

Systems of Engagement and The Future of Enterprise IT

A Sea Change in Enterprise IT



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Over the past decade, there has been a fundamental change in the axis of IT innovation. In prior decades, new systems were introduced at the very high end of the economic spectrum, typically within large public agencies and Fortune 500 companies. Over time these systems trickled down to smaller businesses, and then to home office applications, and finally to consumers, students and even children. In this past decade, however, that flow has been reversed. Now it is consumers, students and children who are leading the way, with early adopting adults and nimble small to medium size businesses following, and it is the larger institutions who are, frankly, the laggards.

Our initial response might be to dismiss this trend as not really relevant to the issues of business. After all, if there really were useful productivity gains here, surely we would already be investing in them. Isn't it far more likely that this proliferation of consumer services, social sites, and interactive games is simply digital entertainment which, if anything, should be banned from corporate computing?

In a word, No. In two words, emphatically No. What is transpiring is momentous, nothing less than the planet wiring itself a new nervous system. If your organization is not linked into this nervous system, you will be hard pressed to participate in the planet's future. To be more specific, amidst the texting and Twittering and Facebooking of a generation of digital natives, the fundamentals of next-generation communication and collaboration are being worked out. For them, it is clear, there is no going back. So at minimum, if you expect these folks to be your customers, your employees, and your citizens (and, frankly, where else could you look?), then you need to apply THEIR expectations to the next generation of enterprise IT systems. But of far more immediate importance is how much productivity gains businesses and governments are leaving on the table by not following the next generation's lead.

Think about how effective you are as a consumer and how much you can accomplish from your kitchen table on a Saturday or Sunday. Have a question? Google it or ask your social network. Buying a car? Go to the Web and learn more about the dealer's price margins than the salesman will know. Kids looking at colleges? No more sending away for brochures like we used to—link right into the admissions department, and let them link right into to your child's world. Medical worries? Not only is there superb information on the Web, but whatever your illness, there are communities out there who are already sharing their lessons learned about it. Or on happier notes, do you have a passion for cooking, or golf, or drama, or origami, or toy soldiers? You are only a click away from founts of information and a host of willing collaborators. In sum, putting all this in the context of our prior decades living on the planet, one can only say, How cool is that!

OK, so why are we so slow to pick up the ball in business? Why do we still rely on e-mail to communicate with our employees? Why is it so hard to implement new technology? Why are our legacy systems so expensive? How do we get out from underneath all this cost?

Why aren't the applications that are critical to *any* organization as easy to implement as an app on an Android device or the iPhone? Why do consumer applications feel so much cooler than those in our organizations? Why is it — as Tony Zingale from Jive recently said — that we know more about what our high school girlfriend had for dinner than what is going on within our organization? How do we uncork the knowledge that is bottled up in the heads of our employees?

What the heck is holding us back?

Enterprise IT 1.0: Systems of Record

The answer, in part, is our mental model of Information Technology. Those of us old enough to have senior management positions understand enterprise IT through the lens of data processing. That is how it grew up around us and we grew up with it. We spent the last half of the 20th century building up this capability from rows of punch cards that could process census data to global information systems that capture every dimension of our commercial landscape, from financial transactions to human resources to order processing to inventory management to customer relationship management to supply chain management to product lifecycle management, and on and on.

These are the great systems of record, and like the interstate highway systems of a prior generation, they have paved the way for an enormous economic expansion. Indeed these information highways have enabled so much outsourcing of business processes that they have shifted the balance of economic power globally, with China and India being the primary beneficiaries, and Western Europe and Japan suffering the greatest short term consequences. This, in turn, is creating great new growth markets among a host of developing economies, complementing the well funded but more mature markets of the developed economies.

But most important of all, the thing to register about systems of record is that they are mostly and largely complete, particularly within larger organizations. Are they perfect? No. But these systems of record are no longer a source of competitive differentiation for organizations. They are a necessary condition of doing business. Once you have an interstate highway system, the era of the great build out comes to an end, and the era of maintenance comes to the fore, and that is precisely what has happened with enterprise IT as we have known it. As a result, this past decade has been one of increasing optimization, led by IT budget cuts as funds are transferred to other uses within the enterprise, and led technologically within IT by virtualization, cloud computing, and ever more outsourcing. And that is where we stand today. So why would anything change?

