C-Change:

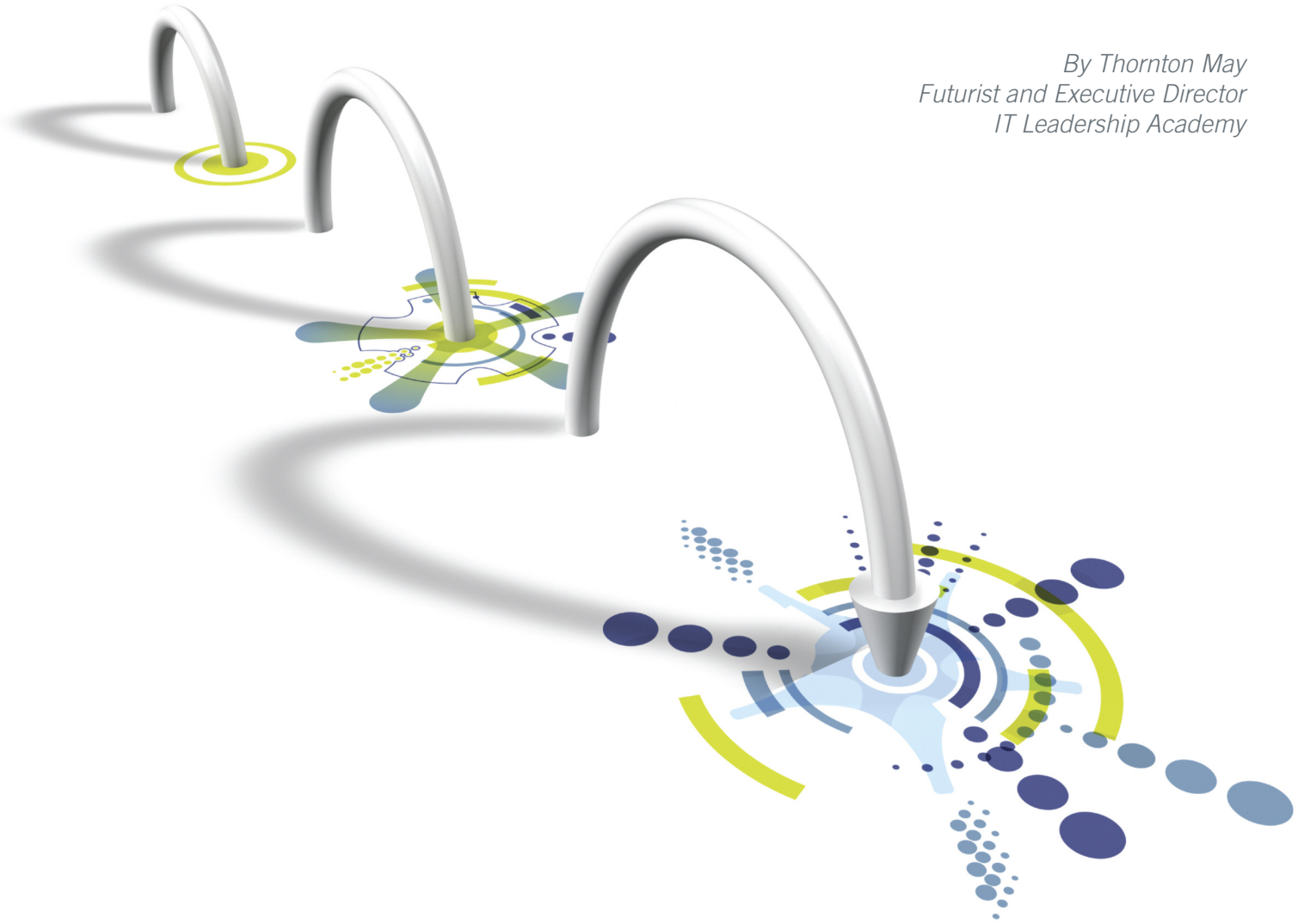## The Impact of Consumerization of IT
TURNING BYOD, THE CLOUD, AND OTHER TRENDS TO YOUR ADVANTAGE

By Thornton May
Futurist and Executive Director
IT Leadership Academy

Kodak

aiim AIIM Executive Leadership Council   www.aiim.org

Table of Contents

Introduction

The Executive Leadership Council at AIIM has published *C-Change: The Impact of Consumerization of IT* as a wake-up call to global executives. We believe that information is modern day gold. The organizations that maximize the ability of their employees to use and act on information will win. Adapting the cultural shift that is consumerization to business ends will be a crucial step for the coming decades' victorious organizations.

> *Employees expect the technology they use at work to replicate the touch, feel, ease-of-use and fit-for-purpose of the technology they use in their personal lives.*

The title *C-Change* provides a four-part organizational construct. Part One examines the sea change in information management perceptions and expectations[1]. Part Two details the need for executives to "see change" (i.e., understand that the situation requires recognizing that a sea change has occurred). Part Three exposes the hard reality surrounding the C-Suite having to re-think, re-imagine, modify and augment their roles to deal with the changed circumstances. Specifically the changed environment mandates the top-of-the-house creatively answering three deceptively simple questions:

- Who owns the customer?
- Who owns the customer's experience?
- Who owns the customer's data?

Part Four presents Action Items for moving forward to make these changes relevant for business.

In preparing this document the AIIM Executive Leadership Council undertook a set of discussions & examinations regarding the changing state of the information management ecosystem with the longer-term objective of fine-tuning a language and set of frameworks that will allow the various "tribes" of information management to co-habit and co-create value. This document is the result of a

> *Adapting the cultural shift that is consumerization to business ends will be a crucial step for the coming decades' victorious organizations.*

six month collaboration among some of the smartest and most visionary thinkers on this planet. It calls attention to the fact that how we manage information today is, too often, a limit to growth.

