

June/July 2020

**THE EDITOR SPEAKS - Pandemic Level Disruption**

Last month I had the opportunity to participate in Horasis's annual economic summit (held virtually this year). Horasis is a visionary community that explores trends and strategies that drives growth for public and private entities and seeks to foster leadership of future organizations.

Several interesting points were raised at the conference.

Technology is a critical tool in allowing organizations to function at scale while safely maintaining an employee/customer distancing environment. But technology based solutions will fail unless both trust and security is a foundational value.

Our culture has changed drastically. This applies to employees, customers, and partners; these changes must be understood and accepted. Economically we will recover but the culture will forever be impacted, thus companies need to be prepared to pivot toward our new normal.

- This new culture brings with it new opportunities and new challenges. New business models are emerging, customers have changed their expectations, and new demand models serve to shape our markets.
- Historically dramatic change has occurred before; but such changes are often restricted to an industry or a geography. In the case of COVID-19, no geography will escape its impact and every industry will be impacted by its consequences.
- In such an environment we must learn new skills that go beyond intra-organization collaboration to include partners, customers, suppliers, and more.
- Business planning processes have to change to become more agile and responsive to these dynamic business and regulatory climates. It is no longer a question of serially experimenting to find product-market fit. Instead embracing market fit is transitory and fast pivots are the key to survival.
- We often talk about COVID-19 in terms of testing, contact tracing, quarantining, treatment and vaccines. These are important issues but COVID-19 is more than a medical problem. Success demands active citizen participation, an active government, and support from the business community. Efforts to fight a pandemic necessitates that everyone participate and understand their role in the process.
- COVID-19 is not war, it is not a binary process that can only be won or lost but instead an effort to minimize damages. Our COVID-19 response must be about caring, respect, and supporting one another.

Another topic of discussion at the conference found that during times of stress, systems tend to expose underlying weaknesses. It is no secret that our social systems support numerous disparities that are growing more pronounced. These disparities impact our politics, economic distribution, gender equality, racial tensions, healthcare availability, educational opportunities, the digital divide, and more. The BLM protests demonstrate a serious outcry for needed reforms. And continued stress on our social systems may highlight other issues as well if they remain unaddressed

On a historic note, as the black plague spread across Europe, it disproportionately affected marginalized populations. This disparity led to numerous protests as these people demanded better treatment on a number of other grievances not related to the plague. The healthcare system reinvented itself as a grass roots effort when the medical authorities at the time failed to provide suitable guidance. There was a marked increase in the persecution of minorities, as people sought someone to blame for an unmanaged situation. The authority figures at the time (the church) were challenged and forced to restructure and purge established leaders who could not be trusted.

Looking back to the more recent polio crisis puts additional color around efforts to manage disease. The polio virus was initially identified in 1908, 14 years after the first polio epidemic. The polio vaccine trials began in 1935 but it was not until 1954 that a vaccine moved ahead to a large scale trial. Success was declared in 1955 but the vaccination process was suspended the following year when harmful side-effects were occurred due to a rushed manufacturing process. Eventually the polio vaccine was licensed in 1960 but it would take another 8 years before enough people were vaccinated and victory could be declared.

While much is being done to accelerate the process, developing a safe vaccine is not easy. Experiences with the polio virus or thalidomide serve to remind us of the dangers of cutting corners in the hope of a quick fix. The development of a safe vaccination process will take time and the inoculation process that begins after that is measurable in years rather than months. COVID-19 will be with us for many years even under an accelerated program. That means testing and social distancing will become a part of our new normal. We should not look at this as a negative but an acceptance of our reality and by embracing that fact, we must seek the opportunity within.

When Frank-Jurgen Richter (Chairman of Horasis) interviewed Armen Sarkissian (President of Armenia), President Sarkissian summed the situation up perfectly. He said, "For many, it's (the future) unpredictable, it is unknown, it is challenging and frightening but for those who will start embracing this using logic and philosophy, it will be the best place in the universe."

