no need to ever say "we can't measure that"

A MAJOR NEW MARKETPLACE

The resulting marketplace is one of enormous breadth and variety. One way to think of it is to describe it as a digital equivalent of the vehicle market—anything with at least one wheel will qualify.

The offerings range from the digital equivalent of skateboards to heavy-duty mining trucks with twenty-foot tires; and yet the language used to describe the capabilities of widely divergent tools are often similar. Phrases like "real time", "connectors", "data science" and "algorithms" have come into general use, and no doubt vendors are deploying against these phrases in a variety of important ways.

But the new language makes it difficult for the buyer to understand who is really offering Convergence Analytics and how robust their offering really is; nor does it afford clarity as to how well-suited such an offering might be to the organization. Can any company that builds connectors to a remote data source and then imports it into a common view be the equivalent of any other company claiming to do the same?

It pays to look more closely at the offerings. For instance, how mature is the technology behind the product, and at what price offered? How much of the offering is really a product; and how much of it is really a "data scientist" service? What does "real time" truly indicate? Do connectors provide more than simple conduits of information, leaving the real work to other applications? What purpose does the algorithm really serve? How much modeling is built into the architecture, and how much is left up to the marketer based on a new way to look at data?

> [Marketers] need to remain vigilant against false positives in their cohort data.

As a rule of thumb, the more mature the offering, the less one-off services will be involved; yet it may also be that much more difficult to implement for its native complexity. History also suggests that the more mature offering, once properly implemented, will function more reliably than an untested platform.

BUSINESS INTELLIGENCE OR CONVERGENCE ANALYTICS?

It may also be true that some companies have been combining data in ways that resemble Convergence Analytics for quite some time—they just haven't been identified this way. As we noted earlier, one of the ancestors of Convergence Analytics is the practice of BI. Such tools as Hyperion and Cognos were built to handle multiple streams of data and were pitched at the quantitative IT teams at larger companies. While these tools saw some success, "BI" as a sector was seen as too difficult to implement and perhaps too arcane for most businesses to utilize effectively.

What separates Convergence Analytics from BI are the capabilities listed above: those that take cloud-based computing power and massive amounts of data, then via sophisticated modeling, present them in a more accessible and more appealing way to the marketer.

Further, the rapid evolvement of technologies has proved a challenge to everyone, but especially vendors. In the new marketplace, they compete against perceptions ("lack of ROI"; reports that are "difficult to understand"; a lack of actionability); and a very much expanded set of competitors adding capabilities to their offerings in ways that can often seem strikingly similar to one another.

For instance, where "siloed" information was long a barrier to marketing epiphanies, now "data connectors" are widely deployed. Where "ROI" was a barrier, now "data overlays" and "cohort comparison" including much more detailed analysis of campaign success combine to bring together disparate data sets (including untagged cost and inventory information) in new and enlightening ways.

Where marketers might once have justifiably complained that the data suggested no particular course of action, and while they need to remain vigilant against false positives in their cohort data, now actionability based on business rules built into algorithms may either suggest or automate new outcomes.

All these and more constitute the disruptive challenges and measurement difficulties that have driven the development of Convergence Analytics solutions. The old order has fallen—we find ourselves in a new age of analytics and insight.

The Convergence

MULTIPLE TECHNOLOGIES, MULTIPLE CHANNELS

Convergence Analytics is the combination of analytics technologies deployed against numerous sources of marketing data for presentation in a single, generally browser-based view. What Convergence Analytics companies have in common is an understanding that siloed information suffers from a serious dilution in value, as opposed to data that can readily be compared to other data, usually by comparing trends within similar time frames.

What many of them have in common are the following technologies:

Convergence Analytics Technologies

- Connectivity to multiple data sources
- Extraction of data from multiple sources
- Transformation of data into a common format
- Capability to load data into a single readily accessible database
- Ability to display the collected and transformed data into a single view, or series of related views
- Ability to create custom views of data

Non-Web Data Sources for Convergence Analytics

Much of this data is now to be culled from sources other than the web. These sources include:

- Mobile
- Social media
- Customer databases
- Call center data
- App data
- Voice of customer data
- Membership data (logged-in activities)
- Email
- Ad networks
- Competitive benchmarking
- and more

WHY CONVERGENCE ANALYTICS?

The digital analytics market today might be fairly described as one that has not lived up to its promise. And if digital analytics has not succeeded as well as it might have in delivering ROI, why would we now be moving towards an even more complex measurement paradigm?

There are at least four ways to approach the answer.

The Power of Information

First and probably most importantly, it is that marketers (rightfully) still believe in the power of information to transform their ability to succeed. Some have actually achieved this, with the right tools and the right expertise and the right focus. So while the broader market has not achieved all it might have hoped from digital analytics, there are enough actual success stories to keep the market in motion.

Technology Improvements

Second is that technology improvements are driving innovations in marketing analytics. As we mentioned in the Executive Summary, a combination of access to much more data than before; sophisticated algorithms and digital data connectors; inexpensive cloud computing; and modular application construction tools that supply display layers for end users with relative ease; all these are contributing to a preponderance of offerings, from every corner of the measurement universe, towards the same goal. Simply put, Convergence Analytics is happening because *it can happen.*

More Sources, More Data

Third is that the customer, believing still in the power of data, now also believes in the power of *more* data. The cry for seeing data from multiple channels has reached a sufficient pitch that application vendors are either launching new offerings, adding features to existing offerings, or taking their existing offering and pitching it afresh

to marketers. Ultimately the vendors are meeting the customers on the field of Convergence Analytics: where streams from multiple data sources are overlaid in meaningful ways such that a marketer can see the relationship of trends and, while remaining on guard against misinterpreting correlation for causation, begin to pinpoint cause and effect (in other words: Campaign A launched just before a spike in Metric B; therefore Campaign A plausibly caused that spike).

Results Automation

Finally, the customer continues to look for velocity—more rapid results. This has built demand for the ability to automatically adjust content based on the success metrics of the campaign; or combined with enterprise resource planning (ERP) data about availability and/or margin, rush offers to different geographics based on data gathered from campaign response. EdgeSpring allows practitioners to gain critical insights to pipeline, forecasts, team performance and trends. Other vendors are now overlaying econometric and cost data with demographics. Ensighten can drive carousels of content within campaigns based on behavior picked up in the clickstream. Both methods are designed to automate the maximization of campaign yield.

MORE DATA: MORE INSIGHTS

Arguably there are dozen, perhaps hundreds of companies with offerings that fit the model we propose as Convergence Analytics. Each one pitches differently, and even as there are a range of offerings with a range of capabilities, they all offer a similar promise: more data from more channels displayed more effectively. The expectation is that with more dimensional data streams, more insights can be gained.

And if a process is in place to define and take action, then Convergence Analytics holds a world of promise.

Tracking the Digital Customer

Arguably the first commonly-used digital behavior tracking tool was a product created by WebTrends called Log Analyzer in the late 1990s. It was able to parse the log (activity) files of web servers; and it was able to report such things as "hits" to the server and "browser type" of the user; and which pages were served and how often. It was enough to whet the marketer's appetite and made marketers aware of "web analytics" generally. Another early entrant was KeyLime, which allowed marketers to view, perhaps for the first time, "real-time" activity on its web site pages in a dashboard format.

FROM HITS TO TAGS

What became apparent to data analysts as they reviewed results from log files was that there were in fact substantial discrepancies between server activity and user activity. While "hits" became almost a byword for "popularity", analysts knew that server activity was far from an accurate indicator of actual browser activity and user behavior. Demand for better accuracy and granularity encouraged the creation of a paradigm now in use almost universally in digital analytics. Commonly this is known as "page tagging". Page tagging requires the placement of snippets of javascript into the html (usually in the header) of every page to be tracked; and it is coupled with a "web beacon" or single pixel graphic file on the same page. When the invisible graphic file (or "beacon") loads into the browser, the browser executes the javascript, and sends the collected page activity data through a web beacon call to the remote collection server. This created a much more accurate way of measurement—because tracking only takes place when the page actually loads into a browser.

The companies that made this market grow included Omniture (now Adobe), WebTrends, WebSideStory (acquired by Omniture, now Adobe) and CoreMetrics (now IBM), among others.

The tagging paradigm remains the standard today for clickstream data. In fact, tagging has become so prevalent it has spawned its own Tag Management market, including companies like Tealium, Ensighten, Tagman and Satellite. The market still offers products that track log files and server behavior; and there are significant products that measure user behavior via panels of users and algorithmic extrapolation, including Comscore and the well-known

Nielsen company of broadcast television fame. These products have the significant advantage of allowing customers to benchmark against competitors, but the actual metrics are in general not as detailed or customized as those available with a tool that measures one's own site in depth in a customized, fully-tagged manner.

BEYOND TAGS: CONVERGENCE

Convergence Analytics sees tagged data as a multi-faceted input factor but certainly not the only data that can yield insight. One of the key characteristics of Convergence Analytics tools is their focus on pulling data from both tagged data (desktop, mobile, social, ad networks, email) and untagged data (point-of-sale, call-center, buyer history, demographics, seasonality, CRM, cost, margin and inventory).