AIIM, the Global Community of Information Professionals, is pleased to provide this analysis of what is happening and what we should do about it.

Part One: Sea Change in Perceptions & Expectations

> *Consumerization is not unique to this age. It should not be narrowly defined as workers wanting to use their iPhones for business purposes.*

The phrase "consumerization of IT" originated in 2004[2] and refers to the then emerging and now ubiquitous reality that the technology available OUTSIDE the enterprise is *perceived* as being more sophisticated, more user-friendly, less-hassle, delivered in a quicker time frame, better fit-for-purpose, lower-cost and more integrated than the technology INSIDE of the enterprise (i.e., that provided/provisioned by the central IT organization).

Malcolm Frank, the Executive Vice President of Strategy and Marketing at Cognizant Technology Solutions Corporation, brings consumerization alive describing the Sunday/Monday technology divide:

> *On Sunday evening, we open up our dazzling personal computing devices and enter an entirely different place, an online world that is virtual yet rich in understanding, global yet intimate and, while running on silicon and fiber, refreshingly human. It's a place of friendship, ideas and commerce, the best and most obvious place for many genuine moments of engagement.*

> *Monday morning arrives…As the PC hums through its bootup process, our eyes dart between the enterprise applications loading on the screen and the flashing red voicemail light on the phone. Yes, the standard-issue computer provides access to standardized systems of record yet offers precious little human engagement. The "dumb" phone won't follow us past the length of its cord. It's all so restrictive and confining. Work technology has become a limiter in our professional lives.[3]*

The perceived disconnect between the fast, cool, bordering-on-free and good technology outside the enterprise and the alleged slow, un-cool, overpriced and not-good technology inside the enterprise is routinely commented upon in major media outlets such as the *Economist, Wall Street Journal* and *The Harvard Business Review:*

> *"'They (young employees) take a look at a business-application screen and they scream in horror,' says Willem Eelman, the chief information officer (CIO) of Unilever."[4]*

"…the double life many people lead: yesterday's technology for work, today's technology for everything else."[5]

"For the next generation of knowledge workers, entering the workplace often feels like entering a computer science museum."[6]

Historically the role of IT has been to shape, then satisfy, user demand for technology. With consumerization, demand is increasingly shaped *externally* by the "best possible technology use experience." People want to be able to use technology that is easy and intuitive. Easy-to-use, high-design sites and tools in the consumer sector (e.g., Amazon, Google, various file-sharing tools, Apple) have changed expectations and raised the bar for enterprise IT.

Employees expect the technology they use at work to replicate the touch, feel, ease-of-use and fit-for-purpose of the technology they use in their personal lives.

As such, technology demand from users is the same regardless of any particular vertical market. It doesn't matter what business you are in—the at-work technology use experience has to replicate the best available product/service experience in the market today. Consumers (and employees) are no longer willing to give an enterprise a "pass" for poor service/performance on the basis of "hey, we are a government agency," or "healthcare has always been behind," or "we are a small liberal arts college" or "what do you expect from a discrete manufacturer?"

A New Narrative Is Required

Pundits are consumed with labeling winners and losers. The IT/business struggle is characterized as one between "Villains/Dummies & Geniuses." This misplaced narrative aimed at identifying "who is on top of the mountain today" is a dead end. This "winner/loser" oversimplification has ghettoized ALL enterprise IT as irrelevant/behind the times and has blinded journalists, policy makers and executives to the positive role enterprise IT can contribute to capitalizing on the wondrous possibilities inherent to the disruptive technologies of big data, social, mobile and cloud.

This "winner/loser" oversimplification has ghettoized ALL enterprise IT as irrelevant and has blinded journalists, policy makers and executives to the positive role enterprise IT can contribute to capitalizing on the wondrous possibilities inherent to today's disruptive technologies.

The headline of consumerization should not be "IT is not giving us what we want," but rather that the global workplace has finally woken up to the fact *that information and technology can be a source of competitive differentiation.* Rather than waiting for an over-worked, meagerly-funded and understaffed cadre of heroic internal IT staffers to conceptualize, design, develop and deploy technologies; the workforce itself is ravenously interrogating a newly invigorated global consumer electronics industry for innovation opportunities.

In direct contradiction to the widely-held common belief, this moment represents not the *end* of the IT era but rather the *beginning* of a golden age of information and technology-driven innovation. Consumers move in and out of technologies at such a torrid pace that market innovators are presented with constant opportunities. This is not a bug. IT IS A FEATURE. We live in exciting times. We should act accordingly.

> *Sneaking around the edges of the "Consumerization of IT" issue is the existential question: What is the role of the CIO these days?*

The "who's gadget is cooler" cage match being fought out in the headlines is just the tip of the consumerization iceberg. While making for an easy-to-tell and immensely satisfying narrative, it is overly simplistic to attempt to frame consumerization as a civil war pitting the vast, fast and global consumer electronics industry against a demonized, compliance-obsessed, control-seeking, security-sensitized and severely resource-constrained internal band of IT bureaucrats in a race for the hearts, minds, handsets and tablets of a highly digitized, mobilized, virtualized and socialized global workforce. *There are bigger forces at work here*.

Sea Changes

Karen Sobel Lojeski, Professor of Technology & Society – State University of New York Stonybrook (*Uniting the Virtual Workforce and Leading the Virtual Workforce*), sums up the new landscape succinctly, "the work force and workplace has changed."

The old way of work had three defining characteristics:

- in plain sight (you could see your workers);

- value was tangible (assets, inputs and forecastable output – hours worked multiplied by units produced); and

- Common context (you knew what was going on inside the heads of your co-workers and bosses).

