

Communications, Information, Technology, and Management (CiTM)

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THE EDITOR SPEAKS - Collaboration's New Normal



With an increasing amount of our professional lives being spent on-line, we find ourselves adopting to new social protocols as we move our historically in-person collaborative interactions to a virtual environment. For many, this transition has flowed seamlessly especially when we already had established relationships with our on-line counterparts. The process is different for co-workers and partners who are still in the process of developing a relationship. While there are different strategies for improving all these relationships, they all serve to demonstrate that our on-line collaborative relationships are now more important than ever.

Whether on-line or face-to-face, successful collaborative relationships require that the interacting parties trust and exchange information that advances progress for both parties. Too often one of the collaborative parties seeks to obtain an often unstated advantage over to maintain a level of relationship control. These relationships are often short lived. A stable, long term collaborative exchange requires both parties to understand the benefit the other party provides and accept the synergism that produces a benefit. This same logic applies in multi-partner ecosystems, where a larger set of partners work together toward a common goal. In highly successful ecosystems, partners strive to work on behalf of each other to ensure sure all partners achieve their intended objective to maintain the integrity of the ecosystem.

Achieving the level of trust necessary to realize such a relationship is difficult in a multi-partner ecosystem and arguably doubly so in an on-line environment. The development of a trusted institutional relationship is first built upon personal relationships which are challenging in a virtual world. These processes can be eased if the individual objectives are clearly defined at the onset of the relationship, along with a set of adjustable metrics to measure progress.

For example, consider a team that has been assembled to create a proof-of-concept (POC) where multiple parties must work together in order to be successful. First, a clear POC vision must be defined and accepted by the participating parties with the understanding that uncertainties and unknowns are expected to present challenges to the team. Roles and responsibilities must also be assigned along with an associated timeline for success. Second, during the development process, each party should continually report to the other parties their successes as well as their impediments. This active feedback loop serves to identify roadblocks that may be encountered by one team member so the other team members can adjust their plan and work together to overcome the obstacles. Many such projects have gone awry when a member of the team attempts to self-recover without sharing the issues with the team. While such face-saving behaviors might provide a path to recovery, they fail to take advantage of the value the larger team brings and can create issues for the other participants that can stymie the larger project. Finally, there should be a means by which the individual participants report on their ability to meet their intended

goals. This last step is often overlooked but it is also an incredibly important aspect to long term relationship building.

In the end, successful collaborations comes down to the individuals on the team. If the team accepts that the partners can achieve more than individuals and feel sufficiently comfortable to share progress and hinderances, there is a chance for success. For this to occur the community must have a common objective and all be rowing together as a team.

UPCOMING VIRTUAL EVENTS

Nov 4-6, 2020. AGC LA Virtual Business Conference. A conference for the Investor and Innovation Community

Nov 12-13, 2020 Los Angeles Virtual Digital Government Summit. A conference decicated to government operations and support

Nov 17-18, 2020. Smart City Live 2020. On online conference substituting for the Barcelona Smart City Conference.

Nov 17-19, 2020. CoMotion LA 2020. On online conference focused on Smart Cities.

Nov 30, 2020. Horasis Asia Meeting. A virtual meeting to focus on the profound economic, political and social disruptions caused by COVID-19.

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.

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: Leading Your Team of Hunter Gatherers By Eric McNulty, Associate Director of the National Preparedness Leadership Initiative



There was much consternation among business leaders about the changing demands placed on them before the global coronavirus pandemic. Some of the concern was generationally driven. Some was rooted in the gig economy and the growing demand for alternative work arrangements. And some of it was about the need and expectation for constant upskilling. Then came COVID-19, like an earthquake on top of already significant tectonic shifts, turning even staid nine-to-five office dwellers into a hyper-nimble, dispersed workforce of the future.

Leaders who expect things to get back to “normal” are ignoring the lessons of evolutionary history. Our current circumstances demand that businesses, and their leadership, adapt or die — but how? The answer to this question also lies in humanity’s deep past.