Stitching together the customer journey throughout a lengthy brand encounter is a key goal of Convergence Analytics; and generating holistic insights about a full spectrum of customer behavior based upon that data. Another key factor is the ability to respond to the data—often referred to as "actionability". Few would argue that data leading to zero activity is worth zero. Analysts can use reporting systems to glean insights; and certainly those insights can be acted upon. But in lieu of this, many organizations see reports as a dead end.

CONVERGENCE DELIVERABLES

Convergence Analytics seeks to change the reporting paradigm. At the top end of capability, Convergence Analytics tools deliver one or both of the following:

- "Predictive" analytics: the practice of modeling business rules around data in order to suggest possible outcomes based on a variety of adjustable "what if" scenarios
- Active decision capability: built-in ability to make decisions on-the-fly about content suitability and the ability to dynamically serve that content (evoking the "right message/right person/right time" paradigm)

Convergence Analytics is the industry's way of combining existing technologies in new ways that seek to close the loop on the value of digital commerce: to make observable data into a workhorse for the organization, rather than a curiosity or placeholder.

The Search for ROI

As stated in the previous chapter, there would be little reason for tracking user behavior if no action were associated with the findings. And while too many practitioners today settle for simply knowing "what's going on" and have no process for taking direct action based on what the data tells them, the market in general has long been focused on utilizing digital analytics to demonstrate a return on investment. In fact, without this goal, the cost of purchasing and implementing digital analytics solutions could never be justified.

A PROMISE UNFULFILLED

The major problem today for digital analytics as an industry, and why Convergence Analytics is transforming the landscape is both simple and obvious. This problem can be stated as follows:

In general, digital analytics has failed to deliver sufficient ROI to justify its continuation in an unmodified form.

It would be easy enough to point a finger at the application vendors and say they have not provided the solution. But this would be to ignore the behavior of practitioners as part of the problem. To be more precise, it would be to ignore the lack of a standardized ROI-focused process on the part of practitioners in which the applications would play a more productive role.

MAKING SOFTWARE WORK HARDER

While the purpose of this report is not to inculcate a new process for achieving digital ROI, it is within our purview to suggest what such a process might look like. Even as we move to Convergence Analytics—where many more silos of information get measured and displayed than in digital analytics—it is safe to say that without an action plan based on discovery, there's not much reason to engage in measurement at all.

Consider once again the time-honored goal that long-predates digital marketing: sending the right message to the right person at the right time. The output of the marketing process, digital or otherwise, is supposed to be greater throughput of goods and services. The only way this paradigm can be approached is with information about user-behavior (in old-fashioned direct marketing, this often would have been characterized as "response rate").

While the subjects of goal definition and actionability deserve more space than we can allow, we can touch upon the surface of it in order to suggest the reason why analytics continues to hold promise even as it has often proven disappointing. Suffice to say that if the following processes were taken up by organizations involved in digital measurement, then ROI would be much more achievable than currently surmised.

Digital analytics has failed to deliver sufficient ROI to justify its continuation in an unmodified form.

SETTING GOALS

Briefly, there are two phases to a digital marketing action plan involving analytics.

First, let's mention goal definition, which has long been popularized as the creation of "Key Performance Indicators". In this scenario, the practitioner must ask of the organization: what kind of content are we measuring? And what is the goal of publishing that content (whether on the web, via social media, mobile, or in an app)?

Four Site Types: Four Goals

There are millions of digital content domains today. So it may seem counterintuitive that, very broadly, they fall into a small set of categories. Our position is that they almost always fall into one of the following four content types, and seek the four goals as shown below:

- Type: Brand or media>goal: overall time spent interacting with content
- Type: eCommerce>goal: direct sale
- Type: Lead generation>goal: contact information; direct contact; inbound marketing
- Type: Self-service>goal: rapid access to information

The above goals are guidelines to defining when a "conversion" or "desired action" will have taken place.

The frequency with which content drives a desired action equals its success as a marketing tool.

Cycle of Improvement

Second, let's describe a five-step virtuous cycle of improvement that can drive better performance through the use of marketing data.

- Step 1: Define goals (determine content type and expected outcomes)
- Step 2: Collect data (using a user-tracking application, create a customized reporting solution)
- Step 3: Analyze findings (determine success of content and create an action plan for improvement)
- Step 4: Adjust content (change content to address the deficiencies revealed by data collection)
- Step 5: Measure again and compare (review effectiveness of changed content against old)

And since this is a cycle of improvement, it should be an embedded process that continually seeks improvement in content performance.

Convergence Analytics will require the same approach. How many organizations are ready to invest in the above activities in a meaningful way? The ones that do, will find their digital marketing performance much enhanced; and as they measure across channels, pulling data from multiple silos, the same will apply.

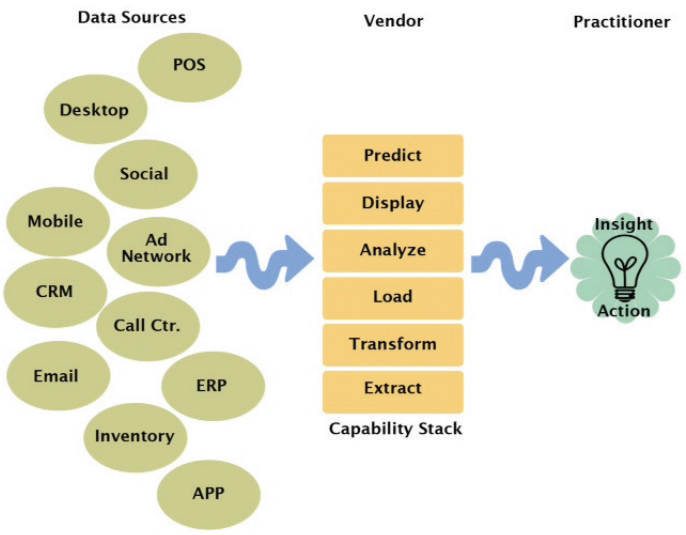
Stacks and Channels

Convergence Analytics can be defined as the intersection of a stack of software capabilities with a series of marketing channels.

The stack is an interconnected set of capabilities that allow a software tool to perform its task.

In the case of a graphics tool, it might include the ability to receive motion-input from a mouse or stylus; the ability to control the color properties of individual pixels; the ability to perform transformative actions on both colors and shapes; and the ability to display a preview or facsimile layer to the graphic designer.

In the case of a Convergence Analytics application, the stack includes the following capabilities:



ACCESS TO DATA

Every analytics tool requires access to data in order to drive insights. Until recently, most analytics tools were closed systems and could only access data that was specially collected and formatted so that their own software engine could analyze it and display results. This was straightforward, accurate and effective. But it was also one-dimensional. In a multi-channel world, where customers demand access to data from disparate sources in order to make comparisons between data from different data silos, the notion of a single stream of data (say from web analytics) becomes antithetical. Convergence Analytics tools access data from any number of sources, often collected by other tools and stored in systems not designed to work with the application now accessing the data.

EXTRACT THE DATA

Data may be the raw material of analytics, but it needs a great deal of refinement before it can be put to use. The chief task of extraction is in making sure that the data is fully and entirely pulled from the source in a non-lossy fashion much as a pipeline will not want to spill oil on the tundra. Corrupted data, or data that gets lost in transit will make the rest of the task that much more difficult if not impossible.

This task is accomplished by a set of data communication tools called "connectors". Companies as divergent as iJento, Anametrix, Ensighten, Gooddata, Decisyon and Rio SEO all build connectors to collect data from disparate sources. In some cases, the connectors are bi-directional such that true data exchange can take place between platforms.

Data integrity is perhaps the key virtue of a good data extraction exercise.

LOAD THE DATA

The raw data, now pulled from its source, needs to be stored in a new, flexible, robust database that is capable of responding to complex, multiple requests in rapid fashion (often referred to as "real time"). Often this database will be more flexible than that from which the data was pulled, and often the data will be reposing in a schema it shares with data from other sources. Much as any storage facility needs its data to be safe as well as ready to send out to whatever request is made for it, so does the data storage facility need to be secure, unbreakable and agile. At this stage the data is no different than from when it was collected but it is housed in a new facility awaiting deployment.

TRANSFORM THE DATA

Perhaps the most difficult part of the data organization stack is the need to transform, or "normalize" the data. Anyone who has ever had to get a mailing out based on a list can understand the need to map data properly. In a

simple mailing, it means making sure the column containing the first name (whatever it may be called), is properly sent to the correct column in the mailing database such that the first name shows up in the greeting of the letter or email. Data transformation is much the same in principle except for its complexity. In a simpler environment, there was little need to match data to other data. But Convergence Analytics companies need to be agile with data. Rio SEO transforms data by taking it into a "hyperlocalization" platform that enables large retail enterprises to create local landing pages in a fraction of the time usually associated with even small site-development efforts.

In a Convergence Analytics paradigm, data-agile applications will be able to take data from multiple, disparate sources, match common denominators on the fly, and in essence re-organize the data into a common schema that can be queried for insight.

ANALYZE THE DATA

The data analysis engine is the heart of the application. Based upon an analog (human) request, the analysis software must immediately respond by accessing the transformed data and delivering results to the analyst. The analysis engine consists of a complex weave of algorithms that take business rules and data requests, extracts the right data from the right source, and prepares it for visualization. Convergence Analytics algorithms are many times more complex than single channel analytics; because they must deal with so many more data sets in order to satisfy the demand to see cohort (related) data in a single view. Without robust, rapid, accurate analysis, there is nothing to show the analyst.