> *What is the role of the CIO these days? We find ourselves in the early days of worker technology empowerment. There are legitimate concerns amongst the free-for-all of self-provisioning technology and services.*

The new world of work is totally different:

- Workers are invisible (post-geographic);

- Value is intangible (how do you measure knowledge worker productivity); and

- No shared context (virtual work teams are frequently strangers to one another).

Exponential, "Second Half of the Chessboard"[7] advances in the power and reliability of computing devices designed for the consumer market, globalization and the increasing mobility of the workforce have blurred the lines between personal and business lives. Employees relying on technology that allows them to work or play

anywhere at any time have come to expect the same sophisticated technology and services integration in the workplace that they already use in their personal life. There is the presumption that the digital riches of SoMoClo (social, mobile, cloud) will always be present, available and affordable.

Society in general and digital natives in particular EXPECT technology to enhance ALL aspects of their lives. Our species has gone digital.

A two-year-old strapped in a car-seat bathed in morning sunshine asked her parents, "Please can I have the remote control?" "What do you want with the remote control?" query her parents. "I need to switch off the sun; it's getting in my eyes." This request gives voice to a world view that believes that there is a remote control (i.e., technology fix) for everything under and including the sun.[8]

A frequently overlooked environmental truth associated with the consumerization of IT—actually the consumerization of humanity—is the insatiable demand for technology. With regards to every need, a new generation has become accustomed to "just using something."

Mental health professionals have started to voice concerns about the mental health implications of omni-connectedness.[9] Some liken the mental state of leaders today to that of disaster victims:

> The "old normal" is gone. Now the search for a new normal begins, says a mental trauma expert. "They call it the disillusionment phase. It's the place where you start to feel things again, and you begin to realize that what you knew as previously normal will never happen again."[10]

Part Two: See Change

Our age is not the first—nor will it be the last—to experience change. It's useful to glimpse at history for a moment and realize that cultural change and upheaval resulting from technical innovation didn't begin with the introduction of Apple's various devices. As Gordon S. Wood, the Alva O. Way University Professor and Professor of History Emeritus at Brown University, reminds us, "In the decades following the Revolution America changed so much and so rapidly that Americans not only became used to change but came to expect it and prize it." (*Empire of Liberty: A History of the Early Republic, 1789-1815*).

> *The pointy-end of the consumerization of IT spear is the fact that change outside the enterprise is happening much faster than change inside the enterprise.*

Daniel Walker Howe, professor of History Emeritus at UCLA, insists that "Few periods in American history have witnessed changes as diverse, deep and durable as the three decades following the War of 1812." (*What Hath God Wrought: The Transformation of America, 1815-1848*).

Democracy = Crowdsourcing

Many of the fine minds examining the consumerization phenomena today appear to lack a sense of history (i.e., where we've been, where we are and where we are going). The consumerization of IT is part of a longer and larger phenomenon of democratization started in the eighteenth century when the locus of sovereignty had shifted in the minds of more and more persons from the monarch or even the legislature to something more elusive, the "people."[11]

Consumerization continues the overthrow of the (very) dated belief that the people at the top, the "elites," make all the rules. History was once very erroneously thought to solely be the story of princes, potentates and popes.

As we emerge from the financial trauma that financial coastal elites caused; as we finish two wars seeking to resolve centuries old socio-religio-political rivalries bequeathed to us by crusading Kings, warring popes, cloistered clerics and career-advancing Age of Empire foreign service bureaucrats; we must never forget the power of the common man to set things right. We must never forget that for every Washington there was an "embattled farmer." For every Churchill there was a "Tommy."

Change; meaningful, value-creating innovation; typically emerges not from polysyllabic, black-t-shirt-wearing, chardonnay-sipping elites but rather from the abundantly fertile minds of ordinary people—the folks who come to work for you every day. If we fail to celebrate their role in making things better we lose a powerful lever.

Consumerization is not unique to this age. It should not be narrowly defined as workers wanting to use their iPhones for business purposes. Nor should it be interpreted as a catch phrase encompassing the disruptive impacts of social, mobile, big data and cloud technologies on slowing changing corporate infrastructures, practices and mindsets. Consumerization is bigger than that.

The Pace Increases

Consumerization embodies humanity's post-Dark Ages desire to do the right thing, with the right tool at the right time. Since the Middle Ages every age has seen individuals "figuring out" how to use technology to solve problems. James Jay Carafano in *GI Ingenuity: Improvisation, Technology, and Winning World War II* reminds us that in 1941:

> *The boys who went off to war listening to Benny Goodman and Artie Shaw on the radio were different. The sons of the veterans of WWI were another new kind of army.*
>
> *…The WWII generation had something more. This was the first age of soldiers who grew up comfortable with modern industrial-age technology. These were kids who built jalopies in their garages, poured over glossy full-color issues of Popular Mechanics, and read "Buck Rogers in the 25th century' comic books, listened to his adventures on the radio, and watched Buck pilot rocket ships in the Saturday morning serials at the Bijou. They were tinkerers, problem solvers, risk takers, and daydreamers. They were curious, gum-chewing, outspoken kids. They were the first generation to elect an engineer, Herbert Hoover, as an American president.*
>
> *The American soldier in WWII deserved his own nickname. And he got one. The one that stuck was GI. It is commonly believed the term came from the initials G.I., "Government Issue," stamped on equipment. It was kind of a joke, as if suggesting the government issued infantry, just like artillery shells, off a factory assembly line – but it did not. The American fighting man had the discipline of an industrial-age worker, but he was a well-educated, free thinking, self-confident individual. While the government did not issue soldiers like parts off the factory floor, it did exploit the genius of the American GI to win the war.*

Alvin Toffler, ur-futurist, put change in universal context in 1970 when he wrote *Future Shock,* surfacing for the first time the widely experienced but not articulated malaise of not keeping up. When one observes the technology landscape one immediately concludes:

1. The pace of change is accelerating. [12]

2. The pace of change for various piece-parts of modern existence is not uniform.

The technology industry is all about time. How long things take, how long things last, how long it takes to learn a new skill, and when is it time to walk-away from long-held skill sets. Time-to-mastery, time-to-obsolescence, time-to-fix and time-to-deploy have become critical dials on the CIO success-o-meter.

