# Communications, Information, Technology, and Management (CiTM)

**March 2021**

## THE EDITOR SPEAKS - Putting Out the Trust Fire

Every relationship we have, personal and professional, is built upon mutual trust between parties.. At an organizational level, what can and cannot be achieved is defined by the trust between organizations. This trust is shaped by the collective nature of interpersonal relationships. The Edelman Trust Barometer report has been monitoring trust for the last 21 years, and has found that only 48% of people trust organizations – an all-time low. While individuals do trust corporations slightly more than government organizations, neither scores are encouraging. It is true that COVID-19 and the resulting economic issues have not helped, most believe that corporate and government leaders are either intentionally trying to mislead or lack the competency necessary to build a trusted relationship with the public.

Deloitte recently argued that there are four components that form the basis for trust; humanity (does the organization really care/empathize), transparency (in relationship to motives, processes, and outcomes), capability (is the organization competent), and reliability (are the interactions consistent and dependable). Under this framework, when two parties are evaluating their trust of one another, they are evaluating the faith they have in how the other party will behave under potential future circumstances.

Honest communication is an essential component to any trusted relationship because trusted relationships, in theory, bring heightened benefits to all involved parties. In fact, there is an inherent organizational motivation to ensure transparent communications because it is also generally accepted that truth wins out over time. However, when the culture disproportionately rewards short-term objectives over long term thinking, it creates an environment where trust is often sacrificed as a casualty for short term gain. While actions that create immediate situational relief at the cost of trust can be expected from the short term horizon, ultimately the price paid far outweighs the short-term benefit.

Issues of trust impact both corporate and government entities alike, as well as their leaders. The greatest difference, however, is that when companies operate in an open market, their customers validate their trust in the organization each day when they conduct business with that company. In contrast, voters express their trust (or distrust) only on Election Day, despite the fact that their trust in elected leaders can alter without notice. In fact, given that data can be used to obscure the facts, the reduction in voter trust may not become clear until well after the elected official has left office.

Fundamental lack of trust serves to sow discontent and reduce the ability of all parties to work together and solve problems. For customers, it reduces sales; for employees, it reduces productivity; and for partners, it reduces collaboration and innovation. When trust is removed from any interaction, the exchange comes with a perceived level of risk that hinders the potential benefits of any activity. Imagine if, for every interaction we experience, we must always develop a Plan B that could be acted upon if the relationship between parties sours. To complicate matters, trust is not a black and white issue. It presents itself in many shades of grey, so a formally documented Plan B becomes important as the probability of a trust fracture and the potential impact of such a rupture begins to increase. However, this low level of perceived trust between parties hinders interpersonal relationships, keeping one or both parties constantly on it's toes. This level of negative, and possibly malicious, energy can result in any type of interaction becoming a high risk situation.

The age of the Internet has made it much easier to communicate. While this, in theory, permits more frequent communications among parties, which should result in a greater trust between parties, it also creates an environment where it is easier for misinformation to spread. Misinformation,regardless of its source, undermines efforts to build trust. This dichotomy has proven difficult to address as efforts to restrain misinformation can also restrain efforts to share the information important to the creation of trusted relationships. The press, which at one time served as the Fourth Estate for its ability to focus on facts, has become an entertainment business that serves targeted markets. Governments now must consider tasking social media companies, companies that were established to allow individuals to directly communicate with one another, with policing the veracity of the views exchanged by their users.

The Edelman research also reveals that trust of national leaders is lower than that of local leaders. This may be related to the fact that we interact more frequently with local leaders than national leaders and that local leaders handle trust impacting issues that mirror local constituencies. But this also demonstrates that mass-market trust is incredibly difficult, or nearly impossible, to achieve in the modern day. Leaders cannot and should

not need to,  actively work at building trust with their countless consistencies, but these efforts can be amplified by actions focused on the local level. The Edelman research also suggests that people often question the data that leaders utilize to make their decisions, since data can be cherry picked to justify misguided actions.  It remains an uphill battle to gain the trust of the populace, but if the degradation of trust cannot be reversed, wedge issues that characterize societal interactions, will become even more divisive and organizationally siloed. All of which leads to undermining leaders' efforts to address societal and economic issues.