Generational differences within the workforce get a lot of attention. Yet the most significant changes leaders must deal with actually arise from the transition to project-oriented work and companies’ decreasing loyalty to their people, which has, in turn, triggered a downward trend in the allegiance of workers to organizations. Together, these changes have contributed to a reliance on short-term specialists and the flattening of organizations. However, expectations among managers for the stability (and rewards) of hierarchical structures continue on, even though such structures are now less and less relevant to achieving goals.

The future of workforce management is filled with uncertainty, but by looking to the past, at the ways in which ancient societies were organized, leaders can learn to adapt.

Learning from the past

I spoke recently with [Brian Spisak](#) of the University of Otago, in Dunedin, New Zealand, about the roots of our expectations of leaders. Spisak, an evolutionary psychologist, explained that deep in human history, fixed hierarchies arose together with agricultural settlements. The storage and distribution of the harvest in these settlements created power dynamics — organizations are always about power — that rewarded those who controlled both the accumulation and the allocation of critical resources. Seminomadic hunter-gatherer societies, by contrast, were less settled and less rigid, and so had more fluid leadership structures, in which the person most fit for the task at hand, be it a hunt or a conflict with another tribe, stepped into the role of leader.

Like the work done by hunter-gatherer societies of the past, the flat structures and team-based work of today call for cooperative behaviors. Yet many organizations still prioritize competitive prowess. They create competitive environments, via a process Spisak calls *niche construction*, that elicit aggressive behavior among those who might otherwise cooperate with one another. In addition, the [growth of gig work](#), the increased frequency of job changes, the reemergence of the [“side hustle,”](#) and other mounting deviations from the lifetime employment model have, in essence, created a seminomadic workforce. These workers, who are being constantly judged on their results, will choose to follow leaders who create the conditions in which they are most likely to succeed — fit-for-purpose leaders rather than those who occupy static, formally designated leadership positions.

Spisak told me, “Agile and transient teams are the emerging norm. Organizations have learned to hire cooperative and empathetic individuals who can work well in teams, yet their so-called leaders still construct highly competitive environments (for example, by encouraging teams to compete over scarce resources). So, they’re hiring seminomadic specialists, yet placing them in niches with detrimental artifacts of our business-settlement past.” These artifacts reside in formal recognition and reward structures and informal mores prizing winner-take-all behaviors over mission-focused cooperation.

An alternative can be found in [“leaderful”](#) organizations, in which everyone is encouraged to lead from where they are, in pursuit of the larger mission or goal. This does not imply that everyone — or no one — is in charge. In leaderful organizations, people can pass the baton of leading to one another without losing status in the group, because the group recognizes that different individuals are best equipped to lead in different situations. This isn’t a new concept; it was advanced as “multiple leadership” by [Mary Parker Follett](#) in the early 20th century. However, our collective addiction to heroic individuals, and perhaps a bit of sexism, kept the idea from achieving its full potential.

Three adjustments leaders can make

Spisak predicts that the realities of the marketplace will cause collaboration and shared leadership to “trickle up” legacy hierarchies. I am not as confident that leaders will be open to such radically different ways of distributing power within their organizations. If my doubts are right, perhaps leaders should consider looking to nature for insight. There, hierarchies develop to serve those below, not those above. There are no more layers or structure than necessary to facilitate productive functioning and foster adaptive capacity.

One important step that leaders can take is to explicitly acknowledge the circumstances in which either competition or cooperation is most likely to achieve the desired outcome. (From the work of such thinkers as sociobiologist [E.O. Wilson](#) and historian [Rutger Bregman](#), there is ample evidence that the ability to cooperate is a significant human asset and advantage.) Then, as a leader, you can examine your organization's structures, processes, and protocols to see if they align with the intended competitive or cooperative behaviors. Where there is dissonance, correct it.