The highest risk and highest opportunity areas of society, economy and technology today are associated with the points of greatest de-synchronization (i.e., places where the pace of change are most widely divergent).

De-synchronization both inside the technology portfolio, inside the enterprise (e.g., different organizational units running at different speeds) and across society and cultures is creating destabilization. In today's world, the fastest change is happening in the consumer sector, and this shift has left many well meaning "IT departments" struggling to adapt, both technologically and culturally. The macro-trend over the next 10 years will feature the general movement of consumer-level products and technologies into the enterprise.

The pointy-end of the consumerization of IT spear is the fact that change outside the enterprise is happening much faster than change inside the enterprise. In the mesmerizing opening of the HBO cable television series *Newsroom,* Jeff Daniels, playing the role of TV anchor Will McAvoy, explains to an audience that "The first step in solving any problem is recognizing there is one."[13] This is the problem enterprise IT must "see" and address.

As we accept more wisdom of the "common man" and as the pace of change accelerates; the pressure on CIOs and IT to innovate and deliver internally increases. Where does the CIO "expert" fit today?

Part Three: Role Change

Sneaking around the edges of the "Consumerization of IT" issue is the existential question: What is the role of the CIO these days? What is the role of enterprise IT with Apple Stores on every corner, Geek Squads at every intersection, Genius Bars in every lobby and cloud apps downloadable at the touch of a button?

This is not a strange question. Every C-Suite role and EVERY executive—given the massive amount of change we are experiencing—needs to reflect on the role they play.[14]

The C-Suite as it is composed today is not (in many organizations) adequately addressing these questions. This has given rise to the creation of new C-level positions—the Chief Digital Officer, the Chief Customer Officer and the Chief Analytics Officer (Head Data Scientist) position. This is, literally, a C-Change.

This is not a new question. Thirty-two years ago, William Synnott, then senior vice president of data processing of the First National Bank of Boston, speaking at the 1980 Information Management Exposition and Conference uttered—for the first time—the phrase, "Chief Information Officer." Ever since that moment, people have debated what exactly this—then new—animal in the executive forest was supposed to do.

Bill presciently articulated:

> *The manager of information systems in the 1980s has to be Superman—retaining his technology cape, but doffing the technical suit for a business suit and becoming one of the chief executives of the firm. The job of chief information officer (CIO)—equal in rank to chief executive and chief financial officers—does not exist today, but the CIO will identify, collect, and manage information as a resource, set corporate information policy and affect all office and distributed systems.*

Since 1980 there has been no shortage of opinions about what the role of the CIO is or should be. Some think the role is shrinking. Some think it is expanding. Some think it is becoming more strategic. Some are convinced the job is scurrying down a tactical, service-procuring, compliance-enforcing rat-hole.

Empirical research[15] posits that there are four primary executive roles. They are, in descending order of emphasis:

P *Produce Results (focus on making the business successful)

A *Administer Systems (focus on how to do things efficiently)

E *Entrepreneur (focus on what the organization needs to do in the future)

I *Integrate (create a climate conducive to teamwork and cooperation)

Short and long-term success requires careful balancing of these four roles. This balancing is difficult because the "**P**" role dominates the "**A**" role which dominates the "**E**" role which dominates the "**I**" role. Without conscious intervention, organizational Pac-Man (the classic video game) will result with efforts to produce immediate short-term results driving out all other activities. This is not a bad thing if the world does not change.

However the world is changing in a very de-synchronized manner. The preeminent cultural historian of technology working today, Rosalind H. Williams at the Massachusetts Institute of Technology, argues that we are living in "an age dominated, if not determined, by technological change." The person who masters technology change, who is able to render the most extreme points of de-synchronization non-toxic (e.g., the person who can equalize the pressure of external changes with internal needs) will be the hero of the age.

In a changing world over-emphasis on producing immediate results places future performance in jeopardy. Enterprises which want to "P" (i.e., produce results) in the future will have to "E" (i.e., entrepreneur) today. The battle between the forces favoring efficiency (e.g., "P" and "A") and the factions advocating innovation ("E" and "I") forms the backdrop for modern value creation/destruction.

Think of the efficiency camp ("P" and "A") as tigers and the innovation camp ("E" and "I") as chickens. These two species do not naturally coexist and when they bump into each other without tightly calibrated supervision the end result is feathers, fat tigers and no innovation.

Historically IT has served "P" and "A" masters. This was the age of building out systems of record (the transaction systems which run businesses today). In today's environment, IT is being asked to deploy systems of engagement (the empowerment, communications, knowledge management and social systems which allow employees to delight customers). IT must remain loyal to the forces of "P" and "A" while championing and enabling the causes of "E" and "I".

There are two curves in IT—the curve we are on and the curve which comes next. In the early days of IT, a key portion of the CIO's value add was making sure the enterprise was "doing things right"—optimally allocating assets to running the business (i.e., being at the top of the current learning curve). In a sense, in previous years IT ran a railroad.