**UPCOMING VIRTUAL EVENTS**

- Jul 23, 2020. [Digi-City Connects: LA 2020](#). Online conversation about innovation from within a pandemic.
- Jul 23, 2020. [A Journey towards a Data-Driven Organization](#). An online event with Jagjit Dhaliwal.
- Jul 24, 2020. [Agile Transformation: People + Culture over everything else](#). A webinar on cultural transformations.
- July 28, 2020. [Responsible Data in the time of Pandemic](#). Conference on ethical use of pandemic data Technology
- July 30, 2020. [Responsible Data Technology and Policy in the Real World](#). Conference on ethics and data policy
- Aug 10, 2020. [Building the Cities of the Future: More Markets or More Regulation?](#) A virtual panel session on ethics and regulation
- Sept 28-29, 2020. [Privacy Conference 2020](#). An online conference covering privacy, security, and the online economy.
- Oct 5-8, 2020. [Interop Digital](#). A virtual conference for IT professionals
- Oct 23-25, 2020. [Data Con LA](#). A virtual conference on Data Analytics

If you have an event that you would like us to include in our newsletter, please send an email to [manager@i3-iot.net](mailto:manager@i3-iot.net)

## READER CONTRIBUTION: Good vs Bad Marketing by Cassidy Shield, Vice President Marketing, Narrative Science



As part of our 2020 planning, we identified 12 differences between good and bad marketers.

I've always had a rough list, but the inspiration for writing down came from the book "The Hard Thing About Hard Things" by Ben Horowitz. There is a section of the book where Ben outlines to his team what makes a great product manager and the positive impact it had.

Lastly, while we outlined for our team, it by no way implies that our team or I have mastered these twelve; rather, they are aspirations.

*The Twelve Traits of a Good Marketer (in no particular order):*

- a. Good marketers make it their job to know the market, the competition, and the company's products better than anyone else - and they share their knowledge with other stakeholders at the company. Bad marketers don't know the product thoroughly and don't stay up-to-date with the market landscape.
- b. Good marketers measure themselves on revenue generated. Bad marketers measure themselves on leads generated or traffic generated.
- c. Good marketers feel ownership of the go-to-market process end-to-end. Bad marketers blame the product or the sales team for lack of success.
- d. Good marketers define and articulate a strong and unique position for their company, division, and products. Good marketers use easy-to-understand and straightforward language as if you were talking to a friend. Bad marketers don't think about positioning or hide behind marketing jargon to define their products.
- e. Good marketers understand that their company's brand encompasses all materials, people, and external-facing processes - and are fierce about ensuring that the brand stays consistent across all of the above. Bad marketers allow off-brand activities 'just this once.'
- f. Good marketers are relationship builders who get out and meet customers, prospects, and peers. Bad marketers only talk to people that work at their company.
- g. Good marketers run integrated programs and seek to reuse and redistribute assets as much as possible. Bad marketers run one-off campaigns that aren't well thought out.
- h. Good marketers experiment and frequently ship while maintaining an extremely high quality of work. Bad marketers create and ship long, drawn out programs that may or may not work.
- i. Good marketers use data to drive decision making up to a point where experience and intuition take over. Bad marketers rely on gut feel alone.
- j. Good marketers hustle and are curious, gritty, fearless. They are the team that should push the company to be uncomfortable. Bad marketers play it safe.
- k. Good marketers are proactive. They get in front of the market, your prospects, and customers. Bad marketers wait until someone raises their hand.
- l. Good marketers question the status quo. They continually ask if they are doing the right tasks the right way, and then modify if needed. Bad marketers do things 'because we always do it this way' or to get it done.

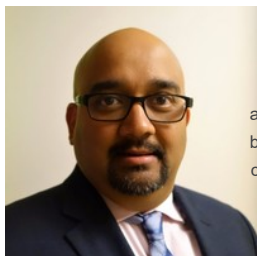
## THE I<sup>3</sup> CORNER

Despite its limited marketing budget, the I3 vision continues to generate interest based on word of mouth. Taking a network-first approach to creating a software foundation that supports managed interconnections between a plethora of applications and an growing number of IOT devices is a disruptive way of constructing real-time data networks. The COVID-19 situation has served to shine a spotlight on the importance of data in driving the decision making process. It has also made it clear that the silo based structures that result from application driven architectures impede the ability to develop insights that look over the transom of established organizational structures. The I3 program has been working over the last four years on solutions to knock down such siloed structures and replace them with an infrastructure that encourages ecosystem participation and manages data-centric partnerships.