DISPLAY THE DATA

Data visualization is designed solely to assist the human observer to make associations and draw conclusions based on visual input. Of course there are a small number of individuals who can make sense of data output without visualization, but few marketers or business owners are among that number. Visualization represents the democratization of analysis, such that anyone who can understand a trend line or pie chart can begin to make inferences from what is shown. While it may seem like a "surface" feature, the display layer is often the most critical in driving user acceptance, as it is really the only thing with which the user ever interacts. It can be observed that a tool with a clean user interface and well-functioning analysis engine will usually become more popular than a tool with a stellar analysis engine and a less-attractive interface.

In Convergence Analytics, the data-agility of the tool becomes apparent at first glance: most applications provide robust and rapid charting capabilities, allowing users to mix and match data, and especially to perform overlays of data such that patterns can be discerned. The presumption is that well-presented data will make it easier for marketers to make content and campaign decisions.

ADDITIONAL FEATURES IN CONVERGENCE ANALYTICS APPLICATIONS

The above represent the current capability stack that defines many analysis tools, and which, in Convergence Analytics, becomes the vertical set of capabilities that gets *played across multiple channels.* Lacking any of the above capabilities, the tool in question would not qualify as useful for today's demanding analytics environment.

Actionability

In addition the need for deployment of this stack against multiple channels is an additional market requirement that sets off a new challenge for all vendors in the space, and that, as we have noted earlier, is the notion of actionability. In other words: we have seen the data about the campaign and its success in conversion; so what do we do now? Tweak? Retire? Substantially alter? Stick with it? And how do we make sure our content is optimized for its intended audience; and how do we make sure we get the right message to the right person at the right time?

Predictive Analytics

Many applications either include or are in the business of including what we have previously referred to as "predictive analytics" features. It's a bit of a misnomer, because there isn't really much "prediction" going on, at least not in the way that the lady at the county fair can see your future in the bottom of a teacup.

iJento takes key performance indicators (KPIs) and runs a correlation routine that combines, for instance, revenue, organic page searches and other trackable factors, pushing them to a report that can predict revenue attainment in an upcoming period. Rio SEO provides predictive forecasts on search term effectiveness and the impact of term variations. Other solutions can predict the effects of seasonality and geography on campaign success.

In each case an algorithm is deployed to review your content. Then for either a single user or a class of users, determining their characteristics based on behavior, demographics, creditworthiness, purchase history, estimated lifetime value and more, and determining which of your stored content should be shown to that individual at a particular juncture in their interaction with your digital properties. The "prediction", if there is one, is that this scientific approach will yield a higher conversion rate and a better ROI than a random sample. The extent to which the predictive layer delivers a higher conversion rate as compared to a random display of data is the measure of its success.

Many see this as the keystone in the arch of customer relations. For if the marketer can construct a strong enough support mechanism for proper messaging, then the entire structure can be completed and held together by the power of actionability. At its best, actionable algorithms can make sure the immense force generated by the data structure is held in place and energized, much the way a keystone holds in place a mighty arch that bears the weight of the entire enterprise.

Actionability is certainly not a mainstream capability yet. Some predictive layers remain hypothesis-display engines. Others take direct action based on business rules. But as the technology matures, and as more data sources get deployed against more channels, we may begin to see the keystone being lowered into place.

Broadening the Market

Large enterprises have long devoted large sums of money and a great deal of technology to build their own convergence mechanisms, including significant efforts in the predictive realm. They have deployed earlier generation BI tools to collect data across multiple channels of data and, with the aid of talented and specialized analysts, determined resource allocation across their enterprises. These industry-leaders will continue to hold an advantage—but Convergence Analytics closes the gap.

Convergence Analytics (taking advantage of technologies now lower in cost and more flexible than ever) will allow mid-sized companies to begin deploying powerful capabilities against formerly inaccessible data across multiple channels. They will begin to enjoy perhaps not all of the success of the very big players, but better success at predictive analytics than they might formerly have hoped.

Product/Service Mix

One of the more interesting findings from our survey was to see how many service-oriented companies filled out the part of the survey intended for vendors. These included digital agencies, marketing companies and analysts who all saw themselves as vendors because their customers in some way purchase digital analytics (or insights based upon digital analytics) from them.

This suggests a much larger issue that has largely gone without enough comment, and that is the very gray area between what constitutes a software or SaaS offering and what constitutes a professional service offering. Much of this lack of clarity is integral to the notion of "software as a service" in and of itself.

SOFTWARE BECOMES A SERVICE

In the older world of software-in-a-box, the lines were very clear. The vendor sent you a disk and you installed the software. Perhaps there was a value added reseller (VAR) involved that helped you set it up; and the software company had a help desk. But with the advent of broadband, cheap storage and rapid processing, it became possible to offer software on line. In a networked world, the model has few detractors if any. It empowers both the vendor by letting them control and adjust the offering much more closely, and the user by allowing them to stop worrying about running software and "keeping current". At an enterprise level, the volume-based pricing associated with SaaS has proven irresistible to vendors. Today you can hardly find boxed software on the shelf. Truly the advantages of SaaS are many, and rather evenly distributed between vendor and customer.

SERVICING SAAS WITH EXPERTISE

But in a business-to-business environment we are forced to ask what is the nature of the vendor itself, and should the buyer see it as a product or a service or an amalgam of parts that includes third party experts? The answer to this question is important because it determines the ultimate value and ROI associated with the offering.

Simply put, which product vendors offer an optimized set of services while also delivering enough value in their product? Which vendors best understand what a services company needs to offer; which are actually impeding the adoption of their tool by trying to do too much via services, and doing it suboptimally? Our call is not to provide a guide or a ranking of companies on this scale. But we can offer some insights as to how one might compare qualities.

IMPLEMENTATION AND EXPERTISE

In reviewing the vendor landscape a little more closely, we encounter a peculiar anomaly: many analytics vendors' tools require extensive implementation due to the fact they work in a very customized manner with their clients' data. There is little similarity between the configuration of one "instance" of the vendor's product and the next. This means that each implementation requires a robust professional services component in order to deliver value. It is more the rule than the exception that the marketer will need to obtain significant professional services in order to get what they need out of almost any Convergence Analytics tool.

Ensighten says their professional services offering is robust and includes configuration. They establish a current state of technologies at the customer; establish a set of goals; and create a project plan for migrating tags to their platform in stages. Webtrends and Adobe maintain extensive professional services groups and have done so for years. They configure and integrate their analytics tools with the customer's business requirements, allowing a much higher rate of insight per customer than would be possible without expert assistance. Rio SEO was spun off from digital agency Covario and finds its roots in a customer-centric, services-rich environment.

Higher-performing vendors focus on quality software and understand that expertise may best come from any of three sources: their own services group; internally at the customer; or from third party experts. Top performers know that customer satisfaction is the key indicator for increased adoption of their technology.

Segmentation and Positioning

Historically, analytics vendors have created products known as "point solutions". An instructive corollary to this name is the notion of "pain point"; a term that defines a particular problem that, presumably, can be solved by a particular tool.

For instance, the marketer responsible for "the web site" experiences a pain point at the juncture where they need to receive data about the site's business success but have no way to get it. Hence, a "web analytics" solution and a ready customer base.

The same would have held true for the email marketer, the social media marketer, the SEO specialist, the advertising campaign manager. Entire industries have sprung up around satisfying the needs of these marketers. Typically these marketers would operate at least semi-independently of one another, and would almost certainly make separate purchases to fix their own "pain point". Typically there is little co-operation between silos.

Convergence Analytics races to a single solution for all organizational silos and blurs application functions, as well as buyer roles and responsibilities.

ANALYTICS CATEGORIES

The marketing analytics application market has been defined by a number of categories such as:

- Web analytics
- Mobile analytics
- Social analytics
- A/B Testing
- SEO
- Email
- Predictive analytics
- Ad network analytics
- Competitive analytics (Benchmarking)
- BI
- Content management systems

But now application vendors from all the above sectors are making efforts to measure results from several different sources both on line and off line; and so the categories have begun to disintegrate. However, the buyer remains mostly in place as before.

CHALLENGING THE VENDOR

This creates a challenge for the vendor. Who is the buyer now? Who is experiencing that "pain point" where all data needs measuring but isn't? By rolling up all of the capabilities into a single offering, vendors must be careful not to cut themselves off from their customer base. They will need to address the needs of all the organizational pain points; but those different parts of the organization don't necessarily come together in one area of responsibility—making it harder for the vendor to gain buy in for their product.

Convergence Analytics races to a single solution for all organizational silos and blurs application functions, as well as buyer roles and responsibilities.

In working to serve more and more parts of the organization, the incoming Convergence Analytics tools find some entrenched players already deeply embedded inside the larger enterprises. These solutions include such venerable marques as SAP, IBM, SAS, Axiom, Merkle and Unica. History has shown that large, entrenched organizations can be dislodged by smaller, newer, more agile solutions like Alteryx, Greenplum, Gooddata and Decisyon; and in the current environment it's really an oceanic wave of solutions all crashing upon the same shore at the same time. The force of it will certainly change the market, but there is no clarity yet on who amongst the current players will win the day.