The IT Railroad Needs to Become a Cab Company

The railroads were designed with rigid rules; tracks that determined the routes available to customers were laid down, timetables determined when customers could get on and off, and stations that determined where customers could get on and off were built. There was no flexibility built in the plan. Additionally, railroads tended to be geographic monopolies (i.e., the prospective purchaser/user of transportation services had only one choice of supplier).

Cabs are very different from railroads. Cabs cruise the city, seemingly at random, but in fact they concentrate their efforts in areas where customers are more likely to need them. They have no idea when a customer will call, where the customer will be, or where the customer will want to go. The taxi system is designed to embrace this chaos and uncertainty and to thrive in an environment that is unpredictable.

Information Worker Ethnography

A key role of next-generation CIOs will be understanding next-generation workers—where they work, when they work, how they work and what they need/want to do their work. This worker understanding provides a framework to guide technology adoption and deployment.

At the AIIM Executive Leadership Council Summit we asked what did we know about the "consumer" of information? With candor and honesty the name-brand organizations and globally respected thought leaders assembled snuck up on the conclusion that—truth be told—Fortune 500/Footsie 100 enterprises didn't really know that much about information users or information usage.

While ~$3.7 trillion a year is spent on information technology, for the most part, the models we use—even the words we employ—are not up to the task of accurately depicting how information is used. We are fifty-plus years into the Information Age and still using Industrial Age models of work and organization. This is changing.

The knowledge work, information work creative work being conducted around the world today has—for the most part—never been subjected to systematic field studies carried out by trained anthropologists using scientific methods of observation. To technologically-enable modern workers, to get out of their way, to empower them: we need to understand them. A very few, very smart companies are launching work-related information use ethnographies. As these companies blaze the way to determining how information is used, workers and employers will both benefit.

At a less granular level information users—ALL INFORMATION USERS—are very understandable. Margaret Stalter, technical director and senior advisor for cryptographic strategy at the National Security Agency's Information Assurance Directorate, explains:

> *It turns out all our customers want what everybody else's customer wants. They want to get to whatever they want to get to when they want to get to it from wherever they are.*[16]

Joanne Kossuth, the CIO at the Olin College of Engineering, tells a similar story:

> *I think what people want is personalization. People want to consume knowledge the way they want to consume it, when they want to consume it, with the things/devices that are relevant to them.*[17]

At the furthest extremes of the information use spectrum—professionals involved at the highest and most sensitive echelons of national security and students with "mad" technology skills experimenting promiscuously—there is commonality.

13

What Business Is IT in?

Theodore Levitt, marketing guru and former editor of the *Harvard Business Review,* maintained that the most important marketing-strategy issue confronting executives is "What business are we in?" What business is IT in? What business should IT be in?

In the past IT was in the:

- systems-building business (IT built systems of record)
- KTLO ("Keep the Lights On") business
- technology provisioning business
- compliance business
- security business
- privacy business

"Once upon a time…" IT got into the PC business (i.e., provisioning personal technology for business users). This became a big and rapidly-growing business. IT was in this business because the assumption at the time was that technology-naive workers lacked the knowledge to make informed technology decisions. This has changed. As the über-architect at an über-media company points out:

> *They (the workers) have all this stuff. They are getting savvy about using the stuff. They have got it at home. They know how to buy it. They go to Amazon or eBay to buy it. They go to the Apple Store to buy iPads and iPhones.*

Users are becoming more comfortable self-provisioning, self-helping and self-solving technology problems. They seek tech services without the snark. Enterprise IT is no longer the sole, preferred or even a particularly respected source of computational functionality. The data indicates that increasing amounts of money is being spent on technology *outside* of IT (once referred to as Shadow IT and viewed very negatively). While overall corporate tech spending is up by 17 to 20%, spending by IT departments is flat at best.[18]

At the AIIM Executive Leadership Council a workshop surfaced the idea that when thinking about provisioning technology for workers, executives should:

> *Think about how you purchase soup. You go into a store: you have a lot of different flavors, you buy it off the shelf and you put it to immediate use. The thought was that is in stark contrast to the experience of people with enterprise systems these days.*

> Enterprise IT needs to change its mental model from one of "Compete & Control" to one of "Leverage & Enable."

We find ourselves in the early days of worker technology empowerment. There are legitimate concerns amongst the free-for-all of self-provisioning technology and services. Is a "consumerized" information user more aware (and thus more careful) about info-risks? What do you do about it? When your user can enter an online store and buy different services like so many cans of soup; where does that leave the IT department? So while control of what specific devices employees work on might no longer be 100% necessary; control over the security of and access to the information that employees' access on those devices is 100% necessary.

Consumerization has become a referendum on the competence of the IT organization and has become a critical component of IT's Brand. IT's old identity & reputation revolved around deploying a secure and cost-effective infrastructure. As we said above, IT needs to move into more "E" and "I" enablement. Right now, IT, in most cases is not perceived as being in the "fast enablement of dreams" business. Or the "take this idea/opportunity and turn it into a viable and material revenue stream business."

Does consumerization mandate that IT establish a new identity?

Re-branding May be Necessary

The AIIM Executive Leadership Council conducted a series of aural Rorschach tests about the word or phrase that leaps to mind when people think about IT. Words like "digital dictatorship," "choke point," "nanny state, (as in "they treat us like children"), "where good ideas go to die," "impediment" and "dark art" were prominent in the responses.

As one participant explained:

> *...change the focus (of IT) away from the stuff and change our focus to the worker as an information consumer...understand what they want, how they want it, when they want it, what they are want to pay for it and what is the stuff that really delivers value.*

J.P. Rangaswami, the former chief scientist for the BT Group, believes that in the future IT's success will be measured by *how well it gives up control.*[19]

In an environment hyper-accelerated by a five-year cycle of disruptive technology change the key part of the CIO's value-add in the very near future will not be provisioning technology but rather enabling the creation of new businesses which capitalize on the power shifts that accompanies technology change. Careers will be made and lost on timing and executing curve jumps successfully.