People do not expect perfection from organizations or leaders.  They do, however, expect that issues are acknowledged justly, fairly, and transparently. Additionally, consumers want to see clear steps taken to address their concerns, not just filibustering to please the board or other higher-ups. Transparency remains a critical component when trying to build trust between parties because the public wants to ensure their issues and concerns are clearly addressed.  Efforts to obfuscate issues are often met with larger backlash than the initial issue itself.  Efforts to improve our trust quotient must begin with organizational leaders, but it does not end there.  Leaders must communicate honestly and openly with customers, employees, partners, and others.  They should do so in a way that enables others to carry the message forward, and encourages actions and accountability that reflect the organization's efforts to continually build trust.

## UPCOMING VIRTUAL EVENTS

- March 18, 2021. Horasis Extraordinary Meeting on the U.S.  A virtual meeting to discuss and shape the vision of the new U.S. administration.
- March 23-26, 2021.  Tech Leadership Series 2021.   A conference that examines the impact technology is having on industry.
- March 31, 2021.  Smart Cities: Integrating IoT Devices to Help First Responders Save Lives.  Efforts of DHS to develop new technologies for First Responders.
- April 6, 2021.  Big Data Insights Conference.  A virtual conference on Big Data hosted by Georgian College, Barrie Ontario.
- April 13-14, 2021. Smart Cities Connect.  A smart cities conference associated with US Ignite.
- April 14-15, 2021.  Sensors and IIOT.  Conference on industrial automation.
- April 20-21, 2021.  Digital Transformation Week,  A conference dedicated to the technologies and processes necessary to complete a successful digital transformation.

*If you have an event that you would like us to include in our newsletter, please send an email to* manager@i3-iot.net

## READER CONTRIBUTION: Decade of Investment in Big Data AND AI Yield Mixed Result

By Randy Bean, CEO of NewVantage Partners and and contributor to Forbes, MIT Sloan Review, Harvard Business Review, and The Wall Street Journal.   This article originally appeared in Forbes on Jan 3, 2021.

It was nearly a decade ago that Fortune 1000 companies began to embrace Big Data, and within a few years, embrace AI as well. About this time, beginning in 2012, my strategic advisory firm NewVantage Partners began to track the progress of these efforts, as leading companies sought to undertake data-transformation efforts with the objective of becoming more data-driven in their business decision making. Based upon findings from NewVantage Partners 9th annual survey of senior corporate c-executives, the picture is decidedly mixed.

This year's theme was the progress of leading companies in their data and AI initiatives. The survey, and summary report entitled *The Journey to Becoming Data-Driven: A Progress Report on the State of Corporate Data Initiatives,* attracted 85 Fortune 1000 or industry leading companies.

Participating firms included top-tier banks—Bank of America, CitiGroup, JP Morgan Chase, Morgan Stanley, and Wells Fargo; payment processing leaders—American Express, Capital One, Mastercard and VISA; healthcare services firms—Anthem, Cigna, CVS Health and United Health; pharmaceutical giants—Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Merck, Pfizer and Sanofi; leading insurance providers—AIG, Berkshire Hathaway, Liberty Mutual, MetLife; and consumer goods and services giants—McDonalds, Starbucks and Walmart.

Among the principal findings of this year's survey, established companies continue to struggle in their efforts to build data-driven organizations, as illustrated by some stark findings from these companies:

- Only 41.2% are competing on analytics
- Only 39.3% are managing data as a business asset
- Only 30.0% have a well-articulated data strategy for their company
- Only 29.2% are experiencing transformation business outcomes
- Only 24.4% have forged a data culture
- Only 24.0% have created a data-driven organization.

What is noteworthy in these results is that while investment in Big Data and AI remains high—99.0%—and investment levels increase—91.9%, results continue to lag. Only 24.0% of executives report that their companies have realized the goal of becoming a data-driven organization.

There appears to be a recognition that data-driven business transformation may be harder than once anticipated. The findings illustrate that even as progress remains elusive, most companies have not progressed, and have even *regressed* in these efforts in recent years—see Table 1.