The Next Stage of Enterprise IT: Systems of Engagement

The answer lies in the dynamics of the very outsourcing-driven global economy that systems of record have enabled. Under its globalizing influence, enterprises of all sizes and shapes have been forced to sharpen their competitive advantage or suffer commoditization of the goods and services. Companies are expanding their reach both organically and through acquisitions. This means they have to focus more resources on their core businesses, core competences, and core differentiation. As a result, few business transactions any longer involve just one vendor; more and more require the coming together of supply chains, delivery chains, customer support services, partner ecosystems and the like. And this is the key point to register: Business has become much more collaborative than ever before, if for no other reason than it has had to in order to make these chains of relationships actually work.

And that brings us full circle back to our IT-enabled consumer experiences, which are deeply collaborative, highly effective, and astoundingly efficient. In the new global economy, business needs these very same capabilities for itself. What some are calling the consumerization of enterprise IT is not some sop thrown to the millennial generation swelling our work forces but rather a next wave of productivity gains to be garnered from investing in a next wave of IT. Only this time around, instead of investing in automating first level task workers at the edge of the enterprise with various transaction processing applications, and instead of informing executives at the top of the enterprise with various business intelligence applications, the focus instead will be on empowering the *middle* of the enterprise to communicate and collaborate across business boundaries, global time zones, and language and culture barriers, using next-generation IT applications and infrastructure adapted from the consumer space.

What will enable this transformation are *Systems of Engagement* that will overlay and complement our deep investments in systems of record. Systems of engagement begin with a focus on *communications*. We grew up with letters, phones, telexes, and faxes, and grew into email, shared text databases like Lotus Notes, portals, web sites, and mobile phones. Now we are going to incorporate a third generation of communications, based on 1) connecting people in real time; 2) smart and geographically-aware mobile devices; and 3) ubiquitous and cheap bandwidth.

These communication capabilities will also be complemented with new *collaboration* capabilities. These are IT-enabled services that allow groups of people to interoperate both synchronously and asynchronously, and they include wikis, collaborations tools, chat, crowd-sourcing, web conferencing, video streams, video conferencing, and similar services. And as cultural and language barriers become more and more important to overcome and transcend, high definition real time video telepresence sessions and the like will complement and in some cases replace the inevitable round of international trips required to make global commerce really work.

If you are dependent upon suppliers or distributors or partners to deliver your fundamental value proposition to your customer — if, that is, you are in the technology sector, or health care, or financial services, or consumer packaged goods, or retail, or education, or government, or energy, or aerospace and defense, or travel and hospitality, or media and entertainment, or marketing and advertising, or anything else of such ilk—then who are we kidding? You have to grab onto the new communication and collaboration systems or you will simply end up as roadkill.

The Role of Content Management in Systems of Engagement

Content management is but one corner of the overall jigsaw puzzle that constitutes systems of engagement, but it is an important one. In a world of digitally facilitated communication and collaboration, where almost all data, voice, and video are transmitted via the Internet, every interaction leaves a trace. This has mind-numbing implications for those responsible for securing, storing, and deleting such records.

Indeed, it is this very numbing of the mind that has given so much pause to enterprise IT embracing systems of engagement. Where does it stop? Where does it end? Chief security officers wince at the vulnerabilities implied. Chief legal officers pale at the potential liabilities entailed. Left to its own devices, IT would prefer not to touch any of this, even with a ten foot pole.

At the same time, however, chief marketing officers are drooling at the opportunities embedded in these trace logs. Behavioral targeting is the new rage in digital advertising, anchored in the ability to infer a user's preferences from their prior Web behavior, and to thereby present them with offers that are better tuned to their likes. Here chief privacy officers—the latest new executive role to be generated by IT advances—come into the fray. This in turn is pushing policy and technology toward standards of anonymity and protocols of opting in or opting out.