A New Kind of CIO

What if you could "genetically engineer" the perfect CIO from traits and capabilities of historical figures. What would that CIO look like? Individuals with more than a passing acquaintance with the history of the Renaissance might remember that toward the end of the 17th century, the English hailed Machiavelli as the most profound moral thinker of modern times. Machiavelli:

> *A key role of next-generation CIOs will be understanding next-generation workers—where they work, when they work, how they work and what they need/want to do their work.*

> *…wrote as a philosophical "physician" seeking 'to' treat mankind's recurrent moral and political disorders. In the role of civil physician, he hoped that his writings would make him "tolerated as an educator and teacher by those who held the tiller of government" in a principato or a republic, so that his advice might help to steer either government away from ruin.*[20]

We may be making the CIO role question harder than it has to be. CIOs could do much worse than embrace the role of enterprise physician—seeking to make things better and assisting the hand on the tiller turn away from ruin.

Vince Kellen, CIO, University of Kentucky, points out that the next wave of IT leadership is all about the logistics of information—"where does information want to go?" In Dr. Kellen's opinion, IT needs to focus on:

- The cost of moving information through IT systems (infrastructure)
- The cost of moving information through people's brains (presentation/usability)
- The benefits of using information wisely in a competitive environment

Part Four: Action Items

The Action Items bolted onto the back of many white papers sadly fall into the category of being bromides that are obvious upon modest reflection, easy to say and not so easy to do.

We conclude that moving forward; executives need to think deeply and not alone about Consumerization of IT and its impact on the enterprise and the future of work. Consumerization of IT is a complex, multifaceted issue which cannot be ignored, requires delicacy, intensity and leadership.

An aphorism popular in this age of disruption and uncertainty is the prayer asking guidance to "accept the things you cannot change, change the things you can and be able to recognize the difference."

In the "thing we cannot change category" most would agree that enterprise IT is not in a position to dictate how fast or how slow the world of technology operates. Enterprise IT needs to change its mental model from one of "Compete & Control" to one of "Leverage & Enable." Action items along this path include:

Create a Decision Framework for Thinking Through Consumerization

Will you allow Bring Your Own Device? Will IT assist in provisioning those devices or will employees self-provision? Who will support the devices? How do you change your culture? How will you address governance? Will employees be able to use their personal cloud services for work? Do you allow a wide-open land grab of applications by your business users? Departments? Divisions? How will you ensure that your organizations becomes more, not less, efficient as groups and individuals strive to maximize personal efficiency? How will you use apps in the organization rather than monolithic software implementations? Should you try a council approach?

Understand Evolving Information Users and Usage

A new generation is entering the U.S. workforce: millennials (defined as the 80 million young adults born between 1976 and 2001). By 2014, 36% of the U.S. workforce will be comprised of millennials; by 2020, millennials will comprise 46% of all U.S. workers. These workers are bringing different expectations about work/life balance into the workplace. Companies need to take advantage of the facile use of technology these workers bring to the office by focusing on *how people are getting work done*, not just what devices they are using. Companies need to think hard about how to use technology to enable organization around work; rather than organizing work around technology.

Keep in mind that the millennial expectation is also a mindset around the use of technology and information; not merely defined or confined by and to this age group.

Acknowledge Information User Needs

"If this is what we are getting then all of this hard work has been worth it – **you listened**," said a user from one US state's university system on the first day of roll-out of a new reporting system for decision support. The words highlighted in bold are key here: you listened. Listen to your users; give them what they want. They want better and faster access to the information that they need. IT needs to deliver tools in a way that matches both the technology and cultural expectations created by the consumerization trend.

There's also an "i" effect that is real. The user experience (UX) is critical. Not easy to use = fail. As the "great man" tendencies recede, embrace that employees aren't widgets. Unleash them by allowing them to be present in the organization wherever they are; through smarter provisioning and easier access to their information and applications.

> *Short and long-term success for CIOs requires careful balancing of four primary executive roles: produce results, administer systems, entrepreneur and integrate.*

Anticipate Future Information Use

Organizations need to spend more time thinking about the future. Time needs to be allocated for anticipating what the future of work will look like.

Contextualize User Technology Demand with Enterprise Mission

As bromides go; this one is as basic as it gets, yet bears repeating because it is too often taken for granted. Technology is the enabler of business goals. Technology is not a business goal in itself. Identify your business goals and strategies and match the technology (whatever it is) to achieve those goals. Best-in-class technology is great. Technology that fits your organization is even better.

Visibly Change How IT Provides Technical Support (e.g., move from a Help Desk to a Genius Bar)

Organizations are experimenting with mechanisms for enabling better self-help resources—videos, screen captures, etc. for the self-motivated learners.

De-mystify IT Decision Making

Make sure that each IT decision is accompanied by an authoritative, concise explanation of how the decision was made. Include end user testimonials when possible.

Eliminate Friction

Wherever and whenever possible eliminate friction from connecting with others and sharing ideas. Create an enterprise scavenger hunt to identify and eliminate computer-based interfaces that force users to sit at a desk to input information, firewalls that limit or block data flows across supply chains, or poor integration with other systems and tools, requiring repeated data re-entry.

Experiment with an enterprise APP Store enabling employees to "find" business applications at a well-known and trusted place.

Shape the Technology You Use

Enterprise IT and the CIO can shape technology supply. Work with your suppliers to ensure products meet your information user needs.