These results suggest that most companies continue to remain at an early stage in their transformation efforts, and it will take time for firms to realize the full fruits of their investments of time, energy and business resources. This is the case even after a decade of investment in these efforts. Transformation comes slowly and transformation efforts represent a long-term journey.

| The State of Big Data/AI | 2019 | 2020 | 2021 |
|---|---|---|---|
| Driving Innovation with Data | 59.5% | 64.2% | 48.5% |
| Competing on Data and Analytics | 47.6% | 45.1% | 41.2% |
| Managing Data as a Business Asset | 46.9% | 50.0% | 39.3% |
| Well-Articulated Data Strategy | | | 30.0% |
| Transformational Business Outcomes | | | 29.2% |
| Forged a Data Culture | 28.3% | 26.8% | 24.4% |
| Created a Data-Driven Organization | 31.0% | 37.8% | 24.0% |

Table 1. The State of Big Data/AI in Leading Companies. NewVantage Partners 2021.

Why is it that as firms continue to invest in data and AI initiatives, and increase their rate of investment, progress remains elusive? One answer may lay in where companies perceive the greatest barriers and impediments to progress with their data and AI initiatives. This is around cultural change and transformation. According to this year's survey, company executives overwhelmingly report—92.2%—that the greatest challenges to becoming data-driven are, and continue to be, due to cultural barriers, not technology limitations or a lack of viable technology options. This is an instance of technology being ahead of capacity for adoption.

The cultural impediments and barriers to data-driven transformation efforts arise largely from challenges in the areas of organizational alignment, business processes, change management, communication, people skill sets, and resistance or lack of understanding that enable change. Investments in data governance, data literacy, programs that build awareness of the value and impact of data within an organization, may represent an eventual step in the right direction. As evidenced in Table 2, progress has been slow and cultural impediments continue to loom large, with no immediate improvement in site.

| Principle Challenge to Becoming Data-Driven | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| People/Business Process/Culture | 80.9% | 92.5% | 90.9% | 92.2% |
| Technology | 19.1% | 7.5% | 9.1% | 7.8% |

Table 2. The State of Big Data/AI in Leading Companies. NewVantage Partners 2021.

As the survey indicates however, the picture is not all gloom and doom. There are notable bright spots on the horizon. For example, the adoption of Artificial Intelligence (AI) represents one potential bright spot, as companies appear to be progressing steadily in their adoption of AI initiatives. This year, 77.8% of companies report that AI capabilities are now deployed in widespread or limited production, up from 65.8% last year, with only 4.1% reporting no applications of AI in use. This represents steady progress. With overall investment levels in data and AI increasing, adoption of AI capabilities can be expected to continue.

Another potential bright spot can be observed in the long-term optimism of data executives. Despite the many challenges that leading companies are facing as they pursue efforts to become data-driven, an overwhelming majority of executives—81.0%—are hopeful for the future, expressing optimism about the outlook for data/AI within their firms. Within these companies, 91.9% reported that the pace of investment in data/AI continues to accelerate, another positive indicator. A further positive indicator is the number of executives—45.4%—that describe their companies as leaders in making progress on data/AI. Even in this most challenging of years, 91.6% of companies report that, while facing the headwinds of the Covid-19 epidemic, their companies would be spending the same or more on data and AI initiatives. Good news indeed.

One final bright spot is reflected is the commitment that leading companies have made to establishing a central data function, in the form of the Chief Data Officer, and appointment of Chief Data Officers to fill these leadership positions. During the past half decade, well over half of leading companies have taken steps to establish a CDO function and appoint a Chief Data Officer. Although the role continues to evolve, companies appear to be steadfast in their commitment to this role's inevitable success, with nearly two-thirds—65.0%—having a sitting executive in this role today. As illustrated in Table 3, the Chief Data Officer role is firmly established and there is no turning back.

| Appointment of a Chief Data Officer | 2012 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Yes | 12.0% | 55.9% | 62.5% | 67.9% | 57.3% | 65.0% |
| No | 88.0% | 44.1% | 37.5% | 32.1% | 42.7% | 35.0% |

*Table 3. Appointment of a Chief Data Officer. NewVantage Partners 2021.*

A decade into the data-transformation journey, leading companies are making slow but gradual headway in their efforts to become data-driven. While investment levels and signs of optimism continue to increase, results reflect lagging adoption and remaining challenges in organizational transformation efforts. It is decidedly a mixed bag.