DIFFERENTIATORS

Much of the battle is to be fought around the success of a given competitor's key differentiators. In other words, whomever positions best and also has a compelling offering, will begin to outpace the others and take their place as a market leader.

But the trouble today is that customers may not see enough differentiation in what Convergence Analytics vendors are saying about themselves or the market. From nearly every part of the product spectrum come similar claims: that the combination of data connectors, common

keys and sophisticated display layers creates a new kind of offering. The fact is, these claims are correct. But despite this, many vendors are still searching for their key differentiator: what makes them different or better than several others in the same space?

CREATING THE RIGHT MIX

Historically the difference between success and mediocrity in analytics has been less about picking the very best tool than it has been about combining a capable tool with superior services and expertise. Many solutions today, with their complex data connections and multi-channel capabilities, require perhaps even more attention to expert services than ever.

As we have suggested earlier, professional services has always been a critical part of success in digital marketing. In the Convergence Analytics market, practitioners should continue to expect a need for professional services and perhaps see the trend accelerate. It may even be the case that the winners will be the companies that either provide the best customer service themselves; or form strong partnerships with technology implementation partners; or create a developer environment such that their technology becomes a "standard".

FREEMIUM AND ITS PERILS

However, the latter option may require the development of a robust "freemium" platform in which the focus is on breadth of user-base; rather than the focused business-to-business effort that currently seems to be the rule.

Google has already grabbed large portions of the digital analytics market with Google Analytics (free) and Google Analytics Premium (at cost). With their Universal Analytics, Tag Management tool and their ad network, they may be the single most important vendor in Convergence Analytics—much as they are dominant in other markets. The impact of Google on every company in the space is unavoidable. And because they have the scale and the flexibility most of their competitors lack, they can become major players in almost any digital market they choose. Playing against Google holds significant peril for vendors, but for marketers, the reward is more rapid innovation and more attractive cost structures.

SERVICES KEY IN ANY ENVIRONMENT.

Even in a freemium environment, good expertise and services remain key to success. Google has created a well-known certified partner program for its analytics product.

BEST PRACTICES REMAIN KEY

In addition, the prevalence of services requires the implementation of a set of processes and best practices that remain somewhat wanting in the real marketplace. We have described these earlier in the report, and include the establishment of such practices like proper KPI definition, proper tagging and implementation, agile analysis of results, content adjustment and testing. More often than not, these key process elements are in short supply, especially in a complete cycle.

> The impact of Google on ... the space ... brings significant peril for vendors, but for marketers, the reward is more rapid innovation and attractive cost structures

Making sure organizations can adequately leverage the tools and put them to work will probably be amongst the tasks confronting any Convergence Analytics vendor hoping to come out in front of the rest. This will be especially the case in the market comprising second-tier, non-F500 customers. The very largest companies often enough have the depth and breadth to be able to supply their own expertise. But smaller companies—by no means "small businesses"—usually cannot. This need will be met by professional services either from the vendors, or vendor partners, or third parties such as analytics consulting companies, digital agencies, or individual experts. But whoever delivers the expertise, it's likely to be a main component of any and every successful data analysis operation.

CHANGING ROLES IN MARKETING

While it's true that the technology is racing well ahead of our collective ability to socialize and even understand it, there are stirrings on the buyer side as to role definition. This is especially true at the most senior levels of marketing, specifically at what has been called the position of chief marketing officer (CMO). Some have said that the role of CMO is "dead". While this is hyperbolic, it may be true that the role has changed enough to warrant its renaming. Some of the nomenclature in play includes terms such as

chief content officer; chief revenue officer; and even chief information officer.

This represents a sea change in the role of marketing—where marketing has begun to spread its digitally measurable influence throughout the organization in a way that seems a natural outcome of the basic principle of marketing—and that is to maximize shareholder value through increasing the velocity of customer acceptance for the shareholders' products.

As marketing has become more measurable, its visibility has grown and so has its responsibility. The natural progression of this has resulted in marketing measurement applications to go through substantial transformations as well. And in doing so, they begin to position themselves for measuring more and more of the organization's data, with marketing at the hub.

Vendors from nearly every sector mentioned above have developed the capability to build connectors to several data sources, combine them into a consolidated form, and allow the marketer a more well-rounded view of the factors affecting actual ROI. This has proved to blur the lines between roles in the organization—as the above discussion of the role of the CMO suggests.

WHO DOES WHAT?

For instance, in an environment where every tool measures everything, whose role expands? Does the web site manager take over more of the mobile aspect? Does SEO move into content management? Does email move more into social media responsibility? Does the sales department take more responsibility in the marketing cloud? Or perhaps content managers take control of all of it. The tools can help them all but are they ready to take advantage? And have vendors crafted the right positioning to appeal to these diverse customers?

Perhaps we will see the creation of a chief digital officer role? Gartner goes so far to predict that, "The chief digital officer will prove to be the most exciting strategic role in the decade ahead. The chief digital officer plays in the place where the enterprise meets the customer, where the revenue is generated, and the mission accomplished. They're in charge of digital business strategy." This role will surely use Convergence Analytic tools.

The chief digital officer will prove to be the most exciting strategic role in the decade ahead. The chief digital officer plays in the place where the enterprise meets the customer.

So the blurring of tool capabilities has created an environment where the clear divisions between organizational responsibilities have begun to erode, thus eroding the surface of the sellable market. And the combination of convergence of messaging, convergence of capability, and convergence of organizational roles will represent significant challenges for participants from every corner of the data analysis community.

Conclusions

Based on extensive industry research, including a survey, our years of experience as operating executives and in-depth discussion with representative vendors, it's clear that everybody *is* measuring everything—or at least they want to.

Vendors and practitioners from every corner of the digital universe are converging on convergence. One good question to ponder is, are they compelling themselves towards this, or are they being driven towards it by factors outside their control?

Perhaps more importantly, which vendors might end up winners in the new space; and how will marketers quick on the uptake of this new paradigm prosper in an ever-more-competitive economy?

CONSOLIDATION

If history is any guide, vendor consolidation is in order. Where vendors had staked out claims in what appeared to be a set of well-differentiated digital intelligence domains, many now rush to a smaller patch of real estate in an attempt to be everything to everyone. Some will do this in more convincing fashion than others. It portends the destruction of weaker companies and the absorption of smaller, strong companies into larger, more well-funded (or more profitable) companies. We are at the very beginning stages of this process.

WINNING CHARACTERISTICS

Which characteristics may come to define the companies most likely to prosper by delivering on the promise of Convergence Analytics?

Most likely it will be those that develop strong offerings in the following areas:

- flawless, multitudinous connectors to third party data
- demonstrable predictive customer targeting success
- professional services execution
  - internal excellence
  - via strong partner network

The above three represent perhaps the most difficult challenges facing the industry. The reasons for this are:

Connectors

- Each connector is a one-off. A specific sub-unit of the vendor product that creates a bridge between a specific, ever-changing external data source not under control of the vendor; and the vendor's own specific data intake system and internal database. This indicates a practice that cannot be scalable nor repeatable and therefore subject to intermittent or frequent failure.

Predictive

- Predictive analytics remains relatively ill-defined, and even by a generous definition is mostly aspirational at this point. Even with better stitching of the customer-centric data story, the outcome is never certain to succeed. As with connectors, it relates to a constantly changing, evolving, environment to which it must respond very quickly, and in addition, requires all the data and all the processing power the vendor can harness. It is at the top end of technological difficulty and can never remain fixed. One day's success may become the next day's failure, depending on the outcome of a campaign. Like they say about Hollywood, predictive analytics is likely to be that part of the industry where "nobody knows anything for sure".

Expertise

- Professional services is both much more prevalent in Convergence Analytics than is widely known and more of a critical failure point than is commonly admitted. That said, it also represents the greatest opportunity for both vendors and practitioners. It is prone to a lack of scalability. It suggests one-off success and the possibility for multiple failure-points. Perhaps most importantly, it is reliant on that least manageable resource of all, people. We believe it is generally the case that nearly everyone involved in Convergence Analytics (both on the vendor side and the customer side) typically undervalues professional services. It is no secret that both vendors and marketing efforts have failed because they rely too heavily on what the software itself can do, versus the amount of expertise and customization needed to make it perform for the customer. Moreover, many vendors as well as customers lack the internal resources to build out a network such that they can expect expert

service providers and consultants to help make their own efforts successful.

Yet those who solve for effective expertise and a true understanding of customer's unique requirements will stand to benefit substantially.

"X" FACTORS FOR VENDORS

There are two other major factors that will influence the shape of the Convergence Analytics space. The first is entirely within the control of the vendor; the second is entirely outside their control.

Messaging

As we noted earlier, vendors typically sell point solutions—where they solve "pain points". In a rapidly evolving market (taking into account the morphological changes in the community of buyers), it will be the identification of the pain point and the way in which the vendor describes its solution that will help define that company destined to compete seriously in the near future. In a market where differentiation remains mostly elusive, whichever vendor develops the best manner in which to describe the problem they are solving will gain significant advantage over the rest.

This will be especially difficult because so many vendors today are claiming to solve the same problems in the same way. And many vendors, depending on their timing in the market and which sector they come from, seem to trail behind their old messaging, often weighed down by it.