A second shift is to embrace self-organization — another valuable lesson from nature. Rather than imposing structures and processes from above, let the people doing the work create them. Be clear on the mission, values, legal or regulatory red lines, and measures of success. Demand accountability. And then trust your people to get things done.

Lastly, executives must demonstrate that they are willing to lead and, in turn, to be led. Celebrate having a team that possesses robust capacity and capability to lead. Model the behavior you want to see in others. This lowers each person's perceived personal risk when stepping back from a leadership role.

One eventual positive of the COVID-19 pandemic might be that we come to understand just how much we need one another and must rely on one another to drive important work in difficult moments. Now, leaders need to create the conditions that support this way of working and ensure that as many people as possible can contribute to the fullest extent of their ability.

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THE I³ CORNER

I3 Systems has completed development of an industrialized and feature enhanced version of the I3 Software. This software has now entered into beta test with the City of Los Angeles. The first phase of the testing calls for testing the I3 Software with the FindMeASpot software developed by the City's IT department. This software was designed to aggregate data from many public and private parking operations to produce a composite view of real-time parking options available to the Los Angeles area citizens. While there are a number of parking availability applications on the market, what makes the LA application so interesting is that it is capable of ingesting data based on different sensor technologies utilizing different data protocols. Further, it integrates data from public and private parking options and can collect regional data rather than focusing on geopolitical areas. The proof-of-concept application, which has not yet been publically released, includes a resident accessible user interface as well as an API that can be integrated into way-finding applications.

The I3 Systems team has begun to actively evangelize the idea of moving IOT device and data flow management away from the application layer and into the network infrastructure in order to manage data flows independent of data context. This concept has significant operations benefits to system operators, especially in complex operational environments. When an IOT system is consists of a single application pulling data from a number of similar IOT devices, operational management of that environment is straight forward. However, when the environment consists of numerous applications running in different environments with multiple IOT devices

feeding this network of applications, operational personnel cannot be jumping between applications to support such a networked environment.

Shaping the Future of Work Post COVID-10 by Frank-Jurgen Richter (Horasis)



Robots and automation are on their way to becoming ubiquitous in various aspects of work and society. From large industrial robots that are used in vehicle assembly operations to ones designed for domestic use, robots are increasingly becoming an important part of professional and personal lives. Arguably, they are indispensable already.

Automation is increasing speed and efficiency, and redefining how we work. But increasing robot use has not eliminated human intervention, and is unlikely to do so.

Even in the case of a 'lights-out' factory, it still needs actual human workers, albeit in fewer numbers.

The pandemic has already led to a prevalence of 'work-from-home' and the increasing buzz around remote work, and the future holds possibility of further lasting changes arising from technology breakthroughs in different realms.

In light of these rapid changes being witnessed, Horasis is convening the [Horasis Asia Meeting on 30 November 2020](#). It is a virtual event that will be conducted on the innovative online conferencing platform called Run the World. What the future of work will look like, is one of the topics that will be addressed at the event. Looking beyond the Asia Meeting, there will be a Horasis North America Meeting on 18 March, 2021 to discuss and shape the vision of the new U.S. administration.

Differing schools of thought

The increasing uptake in robot use has been the subject of much debate. A common argument is that robots will replace many job roles and that will therefore lead to higher unemployment levels. Sure, there is substance to this perspective. But let us take a step back in time and examine how events in recent history have played out.

The first industrial revolution was marked by the use of steam powered machinery. It allowed faster production cycles and it would have required fewer people to execute the same work. There was disruption to jobs but it did not lead to soaring unemployment levels. Rather, it led to less physically intensive work, a reduction in working hours and higher wages. It also resulted, eventually, in more people working.

In the early 20th century, automobile production received a huge fillip when Henry Ford perfected the assembly line. Again, several job roles became redundant when he did so but the outcome of incorporating an assembly line led to a reduction in production time – from an earlier 24 hours per vehicle to only an hour at best. Ford's vision was to enable the organization's workers to earn a wage that would enable them to purchase the very product they were making. As it turned out, he was able to fulfil this lofty goal.