Over the course of the past decade, Big Data and AI have been gradually absorbed into the corporate mainstream. Those firms that continue to make progress and begin to show results from these investments will have transformed themselves to compete more effectively in the 21st century digital business world. For legacy companies, this will represent a significant, and hard won, accomplishment.

## THE I³ CORNER

On March 18, 2021 it was announced that The City of Los Angeles was listed as one of the top 20 open cities in North America as tracked by PSD (www.psdrcs.com). PSD's Open City Index was first published in 2015 to track public sector efforts to support open data environments. The City of Los Angeles was the largest city to make the top 20 list and one of the only two US cities to be included (the other being Coral Gables, Florida). Kudos to Los Angeles.

The next I3 Consortium meeting is scheduled for April 1, 2021 at 11am PST. The meeting will be hosted by The City of Long Beach where they will discuss the new pilot program which they are rolling out. You can attend the meeting via meet.google.com/atz-mgrn-ahk. If you want to be added to the I3 Consortium's email distribution list so you can be kept informed of future meetings, just send an email to i3-join@i3-iot.org and you will be auto-added to the list.

On Monday March 1, 2021 the I3 Consortium convened a special workgroup tasked with creating a video architecture (and Proof-of-Concept) that supports the needs of the Los Angeles Department of Sanitation with the extensibility to support other City departments so they will be able to, with proper permissions, leverage the same video in support of their departmental operations.

There are two deliverables that will be produced by this workgroup. The first is a modularized video architecture that can (1) be linearly extended to support other departmental needs and unforeseen functionality; and (2) adapt as city video policies/technology evolves. The second deliverable is a documented proof-of-concept system that validates the overall architecture and provides a replicable starting point that other cities can replicate as their starting point should they want to adopt or build on our efforts. It is not too late to become involved. If you are interested in participating with this workgroup, just send an email to Niki Asvadi (Niki.Asvadi@i3-iot.net). The next meeting of this workgroup is scheduled for April 6, 2021 (11am PST).

## Recovery Winners and Losers
## by Jerry Power

While it remains premature to let our guard down, we are optimistic that we are past the worst of the pandemic. Vaccines are being distributed, treatment protocols appear to be solid, and hospital occupancy rates are on the decline. The pandemic was not just a healthcare emergency, efforts to respond to the virus created an economic crisis as well which required a $1.9 Trillion bailout from the government. The healthcare and economic impacts of the virus was not equally distributed. Forbes reported that some industries actually experienced improved performance in this environment. These industries included cleaning services, delivery services, grocery stores, liquor stores, game companies, fitness equipment companies, telehealth services, tutoring services, pre-owned cars, behavioral health providers, home health providers, tech

companies, and health care companies.  In contrast, USA Today reported that industries that have experienced significant setbacks include gambling, airlines, hotels, movie theaters, live sports, cruises, film production, automotive manufacturers, oil and gas, retail, conventions, food services, theme parks, gyms, construction, transportation, and technology.

In certain situations, some Covid-19 business expansions served as a counterpoint to declines in other market sectors.  For example, sales of exercise equipment saw increases while gyms experienced declines.  People did not stop exercising, but instead moved away from exercise services and toward in-sourcing their exercise needs.  Similarly, while the food services industry saw declines, grocery sales increased reflecting a significant move toward home cooking as we became more self-sufficient.  Forbes noted that tech companies were doing well as people moved toward using the internet and software as a substitute for business and personal interactions.  USA Today noted that while the virus increased online shopping, the virus had a negative impact on the supply chain because fewer physical products were being delivered to brick and mortar merchants.   Given that the economic losses in one sector of the economy can be linked to demand increases in other sectors, it is difficult to quantify the aggregate impact the pandemic has had on the economy at a macro level.  This, of course, provides little solace to the individuals and companies that have had to bear the brunt of these impacts.

After a year of living under pandemic conditions, the public has developed cabin-fever symptoms.  This can be seen by the spring break activities being reported at beach destinations and a rush to terminate pandemic safety measures in the hope of a rapid return to 'normal.'  But, when comparing the list of industries that have most benefited and those most damaged by the pandemic, an underlying question emerges.  Will the elimination of healthcare driven rules shift business back to currently ailing industries at the expense of the industries that have benefited?  Or, has the pandemic reset our understanding of business-as-usual?  Many behavioral articles have been written about the possibility that pandemic behavioral shifts may become the long term 'new-normal.'  As the virus becomes manageable with vaccines and proper care, restrictions will be reduced, and the public will seek relief from pandemic related hardships.  What is unclear is whether these behaviors that emerge from this maelstrom will reflect pre-pandemic market behaviors or whether markets will begin to embrace new and different customer experiences.