Google

Google is so prevalent in the digital marketing industry that it defies classification. Moreover, its resources both in technology and in dollars will dwarf that of any competitor. In fact it is so large and so fast-moving that it has the ability to transform, even distort any market it addresses. Its innovations force other companies to innovate. Google's movement into a particular digital marketing space drives the other players in the space not to compete better but to re-define themselves—for there really is no competing with Google in a traditional sense.

A cogent argument could be made that we are moving rapidly to convergence analytics because of Google. Google may in fact already be the model for converging data and analyzing it in any way it chooses. Rather than stopping at BI, Google is inventing new ways to gather, analyze and deliver data in a manner and in volume never seen before. And this velocity will only accelerate.

Are digital marketing vendors being driven off their land by Google?

Or are the competitors in Convergence Analytics genuine technology innovators, nimbly discovering new ways to help their customers reach a state of enlightenment?

STRENGTH IN DIVERSITY

For now, we believe there is plenty of strength in the market to concede the latter. The market will continue to want competition no matter how irresistible Google may become to many customers. And we believe there are genuine opportunities for vendors that can solve the problems outlined above.

> Google is inventing new ways to gather, analyze and deliver data in a manner and in volume never seen before. And [it] will only accelerate.

A snapshot of the market today shows a handful of sectors with the natural ability to find themselves at the center of digital marketing efforts. We don't intend this to be comprehensive, but based on our research, we feel like the following sectors are well positioned.

TAG MANAGEMENT

Whether tag management solutions can build the right mix of capabilities to satisfy the needs of a convergence analytics customer remains to be seen. One roadblock is that they will have to build connectors to untagged data and do it better than those for whom this is a specialty. But the unique promise of tag management is its native ability to be the "single sign on" for all things related to digital marketing. It's a good place to start.

SECOND GENERATION BUSINESS INTELLIGENCE FOR MARKETERS

It's no secret that BI is a direct antecedent to Convergence Analytics. Many of the features of BI—access to databases, powerful algorithms, the notion of data exploration, and presentation of results in a readily accessible manner—are built into Convergence Analytics. But Convergence Analytics companies that rely on a BI paradigm also take BI a step further. They include a better interface, more flexibility, more extensibility, and a better focus on a particular user base (in this case, the marketer). We believe these companies have a direct connection to the success factors that set Convergence Analytics within the tradition of business software, and also to those factors that set it apart from all that has come before.

Recommendations

OVERVIEW

Customers should see the Convergence Analytics market the way a fleet-owner sees the vehicles market. The marketing needs of any marketing group are likely to be nearly as various at the transportation needs of a large brick and mortar enterprise. From executive helicopters to trucks to step vans to company cars to warehouse robots, a big company will need to find the right supplier for each need. As digital marketers will continue to grow their footprint of responsibility, they will need to understand the utility of tools that address their particular needs directly.

Convergence Analytics vendors have not finally converged. Marketers' needs may remain ahead of the industry's ability to supply a single solution. In the near term, customers should seek best of breed; always look closely for interoperability and true convergence tools where they can find them; and never scrimp on expertise.

> The ... market suggests a convergence of skills; or multi-skilled teams working closely together in a way that matches the power of the technology.

REFOCUS THE ORGANIZATION ON MULTICHANNEL

It is also important to note that we are experiencing the effects not only of disruptive technologies, but major disruptions as well in people and process. Organizations will have to remap themselves to a new reality. As part of this, they will have to make certain they have the right teams in place to leverage Convergence Analytics.

They will have to staff to the converging roles and responsibilities in demand generation, product marketing, product management and marketing. For when an integrated tool (or a set of tools working in an integrated—converged—manner) becomes part and parcel of each part of marketing and a growing share of the entire business process; then who owns the customer experience? The converging market suggests a convergence of skills, or multi-skilled teams working closely together in a way that matches the power of the technology.

Successful companies will have to adapt to disruptive technology. But they will also have to build in disruptive people, processes and goals.

PEOPLE AND PROCESS

Customers should especially pay attention to the following as they pursue actionable intelligence in a Convergence Analytics market:

- Clarify and identify your objectives before making any move at all
- Decide on your platform focus: mobile, social, mobile, web-based, or more
- Work backwards from your objectives:
- Determine your conversion metrics based on your platform and your business-type
- Remember that linear conversion may not work the way it does in web analytics. You'll need to account for multi-channel, multi-thread, multi-device conversions, including complex attribution models
- Some of the conversion truisms remain true, but become much more difficult to track in a multi-channel environment: reach/engage/convert/retain

Once these challenges have been overcome, customers will need to focus on the following:

- Reduce your purview to a relevant set of data. Ask your teams what content they would change if they knew more about its performance. Don't try to "know everything."
- License best of breed solutions and expand from there. For instance, if your focus is mobile, start with a solution that comes to convergence with a mobile DNA. If your focus is web, look to a multi-channel offering from a web analytics provider. And if your requirements cross many channels, then you'll want to work with an experienced multi-channel provider, probably with a strong BI or marketing automation background.
- Many vendors offer "starting point" solutions
- Rely at first on vendor expertise and expand from there

SCALING THE SOLUTION

There are a multitude of multi-channel offerings in the market. While not denying the disruptive nature of the emerging technologies in this field—allowing smaller companies to access analytical power to which they never before had access—it is still true that differently scaled organizations will want to start with differently scaled offerings.

For instance, a large enterprise will likely want to start with another large enterprise like IBM Global Services or SAP. A mid-sized company ($100M - $1B) will look to an integrated suite like Adobe. Smaller companies will look to lower price-point solutions and cobble them together much as they always have done. That said, even large organizations can advantage lower-cost, often more nimble solutions. In fact, this is one of the key disruptions being caused by the emergence of Convergence Analytics.

TAKE-AWAYS

Convergence Analytics will change everything about the digital marketing industry. The process is already well underway and we can only expect it to accelerate. Vendors are ramping up new offerings based on the modularization of a better breed of technologies that leverage vastly increased data storage capabilities and ever-increasing processing power. Roles in marketing are changing as fast. Having picked up the measurement challenge posed by digital presentation of content, digital marketing is now looked upon as a key business driver and is scrutinized as such.

The discipline of Convergence Analytics provides vendors and practitioners alike with the tools to deliver on that challenge.

Convergence Analytics: Sample Vendors

Convergence Analytics represents a rapidly evolving market. One of the chief contributors to this change is the way vendors are combining analytics features to become more multi-channel aware and more user-friendly. The following list is not meant to be in any way exhaustive but highlights a sampling of companies that engage in Convergence Analytics practices to varying extents. We have categorized in what we believe is an accurate and economical way; however, many companies listed below may conceivably be categorized otherwise than what we have shown, or as members of multiple categories.

Sample Convergence Analytics Vendors grouped by the digital marketing sector they are commonly associated with:

INDUSTRY-LEADING SUITES

Adobe
From Omniture to Demdex (audience management) to Day Software (web experience management) to Efficient Frontier (search, advertising and social), Adobe has continued to acquire assets related to digital marketing success and has the market presence to make every offering an industry-leader.

Google
Transcends every category; dominant in digital marketing with their ad network, search, Google Analytics, Google Universal Analytics, Google Tag Manager and more; capable of distorting every digital marketplace by giving away free tools, forcing the rest to innovate. Consumers generally win.

IBM
Offerings in nearly every category of Convergence Analytics including: Unica (Campaigns); Coremetrics (Web/Marketing Analytics); IBM Global Services; BI; Tivoli.

Microsoft
Excel at the core of many marketing analytics experiences; multiple offerings in multiple BI markets and verticals. Sharepoint, SQL etc at the heart of digital marketing data transfer and analytics. Offers BI tools as well; too many products to list.

EMAIL

Eloqua
Acquired by Oracle in February 2013. Building a "customer experience cloud". Helps enterprise customers "automate marketing, target the right buyer, easily execute campaigns, connect social and revenue, deliver sales intelligence, and measure everything."

ExactTarget
Enterprise email management offering that includes analytics; today they are "transforming how businesses connect with their consumers using data-driven digital marketing across all channels, at scale."

Hubspot
Helping customers in many market segments develop lead nurturing campaigns through email and content creation management, driving lead acquisition and sales. Integrates with numerous analytics systems and Salesforce.

Marketo
Founded 2007. They build SaaS products to help marketers "interact seamlessly with their customers across [multiple] channels, and [help them get] analytic insights to understand where and how to allocate their budgets for maximum return."

Responsys
Founded in 1998 to provide software that would enable marketers to design, execute and manage email campaigns. Today they are "helping the best brands in the world effectively execute marketing campaigns across all key digital channels—email, mobile, social, display and the web."

CUSTOMER RELATIONSHIP MANAGEMENT

Salesforce
Now the standard for CRM in nearly Google-like fashion. We expect to see more acquisitions like Radian6 as they ramp up. Nearly every other tool mentioned in this list connects to and can be integrated with Salesforce.

BUSINESS INTELLIGENCE

Actuate
"Next generation rich internet applications ready information platform for both customer and employee-facing applications." BI software, executive dashboards, performance management, financial reporting, including data visualization.

Alteryx
Building connectors to multiple data sources; offering a full range of BI data collection and visualization layers for marketers and business executives.

Birst
"Agile business analytics" uses extensive dashboarding and visualization; "allows users to combine data from different source systems to get answers to their most pressing business concerns in real time."