The Development team at I3 Systems is making good progress towards the realization a commercialized version of the I3 software. The expectation is to spend the fall testing a commercial quality version of the I3 open source software followed by a public launch early 2021. This enhanced version of the I3 software will provide some new features and performance enhancements over the open software and in doing so, provide a perfect upgrade path for I3 enthusiasts.

In preparation for what is sure to be a busy fall, we have made an update to our online presence at [i3-iot.com](http://i3-iot.com). The I3 Systems website has been updated and serves as a compliment to the open source website which remains at [i3.usc.edu](http://i3.usc.edu). If you are interested in supporting the work of the I3 Consortium, please reach out via the [i3.usc.edu](http://i3.usc.edu) web site. If you are interested to dig deeper into our efforts to bring the I3 infrastructure to production environment, then reach out via [i3-iot.com](http://i3-iot.com).

## Architecture of Work 4.0 by Chirag Gandhi



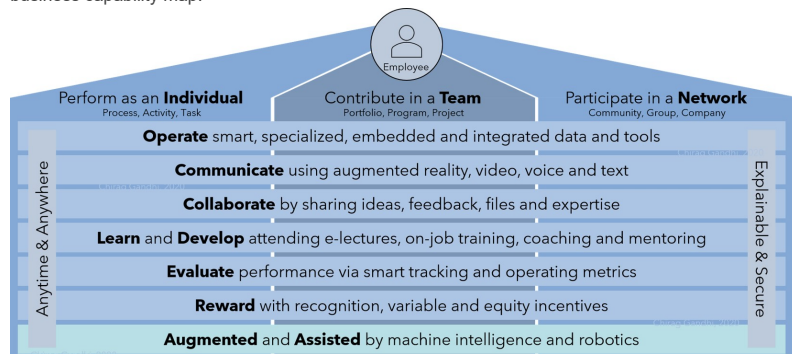
Industry 4.0 is transforming ALL organizations - whether they be industrial, manufacturing, retail or service. We are acutely aware of our customers expecting

- a. Use of the personal and social data
- b. Embedded technology and intelligence
- c. Anytime and anywhere availability of service

All these being packaged with superior experience and at a value based price point. Since the customer is the primary focus of a lot of these transformations, the evolution of the expectations of the employee is often an afterthought.

The nature of work has evolved to where social and analytical skills are more important than physical skills ([Pew Research](#)). The workforce itself now comprises of more Millennials and Gen Z - generations considered as digital natives. Social structures have moved from the physical to virtual and from local to global. These changes are leading to the workforce striving to achieve higher levels on the [Maslow's hierarchy of needs](#) (I prefer the expanded 8 level model compared to the classical 5 levels).

With these considerations, we need a fundamental rethink of the very architecture of work in this fourth industrial revolution. I share with you my version of this architecture - technically the business capability map.



Right at the heart of this is the Employee - Sie (Gender inclusive pronouns) at work is a part of a complex social eco-system where sie is an individual - with specific tasks and activities sie is expected to perform. Sie, in most cases, will also be a part of a team - an assembly line, a project or a product, and in our current hyper-connected world, sie also forms networks - formal, informal, capability-based or even social-cause based. Work today is a SUM of these three facets and therefore it is important for us to view the business capabilities we enable through each of these three lenses.

Let us take a look at these enabling capabilities

**Operate** - this is the very reason we have a workforce, to perform specific tasks towards achieving a business goal. As sie rises up the organizational hierarchy, hir tasks become more analytical and social, less well defined and therefore more knowledge driven. Sie needs access to data and tools which are

- a. *Smart* - context-driven and/or personalized avoiding data overload
- b. *Specialized* - specific for the task to be performed, not generic interfaces
- c. *Embedded* - the tools and data need to be part of the work-process so sie does not have to perform additional tasks just to use the tool/data. My pet peeve is the timesheet.
- d. *Integrated* - tools themselves are integrated, so sie gets the relevant data and is able to perform actions contiguously. There are many of examples of the lack of integrated tools in the call center.