Meanwhile, over on the business-to-business side, the attraction is more about cutting the time it takes to reach closure on any key issue, be that a product design change, a customer complaint, a late shipment, a pricing dispute, or the like. Here again, even though the communications are often in real time, they are leaving their trail of digital footprints — emails, for sure, but also Tweets, recorded web conferences and other types of tools (or other types of content). What is the right policy for storing or deleting such records? What preparations must one make for the inevitable e-discovery requests that our litigious society will surely generate?

These are the kinds of questions that keep CIOs up at night, and that are driving the next decade of investment in enterprise content systems and services.

The Future of Content Management: 2010 – 2020

Content management, as a discipline, grew up in the era of systems of record. In this context, it was primarily concerned with supplementing and complementing transaction database systems with non-transactional data, typically documents or drawings or images. Except for specialized industries, content management occurred behind the scenes as one of the myriad of services IT organizations perform unbeknownst to their colleagues. Especially in large organizations, it has become part of the plumbing. Over the past decade, implementation practices have matured, the core technologies have become stable and mature, and the focus has been on documenting and sharing Return on Investment for proven systems. At the core is the control of content and the automation of processes to which it is linked. There are still many untapped markets, especially among mid-sized organizations, but this is clearly a mainstream market.

Enter systems of engagement or social business systems. Organizations are facing an avalanche of information, in forms and formats and via devices that weren't even on the radar screen five years ago. Images and documents are the core of systems of record. Conversations — in a wide variety of forms and on a dizzying array of devices — are now the challenge. Best practices in this new world are scarce, the pressure by the business to implement is accelerating, a generation of networked millennials is ready to enter the workforce, and connections back to the familiar world of systems of record are tenuous. Our traditional definitions of control and governance must adapt to meet the changes of this new world

The Evolution of Content

Consideration	Systems of Record—Enterprise Content Management	Systems of Engagement—Social Business Systems
Focus	Transactions	Interactions
Governance	Command & Control	Collaboration
Core Elements	Facts, Dates, Commitments	Insights, Ideas, Nuances
Value	Single Source of the Truth	Open Forum for Discovery & Dialog
Performance Standard	Accuracy & Completeness	Immediacy and Accessibility
Content	Authored	Communal
Primary Record Type	Documents (Text, Graphics)	“Conversations” (Text-based, Images, Audio, Video)
Searchability	Easy	Hard
Usability	User gets trained on system and has access to follow-on support	User “knows” system from consumer experience
Accessibility	Regulated & Contained	Ad Hoc & Open
Retention	Permanent	Transient
Policy Focus	Security (Protect Assets)	Privacy (Protect Users)

Content management for systems of record is a highly disciplined affair, where retention, retrieval, security, confidentiality, and compliance are top of mind. None of these issues, by contrast, are top of mind for the content creators and users in a system of engagement, although they still linger for the CIO, the chief legal officer, and the chief security officer.

Users of systems of engagement treat content as the material of their ongoing business life—living, breathing sessions that are open, spontaneous, and often involve missteps and retracing of steps, moving forward in fits and starts. The content generated by such sessions is more aptly termed social rather than enterprise because as often as not, some or even all of the contributors are external to the enterprise. But still, because these systems are being used by enterprises, they will inevitably be subject to the same legal and social restrictions as traditional enterprise content, and as we have already noted, therein lies the rub. Today that rub is significantly limiting endorsement and adoption of consumer-style communication and collaboration facilities around the world, and it will continue to do so until the content management industry and its customers develop protocols and policies to address its issues.

Clearly, systems of engagement need to operate on top of and in touch with our existing core systems of record. It's difficult, but doable. So what is a CIO to do?

Over the course of the last 3 months, we talked to 20 CIOs from major corporations and government organizations about the challenges that lie ahead. Some of the reactions illustrate that we are clearly moving into uncharted waters:

- “We are grappling with this.”
- “Nobody has figured this out.”
- “Web 1.0, web delivery was informational. Web 2.0 is more dynamic and bi-directional.”
- “Expectations are that there should be no training.”
- “Whether we want it or not, it is coming in.”
- “The workforce coming in has different expectations about our information systems.”
- “The whole industry is changing and changing very fast.”

