

Something Digital

This Way Comes! Entering the Era of the Internet of Things

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**“The future is already here—
it’s just not evenly distributed.”**

—William Gibson¹

With homage to author Ray Bradbury, we don’t think that digital technology is really wicked, but we do think that it is wickedly smart and becoming a more significant part of our work and personal lives every day.

No longer can we focus our marketing strategies and energy only on one-dimensional or traditional marketing—the future is being defined with more digitally interactive, collaborative, and transformative technologies that are reshaping marketing as we know it.

If you haven’t noticed yet, the digital organization is quickly and quietly revolutionizing your workplace, your clients’ workplaces, and their clients’ clients’ workplaces. Whether in business, education, institution, or government, today’s globally-connected, big data-driven, e-everything, IP-everything else, inter-disciplinary collaborative teams, and multi-disciplinary alliances are leading the charge and driving change.

We have entered a new era known as the “Internet of Things” (IoT), which refers to devices that can send and receive data over the Internet, stored in the cloud and connected to a bring-your-own-device (BYOD) world, wired or wireless. These embedded and/or

wearable sensors, beacons, and Internet-protocol (IP), data-enabled materials and building products are being used to create high-performance facilities and improve the functional performance of organizations of all types and sizes.

Combine these functional business changes with parallel developments in the way we deliver our services (i.e., BIM, IPD, P3, etc.), and the digitally-enabled projects we create—enabled by the upsurge of smart devices—and you have a truly brave new world in which you now compete.

The rich resource of rapidly accumulating information that is known as “big data” is creating applications in the building industry to finally realize truly intelligent building systems that enhance energy management and sustainability goals, improve workplace productivity through advanced collaboration tools, and engage your clients and your communities. We are seeing the same benefit across all sectors, including manufacturing and warehousing, materials processing, energy, and transportation. Applications in marketing can be found in machine-intelligent auto-responders, compelling interactive content, and global-resource outsourcing. Using simple systems like Google Trends can provide rich insight into your firm, your sector, and your competitors’ brand positions. The future of data analytics holds even more promise.



ASM International, Buckminster Fuller Geodesic Dome, Materials Park, OH. Project credits: John Terence Kelly, Dimit Architects, Chesler Group. Scott Pease Photography, www.peasephotography.com.

While this shift from “bricks and mortar” to “bits and clicks” has been evolving for more than two decades—more rising tide than tsunami—the CRM systems, graphic programs, and website models you have today were part of the first wave, not the one that’s coming. The rate of change is increasing, and in the very near term, we think you will see a significant transformation in the way we must approach marketing professional services. The accelerating pace of this digital evolution means it is increasingly critical to refocus your business and marketing strategies now, before the rising tide erodes the beachfronts in your competitive landscape.

Data, Delivery, and Performance

There are several factors that contribute to this prediction. If you want to stay relevant and ahead of the curve with your clients and competition, it is critical to realign yourself, your marketing and business development approach, and more importantly, the scope and scale of the services you deliver to your clients in this new digitally-connected reality. (See sidebar graphic with Edelman SICC’s Marketing Process, page 37.)

The digital technologies underlying this revolution may not be new, but they are being used by leading organizations in new ways to create impact not previously recognized or experienced. First, the amount of information accessible as never before—from

proprietary big data to new public sources of open data—combined with increasingly accessible analytic capabilities, has made algorithms for mining intelligence available to firms of any scale. That data—stored in the cloud and accessible via smart mobile devices—makes the information and computing power available to users anywhere the world.²

As these technologies gain momentum, they are changing the strategic context in which we work by altering the nature of competition, the alliances we embrace, the way we conduct business, and, ultimately, the expectation of clients for the services we provide across all A/E/C sectors.³

The New Digital Reality

Digital access makes it easy for buyers of professional services to compare qualifications, service levels, and even price/performance metrics. This dynamic is putting new pressure on fees and margins, and further commoditizing professional services as clients demand proof-of-performance based on a combination of evidence-based project features and the simplicity and speed of their interaction with your team.