Microstrategy
"Self-service analytics—No IT": multiple applications for desktop, web, marketing intelligence, predictive analytics, with multiple data connectors; "accessing all data throughout the enterprise."

Oracle
Venerable enterprise relational database company now making acquisitions to bolster its new-BI stance.

Pentahao
Opensource heritage. Big data integration, analytics, rapid Hadoop deployment; "a comprehensive platform for data integration and visualization."

Qlikview
Easy to use interface integrates data from multiple sources and provides visualization; self-service BI with solutions for numerous verticals.

SAS
Largest independent vendor in the BI market; includes analytics offerings in: business analytics/intelligence; customer intelligence; information management, performance mgmt., supply chain intelligence and more.

Tableau
Includes data analysis, business dashboards, extensive data visualization, drag & drop data analysis; "supports people's natural ability to think visually".

SOCIAL MEDIA

Adobe Social
Aquired Efficient Frontier, which had acquired Context Optional. Both now part of Adobe Social. Adobe Social is "the one integrated tool for social media"; helps customers integrate social into marketing programs and enabling content creation instantaneously.

Radian6
Acquired by Salesforce, Radian6 is now part of the Salesforce Marketing Cloud, and "helps companies listen to what people are saying about them online and engage in those conversations" across numerous channels. Acquisition adds to multi-channel capability as it gets integrated into the SF CRM system.

Sysomos
"Sysomos, Greek for 'everything together', emerged from an advanced research project started in 2005 at the University of Toronto." Brings "business intelligence to social media, providing instant and unlimited access to all social media conversations to quickly see what's happening, why it's happening, and who's driving the conversations."

Viralheat
Helps enterprises understand their customers by providing robust social monitoring and management, brand management, competitive analysis and reputation management in a multi-channel environment.

SECOND GENERATION BI FOR DIGITAL MARKETERS

Agile-1
Integrated service and technology solutions to support all workforce needs. Includes Business Analytics.

Anametrix
Provides "a cloud-based platform with real-time digital analytics so marketers can uncover new trends, hidden correlations, and new relationships." "Collects, analyzes and makes sense out of data in real time across all channels."

Domo
"Domo is BI for the cloud". An "agile BI" product, Domo seeks to put all your data into one dashboard.

EdgeSpring
"A radical new approach to visual analytics" and BI. SalesEdge product allows customers to "gain critical

insights to pipeline, forecasts, team performance, and trends."

Gooddata
Offers SaaS business intelligence and custom reporting to help companies monetize data. Includes "Bash" technology, "business intelligence data mashups" that include data from multi-channel sources and displays them in visually astute dashboards.

KarmaSphere
KarmaSphere provides a "data analyst workspace for Hadoop" (the opensource BI platform). Includes "actionable, self-service, big data insights," as well as "collaborative, social and unconstrained analytics."

Sweetspot Intelligence
Puts the focus on optimization workflow and data visualization with robust export to Powerpoint for the boardroom.

WEB ANALYTICS

Webtrends
The remaining independent SaaS and Software web analytics vendor has perhaps the most robust clickstream analytics platform in the market and continues to offer software unlike most. Recently added "streams" as a way to view "real time" data.

SEARCH ENGINE OPTIMIZATION

Brightedge
Cloud-based service that " enables marketers to increase online traffic and revenue by driving their natural search performance, in a measurable and predictable way."

Conductor
Searchlight product monitors search performance, helps fine new traffic opportunities, prove and report ROI and provide robust charting and reports for search marketers and executives.

Rio SEO
Traditional SEO combined with robust localization platform enabling enterprises to create landing pages for nationwide distributed retail locations.

TAG MANAGEMENT

Ensighten
Enterprise tag management system "simplifies the inclusion of third party applications for analytics, advertising and content targeting." Offers self-service tag deployment and capture of multi-channel analytics data.

Satellite
Tag management toolset allows organizations to manage tagging for multiple sites, without IT involvement, including mobile measurement.

TagMan
Founded in the UK. Enterprise-level tag management platform offers "robust solutions for improving site performance, optimizing data collection, utilizing real-time attribution modeling and addressing privacy at a global level."

Tealium
Enterprise tag management—replacing many tags with one. "A new class of application that enables digital marketers to more easily deploy their mission-critical online solutions, while also providing a hub for managing and exchanging digital data."

MOBILE ANALYTICS

Flurry
Chiefly in app measurement; helps organizations build apps, measure behavior, advertise to the right audience and monetize visitors. Free tool helps customers understand how users interact with mobile applications; includes conversion funnels, demographics, interest graphs, geographic information.

Kontagent
People, process and platform combine to provide mobile customer intelligence. Includes product management tools, robust visualization, and tools for C-level executives to understand drivers of P/L performance.

KISSMetrics
Person-based analytics. SaaS offering for tracking e-commerce, mobile apps, social and content. The basic metric in KISSmetrics "is a person". Integrates with CRM, emails providers, help desk software and billing systems.

Mixpanel
Analytics for mobile and web. Includes segmentations, funnel analysis, retention tools and ease of installation. Includes dynamic drilldown into data and collaboration.

MARKETING INTELLIGENCE

Experian
Combines offline data with on line, point of sale (POS) credit score, to create robust customer profiles for nearly every marketing intelligence purpose. One of the three major "credit score companies" along with TransUnion and Equifax.

Merkle
Long a player since the days of direct marketing. Cross-channel analytics include online, offline, predictive; direct marketing, demographic targeting, geography; Brillig acquisition in 2012.

Visual IQ
Marketing data management and integration; integrates search, bid management, campaign management, ad network, CRM, POS, call center, clickstream; overall marketing data management with robust dashboarding.

PREDICTIVE/AUTOMATED ACTION

BloomReach
Deploys a "web relevance engine" that analyzes consumer interaction and dynamically adapts websites to capture consumer demand—"making the most relevant products and services easier to find".

Monetate
Delivers personalization, merchandising, analytics and "relevant online experiences customers demand" to "build brand loyalty, and drive new revenue".

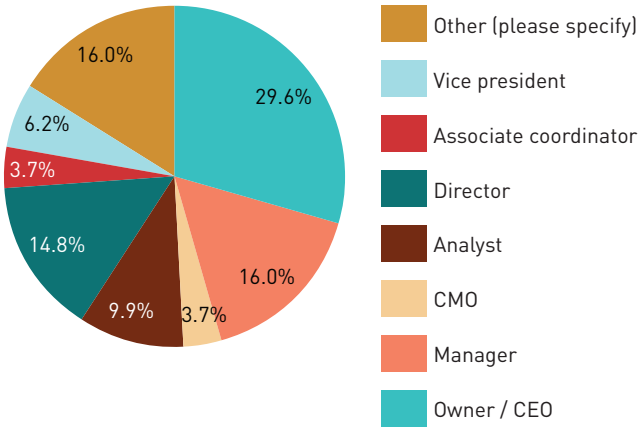
X+1 (XplusOne)
Combines a "leading enterprise data management platform (DMP) with multi-channel execution capabilities" and "enables campaign optimization across each interaction for all the digital channels in your marketing plans".