In the sections that follow, we outline a series of what we believe are “no regrets” moves that will allow CIOs to introduce systems of engagement into their enterprises in a relatively ordered and controlled way. We are going to present these moves in two sets, the first optimized for B2B enterprises looking to enhance productivity across a highly distributed supply and delivery chain, the second for B2C enterprises needing to engage more effectively with their next-generation digitally enabled consumers.

Systems of Engagement in B2B Enterprises

Here are five steps a CIO can lay out as a reasonable roadmap for leading a consumerization of enterprise IT effort that is focused specifically on empowering knowledge workers and middle managers negotiate the complexity of global supply and delivery chains in real time. These aren't solutions; they are applicable uses of the new technology that can be controlled by taking the principles that AIIM developed in the world of systems of record and updating them to the new environment.

- **Make meetings work better across time zones.** This is a matter of introducing meeting technologies like Webex, LiveMeeting, GotoMeeting, or the like, all of which not only facilitate the sharing of PowerPoint presentations but also can record meetings for playback at a later date. Going forward there are two issues to keep in mind. The first is content indexing: until that is reasonably functional, streaming media is difficult to search to find the key point in the meeting that you want to zero in on. And second, meeting content tends to be rough around the edges, leading to many comments that, taken out of context by an e-discovery foray, could be used to the detriment of the enterprise. So there has to be a content control policy that posts meeting content for a fixed period, does not allow it to be copied, and deletes it permanently after a set amount of time.
- **Address complex issues collaboratively.** This involves overlaying systems of record with systems of engagement, initially in the form of community threads, wikis, blogs, or the like. These become information exchange vehicles that leverage both the wisdom of experts and the wisdom of crowds. By linking them to systems of record, particularly in a technical or customer support context, enterprises can dramatically improve the timeliness and effectiveness of their responses to customer issues. There is an issue about community "tone of voice" that must continually be monitored, with "flaming" messages being isolated, and violators being held accountable. And there is additional technology required to make sure searches span the full complement of resources to return the best possible answers. But overall, this is proving to be a good no regrets move for many early adopters.
- **Keep collaborators connected for faster decision making.** This involves moving collaboration from a document-mediated, asynchronous activity to a live-session real-time phenomenon. The enabling technologies here include everything from instant messaging and texting, to presence detection and mobile device support, to video conferencing and high-definition telepresence. All these systems attack the problem of response latency, thereby allowing managers catch problems earlier and move group decision-making ahead faster. By by-passing the document in favor of the live session, they can often head off misunderstandings before they even arise.
- **Mine community content to extract insights to enhance the business.** This is a natural and valuable extension to Step 2, but there is no need to rush into it. Data mining is still an emerging art, and while there are powerful tools for driving the analytics, the business side of the house needs to catch up in terms of organizing the deep dives and staging the results to support future action.
- **View collaboration and social systems in context.** One of the mistakes organizations made back in the days of Knowledge Management was to assume that there was a need to collect and share organizational information in a fashion that was somehow separate from the core processes of the organization. Social business systems need to be implemented within a context, and that context is the processes that drive the business. This combines Steps 2, 3, and 4 to create game-changing capabilities in processes where response times make all the difference. It requires focusing systems of engagement on moments of engagement, working backward from those key moments that make or break a strategy, determining who is representing the enterprise during those moments, then deciding what information or capability in what form would most empower that person to make the best decisions.

Systems of Engagement in B2C Enterprises

In the B2C world, the challenge is not introducing consumerization but rather keeping up with it. Now that the Googles and Facebooks and YouTubes of the world have completely reset the bar for what constitutes a good online experience, B2C enterprises that have been online for years are having to revisit their assets, if for no other purpose than to put a new face on them. Many organizations are simply setting up Facebook and Twitter “outposts,” unconnected to core back-end processes that provide information and context about customers. Engagement means more than what happens on a Facebook page. It means mapping that experience on a Facebook page back to the actual conversion of the customer.

Here’s a reasonable series of starting steps for the CIOs in these companies to undertake. AIIM can help organizations make sure that when the ideas below are implemented, they are implemented safely — safely for the company, the CIO, and for employees.