Digital access lowers the barriers to entry and opens the field to a new era of competition. Digital dynamics undermine the already difficult issue of service differentiation. New competitors can often



ASM International, Buckminster Fuller Geodesic Dome, Materials Park, OH. Project credits: John Terence Kelly, Dimit Architects, Chesler Group. Scott Pease Photography, www.peasephotography.com.

be smaller companies—located anywhere on the planet—that will never reach the scale of the more established leaders, but have the ability to offer services and experiences that are indistinguishable to the buyer.

What Should We Do Now?

To be successful as 21st century marketers, we must find new ways to enrich communications among clients, collaborators, vendors, and our professional staff. As clients increasingly demand digital interaction, we must make our marketing communications universally accessible through mixed-media (e.g., graphics and video), tailoring content with context—providing device-, location- or demographic-based information—and adding social media elements that allow user communities to develop naturally, based on common issues, needs, and idea-sharing among cohorts. This will allow our firms to stand out from an ever-increasingly crowded global marketplace.

The advantage of leveraging digital channels is lowering the cost of transactions and increasing transparency, which can help improve communication and trust, and reduce the potential for post-occupancy litigation—one of the “elephant in the room” topics rarely discussed in the A/E/C marketing reality (hopefully to be addressed in a future issue of *Marketer*).

There’s an App for That

One of the growing trends is the creation of small, custom applications, defined for a particular market, which provide users (clients and potential clients) with insight into issues that they need to make a buying decision. Examples include a phone or tablet app that uses augmented reality—combining camera imaging with database information—to provide a client with information regarding the details of a residential or commercial property.

Another would be a custom dashboard for your marketing department that projects growth or decline in a certain market sector by aggregating data from several public or subscription databases, to help focus your business development efforts on sectors and geographies that are showing growth potential.

Both of these examples exist in some form today. As we see the influx of small, connected BYOD and wearable devices, our clients (internal and external) will demand tailored content from the outfall of information everywhere. Technology has changed, and we have, too. What was once the domain of experts is now truly ubiquitous. Just look at your toddler’s favorite e-toys.

As we become more comfortable with technology (and those wonderful apps), we also become more discerning. We want to experience stories and information in more user-friendly formats without having to fight our way through hyperbole. We seek clarity, in part because it helps us find our way through all of the data. This calls upon us as marketers to become great communicators, not just providing the app, but the content behind it.

What Comes After What Comes Next?

We only need look backward at the timeline of technology evolution in the last decade—realizing that a mere 10 years ago, there was no Facebook, iTunes, Giga-Bit Wi-Fi, or many of the other pervasive applications we take for granted in our daily lives—to see that we will have a digital future.

And we only need look forward at performance advancements of zettabyte computing systems like IBM’s Watson program to see how digitization will replace a growing number of knowledge roles within companies that can be automated based on synthesizing information and see the potential of artificial intelligence (AI). Notwithstanding Stephen Hawking and Elon Musk’s dire warnings⁴ regarding the potential perils of AI, an excellent example of what’s coming next is the AI-driven website platform being launched this year by The Grid (<https://thegrid.io>). This innovative program promises to revolutionize site design and allow your message to shape the medium.

At the same time, A/E/C companies are struggling to find the right talent in areas that can’t be automated. This demands digital skills of everyone in the workforce, from principals to project managers to marketers. We all need to be digital strategists—to think creatively about new interconnected business designs and implement them with increasing speed.

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Don't Look Back, Something Might Be Gaining on You⁵

One really “wicked” emerging technology innovation in the A/E/C industry is the development of effective computer-generated architectural design,⁶ where software replaces human labor in the digital design business—think automated building information modeling. Already, algorithms are being developed that take project management data to create a fully functional building design, including siting, massing, orientation, and integration of finishes, structural, mechanical, and electrical elements. Combine that capability with the growing field of large-scale 3-D printing⁷ and you have a potential AI-driven minimal cost design/build solution that could be very attractive to many real estate developers.