Re-imagine IT Goals and Strategies

The Executive Leadership Council members also discussed a generic "IT Goals and Strategies" Statement to help CIOs shift their mindset from a focus primarily on "produce results" and "administer systems" to also include focusing on "integration" and "entrepreneur." We need, as a group, to create a new gospel; a new direction and purpose for IT. We suggest as a starting point the following IT goals and strategies.

Goals

- Increase productivity by analyzing adoption, benefits and barriers
- Reduce costs by right-sizing the hardware, software and services we deliver
- Improve satisfaction by understanding what people really use and need
- Identify problems and opportunities by tracking workforce behaviors

Strategies

- Switch from device focus to consumer (worker) focus using market segmentation
- Develop segmentation of marketplace with worker profiles
- Target and market offerings to consumer segments using a retail business mentality

19

Conclusion

Society in general and digital natives in particular EXPECT technology to enhance ALL aspects of their lives. Technology change—the defining characteristic of the age we live in—now requires that every task and activity be scrutinized as to the economics and ergonomics (who, how, when, where) of how it gets done. Consumerization empowers individuals to participate in this reexamination.

The consumerization trend is here to stay. It is a global phenomenon.[21] A Chinese worker is twice as likely as a U.S.-based worker to be granted BYOD rights, privileges and responsibilities. Gartner says consumerization will be the most significant trend affecting IT during for the next ten years.[22] The editors at *Information Week* tell us "Consumerization is a parade. You can either get out in front of it to stop it and get trampled, or you can grab the baton and lead the parade."[23] Dion Hinchcliffe, technology pundit and keynote at this year's AIIM 2012 Conference believes, "2012 is the year consumerization upset the enterprise."[24]

Consumerization can be IT's finest hour. The phenomenon should not be micro-managed as an administrative hassle associated with controlling/slowing the explosion of devices emanating from the vast, fast and global consumer electronics industry. Nor is consumerization merely a question of determining policies for allowing/denying access to an exponentially growing SOMOCLO (social, local, mobile, cloud) application set. Consumerization is bigger than that.

We live in an age where technology and technology use are vital/foundational elements of personal and professional identity. Consumerization embodies humanity's post-Dark Ages desire to do the right thing, with the right tool at the right time. Information management and information managers have the opportunity to cease being limits to growth and play a leadership role in a new era. Consumerization adds technological sizzle to the great Enlightenment narratives of reason, tolerance, humanity and hope.

Notes

[1]This sea change is consistent with and build upon the changes articulated in the AIIM White Paper, *Systems of Engagement and the Future of Enterprise IT: A Sea Change in Enterprise IT.* http://www.aiim.org/futurehistory

[2]"The Consumerization IT Civil War" (8 June 2007). http://www.gartner.com/it/products/podcasting/asset_175790_2575.jsp. As with any big idea – who actually coined the phrase first and when is a subject of contention. Some argue that it was created as early as 2001.

http://setandbma.wordpress.com/2012/03/30/consumerization-of-it/

[3]Malcolm Frank and Geoffrey Moore, "The Future of Work: A New Approach to Productivity and Competitive Advantage" http://www.cognizant.com/Futureofwork/Documents/FutureofWork-A-New-Approach.pdf

[4] "Personal technology at work," *The Economist* (8 October 2011).

[5]Nick Wingfield, "It's a Free Country...So why can't I pick the technology I use in the office?," *WSJ.com* (15 November 2009).

[6]R.Wang, "Coming to Terms with the Consumerization of IT," *Harvard Business Review Blog* (13 July 2011).

[7] The inventor of the game of chess was asked by the king of the land to name his prize for the invention. The man, asked that for the first square of the chess board, he would receive one grain of rice, two for the second one, four on the third one, and so forth, doubling the amount each time. The King's treasurer charged with delivering the gift explained that it would take more than all the assets of the kingdom to give the inventor the reward (2^{64}-1). The second half of the chessboard (square 32 and beyond) is where the doubling begins to make a difference. Up until Square 32 the chess inventor had accumulated one field's worth of rice (`4 billion grains). Ray Kurweil The *Age of Spiritual Machines* and Erik Brynjolfsson (*Race Against the Machine*) both make reference to the fact that – with regards to technology functionality, we are at the second half of the chessboard.

[8]http://www.newworldofwork.co.uk/2012/04/11/switching-off-the-sun-preparing-for-the-next-generation-in-the-workplace/?utm_source=twitterfeed&utm_medium=twitter

[9]"Technology: Is it making addicts of us all?," *The Week* (2 August 2012).

[10] Joanne Caye, a clinical associate professor of social work at the University of North Carolina at Chapel Hill (*When Their Worlds Fall Apart*) speaking about the post-Fukushima disaster Japanese.

[11]James H. Billington, *Fire in the Minds of Men: Origins of Revolutionary Faith*, 160-166.

[12]An analysis of the past quarter millennium reveals that fundamental change, the kind which induces power shifts and mandate adopting new mental models have tended to occur once every fifty years or so in the early industrial age; once every twenty years in the later industrial age; and once every five years currently. (See, Thornton May, *The New Know: Innovation Powered by Analytics*). This metabolic measurement is corroborated by Geoffrey Moore's comment that "…every five years in the technology sector, things change enough to force me to write another book."

[13]"3 greatest minutes on tv"
http://www.youtube.com/watch?v=16K6m3Ua2nw&feature=share

[14]Two of Socrates' most enduring principles for living a good life were:

Socratic Principle #1: "The unexamined life is not worth living"
Socratic Principle #2 "Wisdom begins by knowing that you don't know"

(Marsh McCall, emeritus professor of Classics at Stanford University).