**Communicate** - as a social creature sie communicates (effectively and ineffectively) all the time. Communication has so far been synchronous - voice and video calls and asynchronous - emails, texts, chat. Modern technology now allows sie to communicate using augmented reality - think about remote medical procedures performed by specialists thousands of miles away.

**Collaborate** - much of the collaboration technology has existed for decades, however, the new cloud models (Office 365, G-Suite, Slack, etc.) are making this collaboration technology a lot more accessible and affordable.

**Learn and Develop** - the most radical changes to L&D has been the introduction of MOOC (Massive Open Online Courses). This not only changes the channel, but introduces a fundamentally new way of learning - sie can now acquire specific skills in bite-size learning sessions - very similar to skills acquisition in the Matrix. On-job training too is undergoing a massive revolution with many organizations creating content using augmented reality which reduces the cost per skill acquired.

**Evaluate** - Feedback and evaluations too are undergoing tremendous change with some companies introducing OKRs while others doing away with annual evaluations and stack ranks. Key metrics are being auto generated using smart tracking technologies (remember time-sheets) and the usage of AI to determine business important indicators such as customer satisfaction. There is also a developing understanding that while individual contribution is important, it is more beneficial for the company to have employees with higher levels of empathy and Emotional Intelligence (EQ).

**Reward** - as methods of evaluation and feedback evolve so do the mechanisms of reward. One of the major impacts to this has been the gig-economy, where unit production is rewarded. Additionally, team based rewards and recognition are becoming more prevalent and acceptable as newer methodologies and tools are introduced to evaluate teams.

Each of these capabilities, in the 4.0 world, need to be *Augmented*, where hir action and/or decisioning is supported by, and *Assisted*, where repetitive tasks are offloaded to, machines - either industrial or digital robots.

These capabilities need to be "mobile first" (the verb not the noun) - where sie can perform them from *anywhere* at *anytime* (within reason). The information and actions need to *secure* and most importantly *explainable* - not only are the actions recorded for audit, but so is the logic of the decision which led to the action.

Work 4.0 introduces the social element of work - with greater emphasis on team and community, communication and collaboration AND leveraging the technological advances which we use to improve our customer's experience to that of the employee leading to higher levels of employee engagement and satisfaction.

Reach out to [Chirag Gandhi](#) if you would like to comment on this article.

## Open and Shut by Jerry Power

These last six months have been a breathtaking roller coaster ride. January, though not that long ago, seems like a distant memory as we strive to adopt a more health conscious posture in the way we conduct business and live our lives. Masks and teleconferencing have replaced the large meetings and business trips as we soldier on. Market strategies that emphasized direct and personal contact are giving way to approaches that allow distancing and emphasize precautionary health measures. As these measures began to moderate the pandemic's progression, a lifting of restrictions gave rise to an accelerated infection rate that required reinstatement of some restrictions. There are those who would argue restrictions were lifted too quickly, while others assert too many people stressed by the restrictions overreacted to even modest loosening of requirements. The fact that the virus progressed to areas that had previously been spared and many continue to minimize the seriousness of the virus only compounds the problem. Despite this, the result is the same, we are operating in a climate

where the environment that governs our behavior as individuals and as businesses is uncertain and continues to change as local governments seek to moderate the impacts by opening and closing the regulator levers at their disposal.

At times like this, it is easy to fall back to tactical thinking, to lurch between each change that impacts the way we conduct business, struggling to adjust to the news of the day. Certainly, many articles appear each day on the internet offering advice on how businesses can best cope with the situation at hand. A smaller number of articles focus on the fact that while the situation may be a crisis for high-touch activities, new opportunities are being created that can be capitalized upon. Additionally, many have made the point that transformative efforts to respond to the current crisis can be leveraged to produce a better final product and future business practices. Management has always had to balance between the near and long term needs of the business. What makes today's situation so challenging is that historically a series of tactical steps could be organized that would lead to the long term objective. Tactics were often considered as baby steps down a longer road but in today's world, this cannot be assumed to be true. A tactical step, once completed, may find it arrives in an environment where the rules have been changed during the implementation process.