Imagine the impact of that same kind of AI on all aspects of your outward-facing marketing communications. Fair warning! It should send chills through those who adopt a wait-and-see attitude, but it creates real opportunity for those who rise above the tide to embrace our coming digital future. Perhaps Hawking and Musk were right! ■

ENDNOTES:

1. Gibson is a best-selling author and futurist. This quote is from interview with Terry Gross, Fresh Air, NPR, August 31, 1993.
2. Martin Hirt and Paul Willmott, *Strategic Principles For Competing In The Digital Age*, McKinsey Quarterly, May 2014
3. Ibid.
4. In an open letter from the Future of Life Institute, they said, “There is now a broad consensus that AI research is progressing steadily, and that its impact on society is likely to increase. The potential benefits are huge, since everything that civilization has to offer is a product of human intelligence; we cannot predict what we might achieve when this intelligence is magnified by the tools AI may provide, but the eradication of disease and poverty are not unfathomable. Because of the great potential of AI, it is important to research how to reap its benefits while avoiding potential pitfalls.”
5. This quote is attributed to famous baseball player and populist philosopher, Satchel Paige.
6. <http://graphics.stanford.edu/~pmerrell/floorplan-final.pdf>
7. www.huffingtonpost.com/2014/09/08/3d-printed-houses_n_5773408.html

MARKETING TECHNOLOGY TIMELINE

1960s	Internet, hypertext, hypermedia
1969	CompuServe (dial-up internet)
1971	COMSPEC, MasterSPEC
1970	PARC (Xerox PARC)
1972	Word Processors (Wang, IBM Mag Cards, etc.)
1973	Mobile phones
1975	Sony Betamax, Video Cassette Recording (VCR)
1979	Apple II and VisiCalc (later Lotus 1-2-3); Compact Disc (CD)
1981	IBM Personal Computer
1982	AutoCAD
1983	Microsoft Word
1984	Apple Macintosh; CompuServe Electronic Mail
1985	Microsoft Excel, FileMaker; Desktop Publishing
1987	Adobe PageMaker, QuarkXPress, HyperCard
1988	Adobe Photoshop
1989	HTML (Hypertext Markup Language), World Wide Web (www); GridPad (tablet-type PC)
1990	Microsoft Office (including PowerPoint)
1991	America Online (AOL)
1992	Macromedia (Dreamweaver); SMS messaging
1993	Adobe Acrobat and PDF; public access wireless (hotspots); Apple Newton (tablet)
1994	Netscape Mozilla, WikiWikiWeb (wiki); Bluetooth wireless technology
1995	Internet Explorer, AltaVista and Yahoo!; Amazon.com; Java Programming Language; Digital Video Disc (DVD)
1996	PalmPilot PDA
1997	Netflix
1998	Google and MSN; Blogging; Ad agencies go digital, separating digital from traditional media
1999	Wi-Fi Alliance; LiveJournal and Blogger.com, Napster; BlackBerry Pager; Alibaba in China
2000	Broadband internet access; BlackBerry smartphone; Dot.com bubble burst
2001	Wikipedia, PayPal, iPod, iTunes (iPhoto in 2002)
2002	Adobe InDesign (successor to PageMaker)
2003	LinkedIn and MySpace; Firefox and Safari, MS FrontPage, Wordpress (PHP), Tableau BI data visualization
2004	Facebook, Yelp; Flickr, first free wi-fi in Starbucks
2005	SEO, Google Analytics; YouTube, Apple iWork (Keynote, Pages, Numbers)
2006	Twitter, Hubspot, Gmail, Google Apps
2007	Box.com and Dropbox, REVIT, iPhone, Kindle
2008	Google Chrome, Google Android OS, iPad, Evernote; Conversation Prism
2010	Instagram, Pinterest, iPad
2011	Google Fiber, IBM Watson, Google Plus
2012	Google Drive
2015	The Grid