Appendix A—Efectyv Marketing and ClickZ survey

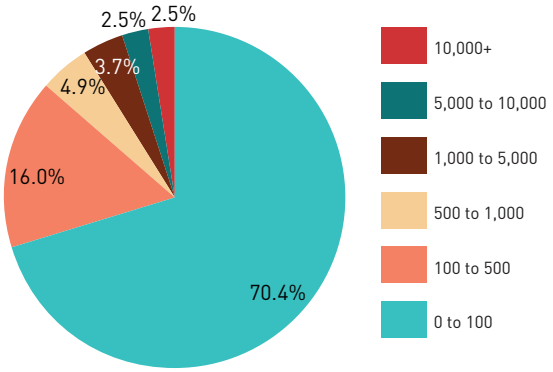
VENDORS

DEMOGRAPHICS

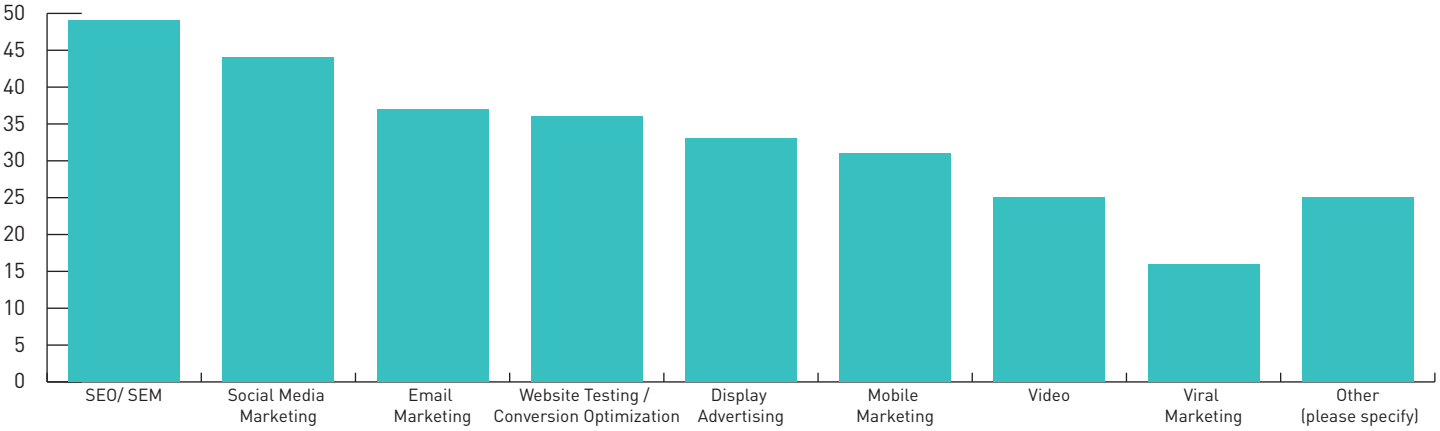
Level in organization



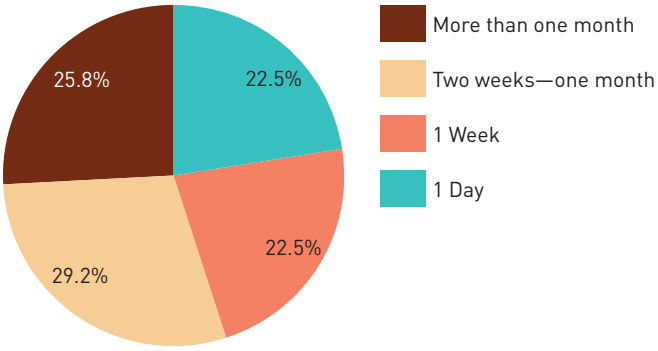
Company size



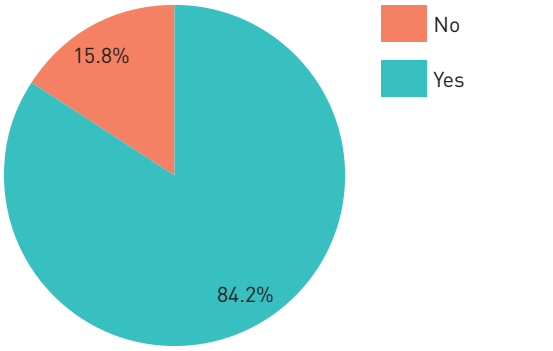
Digital Marketing Specializations



How long is average implementation?



Do you offer professional services to your customers?



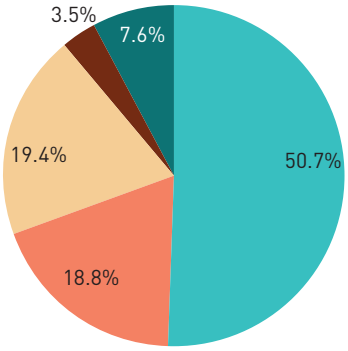
efectyv ClickZ

Appendix A—Efectyv Marketing and ClickZ survey (Cont'd)

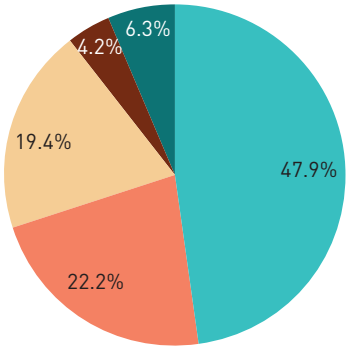
VENDORS

In development | N/A | No | Yes, through third party | Yes, in-house

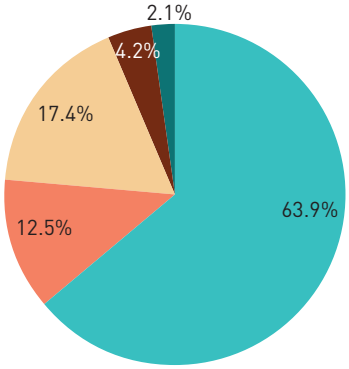
Do you collect real-time information?



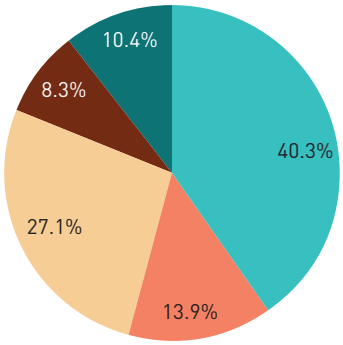
Do you have a dashboard?



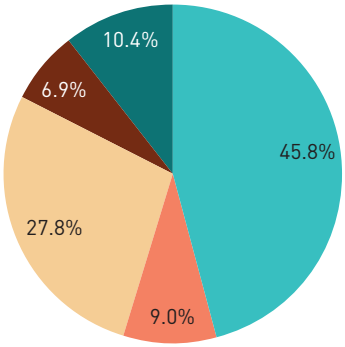
Do you "join information" from several sources?



Can your data be queried from the dashboard?



Do you have an analysis layer?

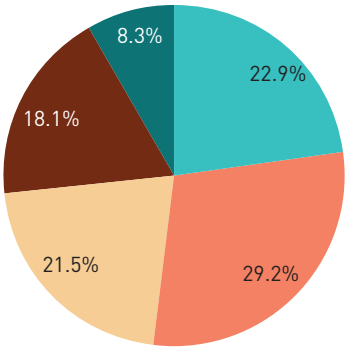


Appendix A—Efectyv Marketing and ClickZ survey (Cont'd)

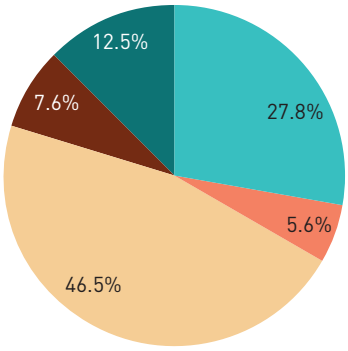
VENDORS

In development | N/A | No | Yes, through third party | Yes, in-house

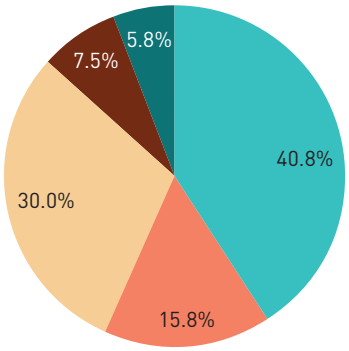
What is your definition of real-time?



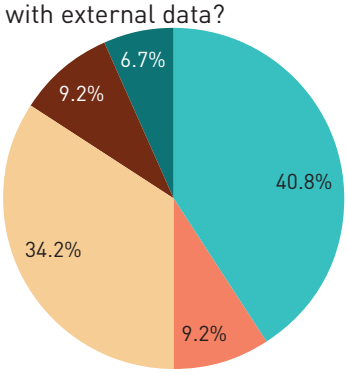
Do you have predictive algorithms?



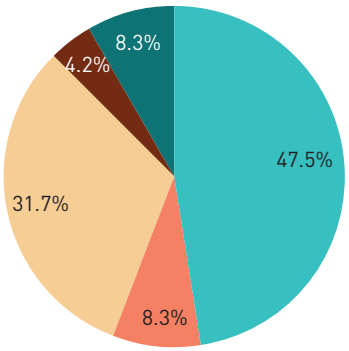
Do you have a datamart (or directly access a database)?



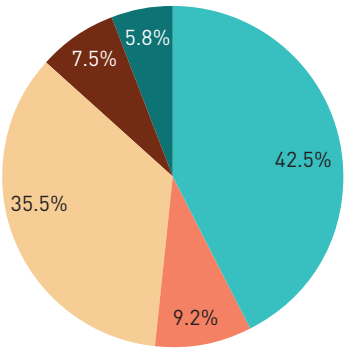
Do you perform "extract, transform, load" functions with external data?



Do you use APIs or other connectors?



Do you have a self-service component?



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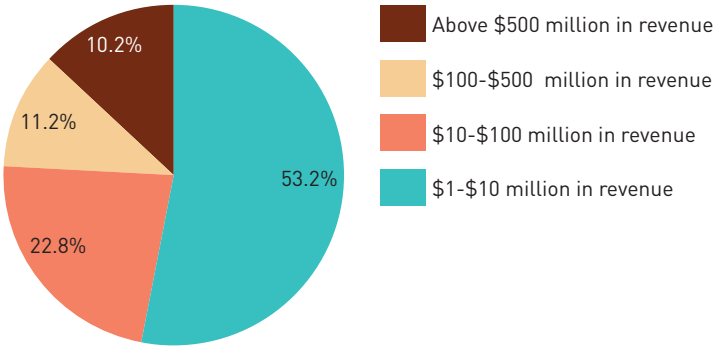
Appendix A—Efectyv Marketing and ClickZ survey (Cont'd)

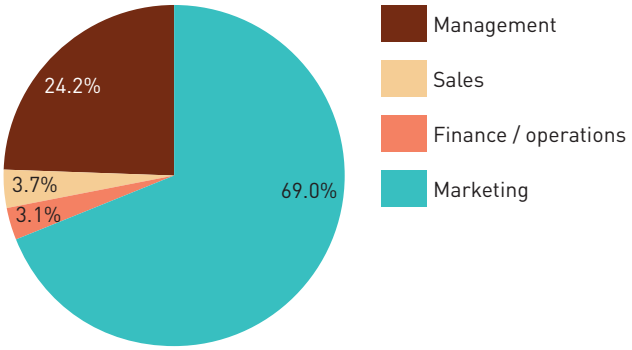
PRACTITIONERS

DEMOGRAPHICS

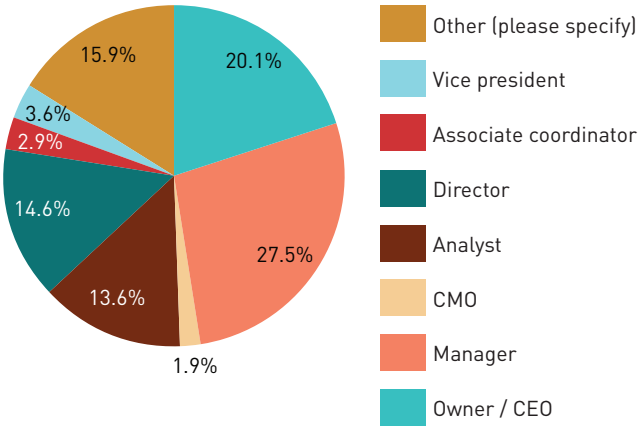
What is the size of your company?