- **Use social media to attract and hold consumer attention.** Bringing higher production values and more contemporary user interfaces to consumer-facing systems has become the minimum bar for online B2C interactions. This is enterprise produced data, used largely in broadcast mode, so technically it is not a great challenge. But it does entail digital asset management challenges for a content management infrastructure that was designed originally to cope with documents and drawings.
- **Use social media to extend and improve customer service.** The catch-all call center is increasingly becoming a part of the past, becoming now instead part of a portfolio of customer contact mechanisms that includes alerts to a mobile device, instant messaging, video conferencing, social networks as support networks, and the like. The great news here is that the “millennial” modalities are some of the most cost-effective. The challenge is that the number of content types you need to manage across the number of platforms you need to interface to creates the kind of n-dimensional complexity that calls for a next-generation content management layer.
- **Use social media to develop deeper brand relationships and consumer insights.** This is job #1 for the marketing organization in any consumer packaged goods enterprise. In their first iteration, these were sites hosted by the brands, not a particularly challenging imposition on enterprise IT. Going forward, however, consumers are not willing to be sent hither and yon. They want brands to show up where they are — be that on Facebook, at their home portal, or in their more specific social groups. Taking this next step into greater customer intimacy requires supporting additional platforms and bi-directional interfaces, many of which are changing rapidly, and few of which are under enterprise control. The big return here is that new product launches can leverage social media to help drive tipping point outcomes, thereby reducing a four-out-of-five failure rate that regrettably is still the industry norm.
- **Integrate social media with systems of record to provide a better end user experience.** This represents another step-function advance in customer service, where a consumer can contact the enterprise through any channel of communication and be transferred to any other channel and not have the context of the call lost. Whether that context be a shopping cart, a wish list, a trouble ticket, or an account question, maintaining it is the key to meeting next-generation customer service standards. And with the widespread deployment of broadband networks, both wired and wireless, video conferencing will add yet another dimension to the user experience. All this means having to integrate multiple forms of media and content with legacy systems of record and deliver self-service and assisted service transactions within the constraints of online response times.

- **Mine metadata to personalize offers for greater relevance and conversion.** This is the holy grail of consumer marketing. Even a small change in the percentage of offers converting can have a major economic impact, given the huge audiences the digital world can provide. But personalization also poses major IT challenges on several fronts, beginning with installing analytics that go well beyond what we have been calling business intelligence, then finding the folks who can build the algorithms and leverage machine learning to improve them, and then hooking all this up to real-time engines to interface with media sites displaying ads or e-commerce sites making up-selling suggestions. From a content management perspective, issues around privacy, security, consumer rights management take on a much bigger life than ever before.

Call to Action

The central challenge for organizations is to define how to implement systems of engagement quickly, responsibly, and in the context of achieving a business purpose. As a non-profit organization focused on information management for over six decades, AIIM has a unique perspective on the challenges associated with rapid changes in technology.

Beginning with microfilm, followed by electronic images, and then with electronic documents, AIIM has helped organizations capture, manage, store, find, deliver, and preserve critical business information. Collectively, the community AIIM represents has developed and evolved standards and guidelines, checklists and templates, and best practices to address governance, classification, compliance, technology, and security issues associated with managing in each of these stages in the evolution of business information.

Major stages in the evolution of business information...	What we need to do with the information at each stage...	Issues that must be defined/redefined at each stage...
Microfilm Electronic images Electronic documents Social content	Capture Manage Store Find Deliver Preserve	Governance Classification Compliance Technology Security

The challenge now is that organizations must redefine how they deal with these issues and extend how they think about control and governance in order to deal with social technologies that are much more distributed, informal, and ubiquitous than anything that we have known previously. For most organizations, this is not something that is in the future or on the horizon - it's here today. AIIM's roadmaps and guidelines, delivered through a strategy workshop with key executives, are the first step in building a responsible and accountable strategy for systems of engagement. The workshops help organizations answer such questions as:

- How will systems of engagement change the way we do business?
 - How will the core value chains within our organizations — innovating, designing, procuring, marketing, selling, servicing, and governing — be impacted by social business systems?
 - What kinds of social business use cases are associated with each of these major value and process chains?
 - What kinds of demands do these use cases create for connections back to the information in our core systems of record?
 - How can we create best practices tied to these use cases that will allow for faster and more accountable implementations?
 - How can social business systems be integrated into existing enterprise systems and applications?
 - How do we avoid replacing our existing information silos with new social silos?
- How do our concepts of control and governance need to change to deal with the new world of systems of engagement?
 - How can organizations balance the effectiveness of personal branding with the overall goals of the organization?
 - How can organizations balance collaboration and agility with security and privacy considerations?
 - What types of governance are required for social business systems to be effective in the enterprise?
 - Given that technology *policy* and *regulation* always lag technology *practice*, what kind of obstacles do outdated policies and regulations pose to rapid implementation of social business systems?
 - In an environment in which we increasingly expect employees to be available 365/24/7, how do we deal with the inevitable resultant blurring of lines between what is organizational and what is personal?
- And most importantly...
 - In a world of tight resources, how do we pay for these new systems and still support our legacy systems?
 - How do we deal with the change management implications of all of this?

About the Author

Geoffrey Moore is a best selling author and a managing director at TCG Advisors. His most recent book is *Dealing with Darwin: How Great Companies Innovate at Every Phase of Their Evolution* published in January of 2006. For more information on *Dealing with Darwin*, please go to the website: www.dealingwithdarwin.com.



Geoffrey has made the understanding and exploitation of disruptive technologies the core of his life's work. His other books, *Crossing the Chasm*, *Inside the Tornado*, *The Gorilla Game* and *Living on the Fault Line* are best sellers and required reading at leading business schools. Geoffrey divides his time between consulting on strategy and transformation challenges with senior executives and developing mental models to support this practice. He is currently at work on a new book focusing on the role of business models in the strategy mix.

Prior to founding the Chasm Group in 1992, Geoffrey was a partner and principal at Regis McKenna Inc., and a sales and marketing executive at three software companies: Rand Information Systems, Enhansys, and Mitem.

He graduated in American literature with honors from Stanford University and has a doctorate from the University of Washington in English literature.

About AIIM

AIIM (<http://www.aiim.org>) is the community that provides education, research, and best practices to help organizations find, control, and optimize their information. For over 60 years, AIIM has been the leading non-profit organization focused on helping users to understand the challenges associated with managing documents, content, records, and business processes. The AIIM community includes over 65,000 users and professionals.

About TCG Advisors

TCG Advisors (<http://www.tcg-advisors.com>) is a consulting firm specializing in a set of challenges common to technology companies and technology-related sectors, where rapid changes in market dynamics force frequent adjustments in corporate strategy. The recurrent demon here is inertia on the old vector, the recurrent frustration inability to get traction on the new one. Its practice is devoted to meeting this challenge.



Icon UK Limited represents, distributes and supports the icon Suite (from icon Systemhaus GmbH) in the UK. We enable large organisations to consistently deliver the best written communications experience with their customers, partners and staff at market leading price-performance levels. We implement state-of-the-art document creation, context appropriate workflows and multichannel output technologies to produce outstanding ROI and user satisfaction. The positive engagement of users via their preferred means of communication, in both style and media, is a differentiating approach to drive desired customer response.

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Icon UK is a member of AIIM and supports the goals of AIIM. This White Paper, also downloadable from the AIIM website, is provided for your convenience and education. Icon UK would be pleased to discuss any aspects arising from the issues discussed within, or even to host a workshop across all stakeholder groups in your business.



Find, Control, and Optimize
Your Information

AIIM (www.aiim.org) is the community that provides education, research, and best practices to help organizations find, control, and optimize their information. The AIIM community has grown to over 65,000 professionals from all industries and government, in over 150 unique countries, and within all levels of management including senior executives, line-of-business, and IT.

For over 60 years, AIIM has been the leading non-profit organization focused on helping users to understand the challenges associated with managing documents, content, records, and business processes. Today, AIIM is international in scope, independent, implementation-focused, and, as the representative of the entire enterprise content management (ECM) industry - including users, suppliers, and the channel - acts as the industry's intermediary.

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