Disruption has been the norm

Across the ages, people have adapted and newer employment avenues have opened up. The underlying idea is to adjust as we keep making technological advancements. In times to come, autonomous vehicles will form the majority of public transit systems. This will completely eliminate job roles such as bus drivers or even taxi drivers. But building of autonomous vehicle enabling infrastructure will need more engineers and programmers.

Similarly, only a decade ago, mobile gaming was just beginning to gain in popularity. This was largely on account of standardized operating systems that allowed game developers to create games that could be played across devices built by diverse manufacturers. In this brief span of time, mobile gaming has become a massive industry in itself, with thousands of people finding employment in this space alone. It has since even become a competitive sport and has spawned further segments such as advergaming. All this in the span of only a decade.

With changing job role demands, upskilling is key

For all of this to happen we need upskilling, without which, our worst fears about unemployment could come true. And sufficient investment in the right kind of training programs and courses can help society adapt and prepare for the changing nature of jobs, which will require entirely different skillsets.

Higher education institutions in emerging economies must accommodate for these changing trends. The prevalent curriculum of a three- or four-year program cannot be discredited. However, there is pressing need for the introduction of vocational courses that can both teach a valuable skill and make the individual job-ready in a matter of months, as opposed to several years.

Alphabet's Google Career Certificate is one such example. These [programs developed by Google](#) take only six months to complete as opposed to college degrees which take three to four years, and provide job-seekers with the opportunity to learn job-ready skills. This is but one example of growing acknowledgment that how we learn needs to change in keeping with what we need to do.

One of the longer-term impacts of the COVID-19 pandemic is likely to be a full embrace of work as we knew it. There are bound to be changes in the way we work, at least in certain areas and sectors. The positioning of services will have to be tailored to changed consumption patterns. Lower skilled urban dwellers have to examine areas that are likely to see more demand. For instance, 'at home' services are already finding favor. Skilled workers in many segments may not be able to work from home but they could very well provide their services at end users' homes. There will be a marked increase in the gig economy too and in contract job roles.

Robots are machines and machines have long disrupted

Amidst increasing urbanization and changing lifestyles, for most millennials, engaging in agriculture is not top of their mind. They would rather work in less physically demanding environments in areas that are seen as being "attractive" or "cool". With increasing rural to urban movement, agriculture and animal husbandry—major industries across emerging economies—will have to turn to higher levels of automation to continue delivering current levels of produce.

While this is already happening at a large scale in several developed economies with large farming sectors, it is something emerging markets—which are seeing the most rapid rates of urbanization—will soon have to turn to as

well, to be able to feed their growing populations. With a dearth in workers to perform agriculture related job roles, there is no alternative but to use technology to plug the gaps in labor demand and availability.

Robots are machines and by this yardstick, machines have been affecting jobs since the first industrial revolution; since the invention of the wheel even. But for the most part, we have adapted and we must continue taking these changes in stride. Will this time be any different? Not if we plan well.

The Goal is to Learn Fast by Jerry Power

For too long we have accepted the often cited “fail-fast” culture, a culture where failure was held up as a badge of honor. Lately, I have detected a refreshing shift to a different, but related, mantra which I would characterize as a “learn-fast” philosophy. No one should never take on a task where the expectation or objective of the task is to fail. Hopefully, most people accept the term fail-fast as being a cheeky term that should more rightfully be associated with reckless behavior and not representative efforts to break through and achieve success despite visible and discovered obstacles.

I know there are many who like to point out that that Edison failed a thousand times in his quest to develop the light bulb as evidence that failure is an indication of future success. But such a quick quote fails to consider the extensive research, both economic and technical, which Edison conducted before he began testing individual light bulb designs. Nor does the sentiment make it clear that he carefully considered the results of each successive attempt as a source of incremental knowledge that impacted the next step in an exhaustive process. The take away from Edison’s efforts should not be that he was randomly trying to uncover his eureka moment but that it was the cumulative impact of technical and business research coupled with both experimentation and field trials that led to success. Edison’s experience should not be taken as a demonstration that failure leads to success but that success is neither linear nor predictable.