[15]Gerry Faust, *Responsible Managers Get Results: How the Best Find Solutions—Not Excuses* (Poway, CA: Faust Management Corporation, 1998); and Ichak Adizes, Ph.D. *Corporate Lifecycles: how and why corporations grow and die and what to do about it* (Paramus, New Jersey: Prentice Hall, 1988).

[16] Margret Salter, "National Security Agency Mobility Strategy," RSA Conference (28 March 2012) http://www.youtube.com/watch?v=JqF4LyUZuS0

[17]Phone interview (15 August 2012).

[18]R. Wang, *HBRblogs.*

[19]John Dix, "Collaboration Success edges closer," *Network World* (21 June 2010).

[20]Erica Benner, *Machiavelli's Ethics* (Princeton: Princeton University Press, 2009).

[21] Aberdeen reports that 69% of respondents Europe / Middle East / Africa (EMEA) region are experimenting with BYOD (Bring Your Own Device) in some form. Aberdeen Research (2 July 2012) http://blogs.aberdeen.com/communications/byod-in-emea-and-employee-it-ization/

See also:
http://content.dell.com/us/en/corp/d/corp-comm/the-evolving-workforce

[22] http://www.trendmicro.com/us/enterprise/challenges/it-consumerization/index.html Cesare Garlati, "Consumerization Talks with Ken Dulaney, VP Gartner Research," (28 June 2011). http://bringyourownit.com/2011/06/28/consumerization-taks-with-ken-dulaney-vp-gartner-research/

[23]Michael Davis, "Consumerization of IT: Security is no Excuse," *Information Week* (2 April 2011).

[24]Dion Hinchcliffe, "The Enterprise IT Landscape in 2012: Consumerization Rules The Roost," http://www.ebizq.net (22 March 2012).

About the Author

Thornton May is Futurist, Executive Director and Dean of the IT Leadership Academy. His extensive experience researching and consulting on the role and behaviors of Boards of Directors and "C" level executives in creating value with information technology has won him an unquestioned place on the short list of serious thinkers on this topic. Thornton combines a scholar's patience for empirical research, a stand-up comic's capacity for pattern recognition and a second-to-none gift for storytelling to the information technology management problems facing executives.

Thornton has established a reputation for innovation in time-compressed, collaborative problem solving pioneering the Lyceum (an intense learning experience designed to keep 'C'-level executives abreast of emerging technology trends); the Directors' Institute (a forum for Board members to increase their awareness of technology management issues); and the Controller's Institute (arena for European Chief Financial Officers to fine-tune processes associated with making technology investments). Thornton designs the curriculum that enables the mental models that allow organizations to outperform competitors, delight customers and extract maximum value from tools and suppliers.

Thornton's insights have appeared in the *Harvard Business Review* (on IT strategy); The *Financial Times* (on IT value creation); *The Wall Street Journal* (on the future of the computer industry); the *M.I.T. Sloan Management Review* (on the future of marketing), *American Demographics* (on the evolving demographics of Electronic Commerce), *USA Today* (on the future of the consumer electronics industry), *Business Week* (on the future of CEO direct reports) and on National Public Radio (debating the future practice of strategy with Professor Michael Porter). Thornton is a columnist at *Computerworld*, *CIO Decisions* and has served as an Advisor to the Founding Editors of *Fast Company Magazine*.

Thornton May
Futurist & Executive Director
IT Leadership Academy

About the Research

As the non-profit association dedicated to nurturing, growing and supporting the information management and social business community, AIIM is proud to provide this research at no charge. In this way, the entire community can leverage the education, thought leadership and direction provided by our work.

We would like this research to be as widely distributed as possible. Feel free to use this research in presentations and publications with the attribution – "© AIIM 2012, www.aiim.org."

Rather than redistribute a copy of this report to your colleagues, we would prefer that you direct them to http://www.aiim.org/research for a free download of their own.

About AIIM's Executive Leadership Council

In 2012, AIIM formed a think tank to define, discuss and offer directives on today's emerging issues in information management. This think tank is the Executive Leadership Council (ELC).

The ELC brings together top thinkers, high performance practitioners and leaders in information management for two theme-centric summits annually. Each summit creates a shared space for dynamic conversations to determine the role of the information management industry in a new era of business.

Details of the 2012 summit themes can be found at **www.aiim.org/elc**. Should you be interested in learning more about participating in the Executive Leadership Council, please contact Jessica Lombardo at **jlombardo@aiim.org**.

Thank you to our US Executive Leadership Council Companies who underwrote this research:

ABBYY®

box

cadence 9
ENABLING ENTERPRISE CONTENT MARKETING

Canon

CISCO

DocuWare
From Documents to Value

EMC²
where information lives®

EntropySoft

FileBound®
Content Management Solution

fiserv.

FUJITSU

OnBase
a Hyland Software solution

IBM®

ibml

IRON MOUNTAIN

KnowledgeLake.

Kodak

KOFAX

Microsoft®

newsgator

OPEN TEXT

ORACLE®

PARASCRIPT®

Pitney Bowes

READSOFT®

SAP®

Workshare™

Thank you to our EU Executive Leadership Council Companies who underwrote this research:

Thank you to our additional participating organizations:

- Accenture
- The Boeing Company
- BP America Inc.
- Cognizant Technology Solutions
- CUNA Mutual Group
- Dwell Media
- Gensler
- Gistics, Inc.
- Harvard Business Review
- Imperial College Business School
- Jewish United Fund
- Joint Staff – US Department of Defense
- London Metropolitan University
- McDonald's
- Minnesota Housing Finance Agency
- NATO Undersea Research Centre
- Nokia
- SkyDox
- University of Kentucky
- University System of Georgia
- UPS

aiim ®

The Global Community of
Information Professionals

aiim AIIM Executive Leadership Council   www.aiim.org