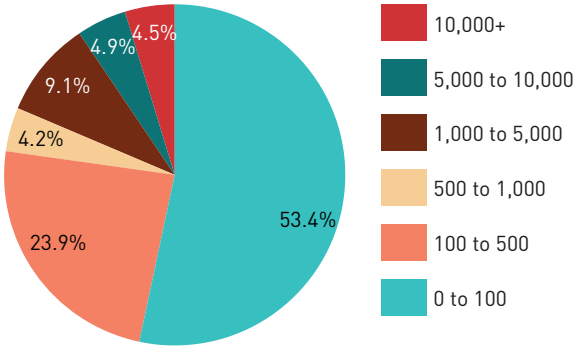
What is your role?



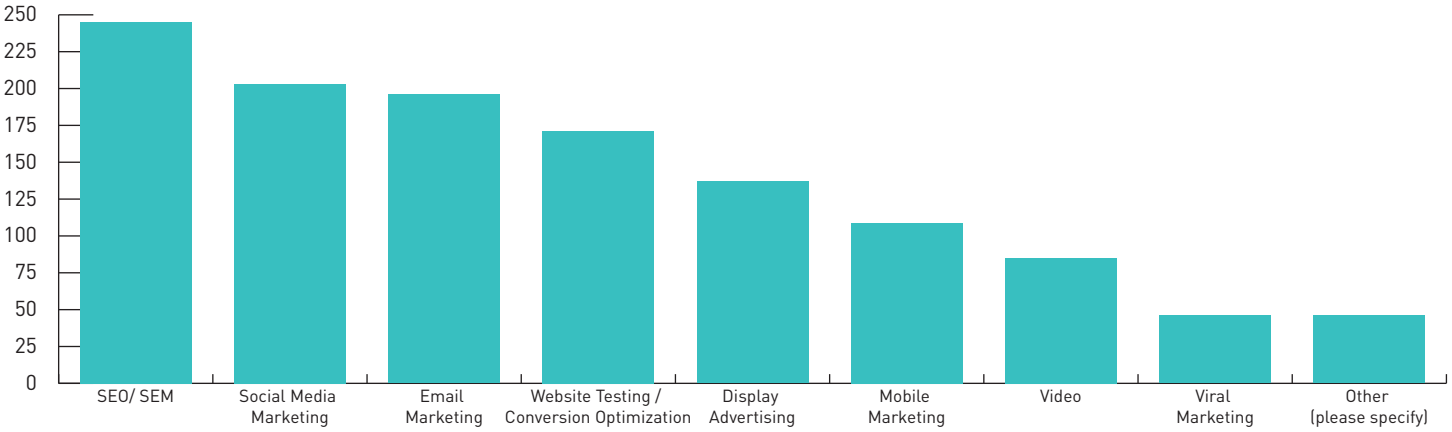
Level in organization



Company size



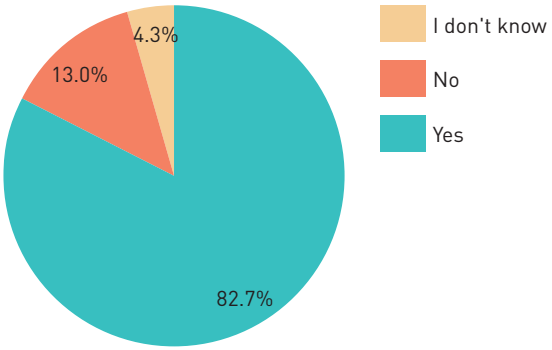
Digital Marketing Specializations



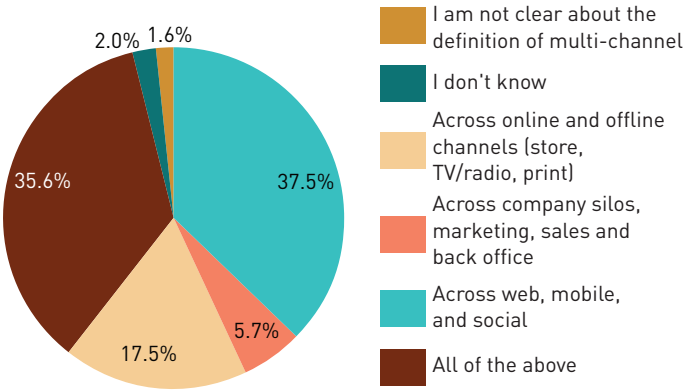
Appendix A—Efectyv Marketing and ClickZ survey (Cont'd)

PRACTITIONERS

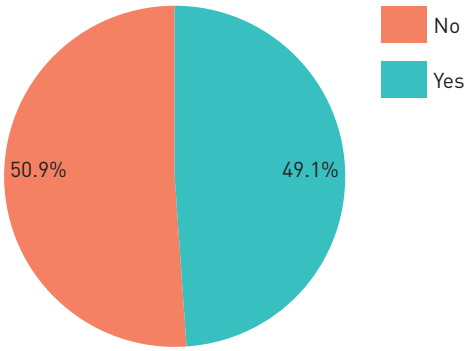
Is your organization collecting multi-channel information to optimize marketing efforts?



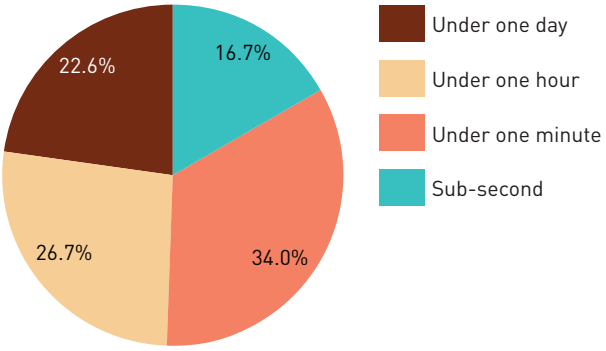
How does your organization define multi-channel?



Do you require real-time information?



What is your definition of real-time?

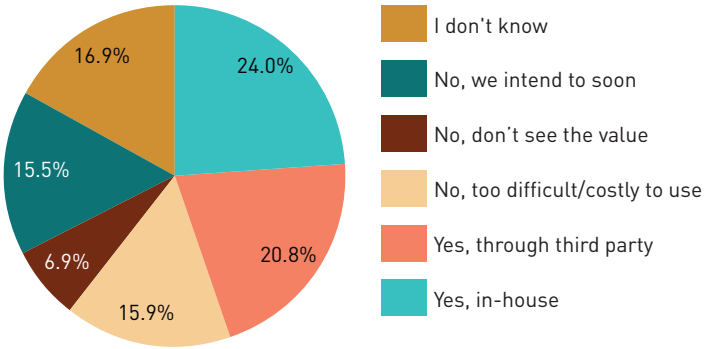


efectyv ClickZ

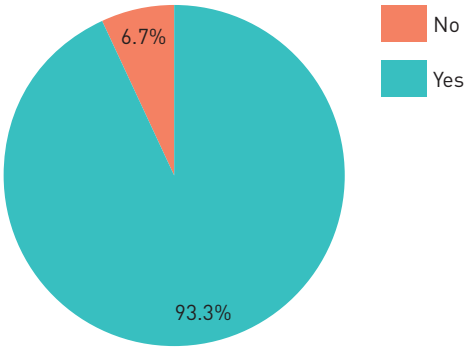
Appendix A—Efectyv Marketing and ClickZ survey (Cont'd)

PRACTITIONERS

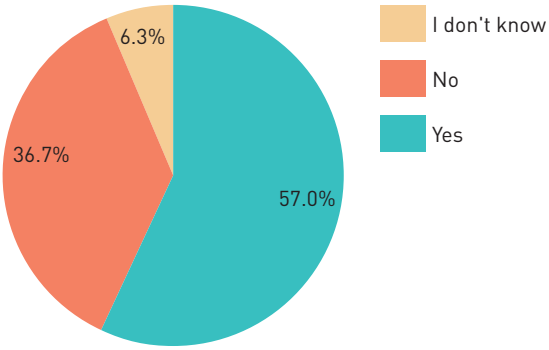
Do you use a BI application?



Do you use a web analytics application?



Do you use a web analytics application for multi-channel optimization?



Do you use some other application for the optimization of multi-channel marketing efforts?