DIGITAL MARKETING'S NEXT WAVE



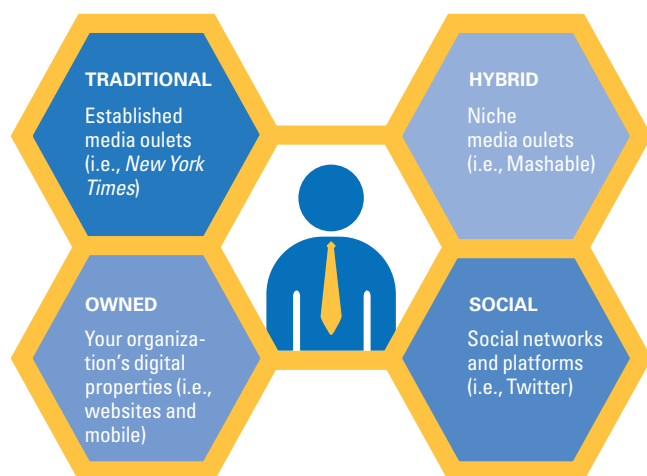
We are in the midst of a sea change with relationship-based marketing. By 2020, the number of devices connected to the Internet is expected to exceed 40 billion. We are operating in a globally connected, multi-channel, transmedia storytelling environment. But as Brian Solis says, "The future of business lies in shared experiences ... It's about people connecting to people."¹

Successful marketing comes down to relationships, and ours have transitioned from temporal to virtual, connected yet without boundary. Now, our digital marketing serves as portals to relationships with the potential for creating opportunities that would not otherwise exist.

After all of the work our industry has put into proactive business development, it's hard to believe that we need to strengthen impersonal digital marketing in order to reach prospects more effectively. Today's clients are changing the way they research and buy our products and our services, too.

I recently had dinner with an SMPS Fellow who told me that his firm had been hired for projects with two different universities. Not surprising for a top firm, right? What was unexpected was how it happened. Each client did its research on potential A/E firms, and then interviewed his firm. Yes, they were selected based on the brand image that they communicated via digital communications, combined with word of mouth—their reputation from other clients. They had to interview, but as the selected favorite, not as one among others on a short list.

SMARTER INTELLIGENCE LEADS TO A BETTER TRANSMEDIA EXPERIENCE



© David Armano, Edelman's "SICC" (Social Intelligence Command Center), 2012.



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This is not a new phenomenon, but it is evidence that the customer-decision journey is changing, with the potential of fewer client-facing opportunities to persuade and less direct influence or control over the outcome. How can we gain attention and shape perception more successfully?

Brand positioning is not just about award-winning projects and great website design and content. Today's audience is just as likely to form an opinion about us based on what they see in news alerts or social media, from Alltop to Yelp. As Nancy Egan, FSMPS, says, "It is the age of guerrilla commentary—if the firm does not determine and control the positioning message, the marketplace will do so."² And we want to make certain that our message gets to the people who really count.

How are the big influencers handling it? One of the biggest is Edelman—the world's largest PR firm and author of the annual *Edelman Trust Barometer*.³ David Armano, global strategy director for Edelman Digital, presents their 'Social Intelligence Command Center' (SICC) on Slideshare.⁴ The core of their approach is "Real-time monitoring, engagement, and content development." In other words, it's not enough to create content, we also need to be vigilant, relevant, and timely.

How does all of this affect the role of the A/E/C marketer? We're not in the business of influence—or are we? Take a look at how Armano describes what he does; it applies to all of us as well.

"I help organizations build brands in an increasingly connected and real-time business environment. I do this by focusing on the intersection of strategy, creative, and business—directing multidisciplinary teams who deliver world class brand experiences which integrate and operate at scale ... I focus on strategically impacting integrated market efforts that are social at the core."

Where is your sweet spot? And how can you and your partners in marketing strengthen your approach to achieve success in our changing world? ■

LINKS:

1. Brian Solis, Principal Analyst with Altimeter Group—www.briansolis.com/2014/12/future-everything-people-connecting-people
www.briansolis.com/2015/01/25-disruptive-technology-trends-2015-2016
2. Nancy Egan, FSMPS, Contributing Editor—<http://newvoodou.com>
3. Edelman Trust Barometer 2015—www.edelman.com/insights/intellectual-property/2015-edelman-trust-barometer
4. Edelman SICC on Slideshare—www.slideshare.net/darmano/edelmans-sicc-social-intelligence-command-center