Prior to the pandemic, the US economy was often described as a service economy.  Participants in the economy were encouraged to become specialists who focus their skills and talents on the specific needs that provide the most economic benefit.  Other, less strategic, needs are outsourced to others thereby allowing the maximization of total economic return for our efforts.  For example, instead of cutting the grass, consumers outsource that service so they can spend that time in pursuit of activities that create more value.  The pandemic drove the population toward socially distant interactions which did not diminish their social nature but instead virtualized it and made them more self-reliant as they eliminated or reduced their dependency on services that put them at risk.

As restrictions are released, there will be a resurgence of these services as people shake off the restrictions that put boundaries on behavior during the pandemic.  However, the increased focus on self-care, home-cooking, and self-entertainment have opened people's eyes to a different lifestyle.  Rather than reactively reverting to historic norms, people will consciously decide whether they will maintain the more self-reliant lifestyle, revert to a pre-pandemic lifestyle, or opt for a hybrid approach.  While consumers consider these options, they will be open to additional choices and service companies should expect that their competitors will use this opportunity to provide potential customers with new and innovative experiences.  Society has learned that they can cook for themselves, exercise at home, binge watch entertainment, and play video games to entertain themselves.   Service companies should not just strive to bring back their pre-pandemic services – they must innovate and bring forward new customer experiences that encourage customer repatriation with a service that customers consider more compelling than the pre-pandemic service.  The pandemic has effectively raised the bar for everyone.

## READINGS FROM THE EDITOR'S DESK

Creating the government of the future. Pandemic demonstrated the importance of agile government organizations. Government functions are defined by the processes by which they conduct their mission. Agile governments have to shift from being process driven to becoming outcome driven.

The Secret of Adaptable Organizations Is Trust. Developing detailed processes that eliminate variability make organization systems very predictable but less agile. Predictability makes quality easy to manage. Managing quality and agility is a balancing act.

The data privacy Cold War is here. Which side are you on? Many companies worry that data privacy laws will impair their business model, but these laws do not prevent the sharing of data, they require companies disclose their policies so users can make an informed decision about how their data will be used.

Rebuilding trust in government. Trust has been in decline over the last 10 years. Deloitte has published an article talking about what governments should do to reverse this trend. Findings apply to companies as well. Good read.

Edelman Trust Barometer 2021. After a year of unprecedented disaster and turbulence the 2021 Edelman Trust Barometer reveals an epidemic of misinformation and widespread mistrust of societal institutions and leaders around the world.

## LET's CONTINUE THE CONVERSATION

Please feel free to forward this email to your friends and colleagues who you believe would benefit from participation in our community. For those of you who wish to be included among those who believe that technology is a tool and that business success is achieved by skilled wielding of the tools available to us, feel free to reach out.  If you have suggestions, topics you want to see included in future newsletter updates, or other general inquiries, feel free to email us at manager@i3-iot.net.  The ideas expressed in this newsletter are intended to stimulate conversation and dialog that will lead to a better understanding of our collective future.  The opinions may not necessarily reflect the opinions of any members of our community of interested people.

## ABOUT I3/CiTM

Originally founded under the guidance of USC, the Institute for Communication Technology and Management (CTM) was formed to support a deregulated telecom industry.  Over time, computer and networking technologies evolved and grew changing the way we do business and live our lives.  The CTM Newsletter was created as a vehicle to foster continued conversation about tech associated issues that transcend specific technologies and specific industries.  CTM conducted foundational Internet-of-Things research and created a community driven IoT network vision.  Working with the engineers at USC's Viterbi School of Engineering, the cities of Long Beach, Los Angeles, the County of Los Angeles, along with a host of supporting companies, academic institutions, and private individuals, this vision was turned into Open Source software that was released in December 2019.  I3 Systems was formed to pursue commercial opportunities based on the work of the I3 Consortium and the concepts published in the newsletter.  With this grass roots tech movement, the newsletter evolved and continues these conversations even further.

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