In overly dynamic environments, like today, the value of any tactical action should be discounted given there is a heightened probability the market will evolve before the action is complete. If that reduced probability is expressed as risk, it reduces the actions' projected return on investment. Therefore, to achieve a similar result under a more favorable situation, the company must need to actively pursue more tactical options simultaneously in uncertain markets. Given that companies have limited resources, such a shift in priorities will inevitably reduce the focus on strategic projects.

History demonstrates that successful companies continue to invest in strategic projects during times of stress. This creates a conundrum; how can a company maintain its focus on long term strategic projects while simultaneously increasing near term strategic initiatives? Clearly, this cannot be done if the company must completely rely on internal resources. However, if the company increases its use of partners for tactical and strategic projects, balance on both near and long term projects can be maintained.

As we continue to traverse the current market uncertainty, it is expected that there will be a steady increase in the use of partnerships. Near term, as companies consider altering strategies to respond to the pandemic or to take advantage of open opportunities they have identified, they are well served to define those plans in such a way to allow compartmentalization of the effort.

## READINGS FROM THE EDITOR'S DESK

- **Ready, set, go: Reinventing the organization for speed in the post-COVID-19 era.** When the market becomes hyper-dynamic, it is important that companies be able to adjust in response to the changing market. This requires reconsidering organization, processes, partnerships, talent, strategy, and even targeted markets.
- **Accenture's CEO: 5 rules for rethinking digital transformation during COVID-19.** Organizations that have invested in digital tech outperform laggards. However, not all digital tech investments pan out. Digital tech means platforms and apps - platforms are important as they have to enable process/app agility to be effective.
- **The Telltale Signs of Successful Digital Deals:** Merging two organizations is a difficult process that often fail to meet the intended objectives. Merger programs must be very clear to all about the intended objectives of the merger and clear on cultural/technical processes needed to meet the objectives.
- **New Architectures of Resilience.** Organizations are defined based on their business and technology architectures. The architectures are linked and efforts to evolve one might be inhibited by the other. Resilience/agility requires both architectures evolve in harmony.
- **Agility to action: Operationalizing a value-driven agile blueprint:** Agile organizations structure themselves as a series of interconnected teams. Communications and defined but linked objectives are important but budgets also must be linked. This implies the budgeting process has to be decentralized and distributed.
- **It's Time for a New Kind of Electronic Health Record:** As the health care industry moves from fee-for-service to a results driven model, the electronic health record (EHR) system must also be transformed. Instead of tracking interactions with health care professionals, the focus must be on the end result.
- **Enterprises building their future with 5G and Wi-Fi 6:** 5G and WiFi6 will rapidly become the technology of choice. It is not being driven by a mythical "killer-application" but by the simple fact that time is money and faster is always better. Allowing other applications to perform better is value in itself.
- **Survey: Italian consumer sentiment during the coronavirus crisis:** Sentiment studies show that as COVID-19 restrictions are lifted, people will be attracted to stores and restaurants that are able to provide safe in-person experiences. Protective actions taken for consumer safety are a long term expectation.
- **The economic impact of closing the racial wealth gap:** The divides that define us have become more pronounced and led to the unrest we face. BLM is but the visible tip of a more systemic problem. A system that reinforced the position of the privileged few has negative economic impact to the larger system.
- **Reimagining the technology operating model:** The traditional technology model where tech experts were centralized and supported other departments is dead. Today's technologists have to understand business processes, customer needs, solution economics, and cross-departmental collaboration.
- **The kinetic leader: Boldly reinventing the enterprise:** Today's leaders do not manage a team, they lead across the organization and coach their team to support the vision of the larger organization. Tech provides the tools to accomplish this feat but only if the leaders make use of these tools.

## 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 to us. 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](mailto: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 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 opensource 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 conversation even further.*