The Nike slogan of “Just do it” might be considered by some as an means to express the fail-fast sentiment. I am sure that Nike would be the first to say that they were not encouraging people to act recklessly. It is clear that Nike intended the saying to be an encouragement to people to not sit and think about exercising but instead to go out and exercise with the intent to achieve the goals we intellectually aspired to. It takes more than putting on a pair of sneakers to become healthy, you must have an exercise plan, a vision, and then a drive to achieve your goals.

When these lessons are applied to business or technology, an important part of any endeavor is the research that must be carried out in preparation for the action. While paralysis by analysis must be avoided, bypassing the research that could have been done before embarking on a project beforehand is wasteful.

Similarly, rushing a product to market prematurely in an effort to discover issues that could have been identified during product testing risks tainting the effort with a negative image and is an expensive way to learn. The other side of this argument is that testing beyond any reasonable level of expectation only serves to delay the opportunity to receive direct market feedback.

I am not suggesting that a failed or misguided project should be born as a badge of shame. Instead the value of a failure is dependent on the data that arose from the failure compounded with established experiences. To extend

this idea, it is also possible that a single stupendous failure that produced a single great insight may be much more valuable than a series of incremental failures that only produced marginal insights. The conclusion should be that a failed project that produced no incremental knowledge is shameful. For that matter, a failed project that allowed an individual to learn a lesson that could have been learned through a less exhaustive method, it not an activity to be lionized.

Like many other facets of life, moderation is key whether conducting research to bring a new product to market or moving a product through its testing processes. Too often the mantra “fail fast” has been adopted as a reason to short cut research and testing processes when the concept was conceived to warn against the perils of overly prolonged research and testing processes. By adopting a “learn-fast” philosophy, the focus is shifted from the result (success or failure) to the outcome.

READINGS FROM THE EDITOR'S DESK

- [Accelerating Smart Manufacturing](#). Smart manufacturing is more than factory automation. It requires the ecosystem to evolve to become a smart and agile team that works together on multiple projects.
 - [Transforming Homes and Communities Into Healthcare Hubs in the Post-Covid Future](#). Healthcare systems are evolving to be more community centric with a decreased focus on physical hospitals and doctor offices. Patients want care when and where they are. Services will be coordinated by many specialized healthcare service providers.
 - [Blockchain and the Personal Data Protection Bill: Technical and Compliance Perspectives](#). Our legal system assumes that when something goes wrong, the aggrieved party can detect and demand action from the responsible party in the courts. Blockchain distributes control so there is no responsible party and decisions are made by consensus.
 - [Seven Lessons COVID-19 has Taught us About Data Strategy](#). It is easy to say decision making should be data driven. COVID-19 has demonstrated that the lack of a data strategy is more than an inconvenience - it can be catastrophic. Businesses must deal with COVID-18 *and* accept that data plans determine all future competencies.
 - [Leading Your Team of Hunter-Gatherers](#). Many pandemic driven changes in the workplace will be permanent. Team structures will become more dynamic with leadership roles and rewards becoming more dependent on the immediate need and collaboration with less of a dependency on a rigid hierarchy.
 - [Executive Voices on Pandemic Recovery](#). COVID-19 is forcing CEOs to retrench. They are targeting the blocking and tackling of their business, becoming agile in their decision making, changing marketing/partnerships, increasing attention to customer convenience, and trying to keep employees safe.
 - [When Nothing is Normal: Managing in Extreme Uncertainty](#). We live in unprecedented times. The pandemic is impacting customers and employees. There is hope but little solid data to say when we will return to normal. Companies must be adaptable and fast acting and this puts different demands on management.
- <https://www.mckinsey.com/business-functions/risk/our-insights/when-nothing-is-normal-managing-in-extreme-uncertainty>

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. 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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