

March 2019 @ CTM

THE DIRECTOR SPEAKS - Shifting from Capex to Opex



Everyone agrees the nature of business is changing but most of us are so busy fighting the issue of the day or the critical issue of tomorrow that we seldom have time to stop and think about these vectors of change and where the process might lead us. A major factor driving these changes is globalization. Globalization gives companies many more opportunities. These opportunities are significant and a very positive motivator but globalization also increases the level of competition by opening established markets to new suppliers. Automation is another force for change because it can improve labor productivity. Productivity enhancing tools are an investment that allow us to serve the same market at a lower cost or to use the same resources to server a larger market. The latest productivity enhancement tools can be expensive to put into operation and therefore they will likely be justified as a part of a transformation program designed to support a revenue enhancement program

rather than a cost reduction program. The advantage being that products can be profitably sold at a lower price point but only if the marketing/sales effort is able to successfully serve a larger market. A third force for change is a result of the changing nature of the business models. Historically most business models were designed to reflect the supplier's cost structure. Most of the costs were incurred when the product was built and the manufacturer recovered those costs when the product was sold. To the customer's delight, many newer business models are focused on customer use – customer's pay when they use the product. Product cash flow is becoming more a function of the benefit customer's receive and while this makes many products viable for a larger market, it also puts the revenue stream at risk if the supplier is unable to maintain customer loyalty.

These points, taken together, mean the fundamental nature of business has and will continue to change. The opportunities and rewards have increased significantly. However, a significant amount of the cost has shifted from opex (money spent to operate and produce a product) to capex (money that must be spent as an investment before anything is delivered to a customer). Essentially, business is becoming more risky and more unforgiving. Maybe that is why everyone seems to be working harder than ever. It is not that there are more fires but the fires are bigger and the penalties are larger as well. The message I take away from all this is that when it is hardest to think strategically, that is time a strategic focus is most needed.

UPCOMING EVENTS

- **March 1, 2019.** [E2 Conference: The Future of Entertainment](#), USC Campus, Los Angeles CA
- **March 5, 2019.** I3 Consortium Working Meeting, USC's Downtown Facility, Los Angeles CA.
- **March 19, 2019.** [CIO Summit](#), Lowes Hollywood Hotel, Los Angeles CA
- **March 21, 2019.** [Marketing Leadership Forum](#), downtown, Los Angeles, CA
- **March 29-30, 2019.** [Emerging Technologies Conference](#), USC Campus, Los Angeles CA
- **April 10, 2019.** [Digital Summit](#), Skirball Center, Los Angeles, CA
- **May 13-16, 2019.** [IOT World](#), Santa Clara Convention Center, Santa Clara CA
- **July 10-12, 2019.** [NIST Smart and Secure Cities Expo](#), Walter E Washington CONvention Center, Washington DC
- **Sept 10-13, 2019.** [Global Network for SMART Organization Design](#), USC Campus, Los Angeles CA

If you have an event that you would like us to include in our newsletter, please send an email to ctm@marshall.usc.edu

IN CONVERSATION WITH Fred Mattocks, GM of Local Services at CBC



Fred Mattocks is the General Manager of Local Services at CBC (Canadian Broadcasting Company). He is responsible for the operations of English Services local programming and services for radio, TV and digital platforms. He is a key driver in the CBC's effort to re-engineer local media across the country. Fred has a long and varied experience in the CBC in operations and in programming.

The CBC is not often thought of as a hot entertainment company like Disney or Netflix but you have been doing some very interesting things in Canada. What's going on?

We actually have had some pretty awesome success with our entertainment products – our television entertainment products are often picked up or we partner with some of the world's best. Most recently, Netflix has picked up our series "Working Moms" as an example. Another example, we are a world leader in podcasts today. However this isn't the only thing we do.

Historically CBC has a long history of developing content in all genres for the Canadian market and then using the CBC infrastructure to deliver the content to the citizens of Canada. Under this paradigm, the local stations were treated primarily as a simple point of distribution. As the media market became more competitive, CBC pushed to make our distribution network as effective as possible so we could concentrate their investment in content for the Canadian citizens. Meanwhile, new entertainment and service options are presenting themselves with the consumer driving further erosion in the traditional market. While the dynamics are different in each media, the direction is the same. Eventually CBC realized that were chasing a goal that could never truly be attained – we were continually trying to optimize around a legacy service that was becoming irrelevant to the consumers. We had an epiphany.

People care about a trusted media brand, but without content that meets their needs that fact is moot.. They want good content they care about, when and where they want it. We realized that the definition of "good" is very subjective and situationally dependent. What one community considers good content may not meet the needs of another and what was good last week may not be relevant next week. What I want and how I want it in the morning can be very different from my preferences at another part of my day.

We believe the legacy idea of a linear schedule driven by a centralized staff that makes decisions about content choices for customers is losing its power and with it, the concept of the local station as distribution is also failing. (Not that we've ever been pure distribution in Local, but our other roles were traditionally secondary to the centralized network play.) That is not to say, the local station is going away – it is saying that content and its delivery has to reinvent itself in order to stay relevant in a rapidly evolving world. Local is the key to that.

CBC has significant local station assets. How do CBC's local stations fit into the larger picture?

We have begun to look at our local station assets as a critical component in our long term strategy. We believe we need to look beyond the current concept where we analyze historic viewing patterns and then try to guess future interests. Just because people wanted to view something last week does not mean they want to view the same thing next week. To take that next step, you have to look past viewing habits and begin to incorporate information about what is going in the community. To develop that understanding, we have to embrace that customers are really our partners and we have to develop a much broader relationship with these partners to truly understand them. That relationship is not based on our serving them content, it has to be a much deeper relationship that is based on trust.

Trust is a key component in today's media and its place in society. Our offer includes a majority of information programming (news and current affairs) and trust is absolutely central at all levels in the company. In that context, local stations are a cornerstone in the CBC's efforts to build a trust relationship with our citizen customers; this is not something that can be driven by a faceless algorithm in the cloud or a monolithic network organisation. You see this same paradigm shift being played out in a hundred different ways such as politics, business, and government where people are rejecting centralized authorities that do not have a direct relationship with them. While technology may have brought us to this point, technology is not really the limiting issue anymore, it is a question of configuring and using the technology at hand to empower our customers and partners to build the value proposition of our relationship to them.

This is a bold vision, it is a complete restructuring of what had been the media industry.

Once we walked away from the idea that the role of the local station is to solely to deliver content to the viewers, and started thinking about these resources as platforms to build relationships, our thinking totally changed. Instead of focusing our thinking on the TV evening news for example, we began thinking about how to engage with customers to provide them information in a variety of different ways and on different platforms. We began thinking about news and sports and community focused programming and how we engage with our communities differently, we began think about ourselves as animators and facilitators of local conversations, we began to think of ourselves as not just as a service provider but as an active part of the community.

Describe the vision given the relationship between CBC and the Canadian government that underlies the vision.

CBC is funded largely by the Canadian government in an arm's length relationship and the government is funded by the Canadian citizens. Indirectly, the citizens are our shareholders and we have to provide a service to them that they value. One could look at the government as a kind of a subscription service in return for a portion of tax dollars which provides a basic level of service for all Canadians and that is why we are so focused on providing value for Canadians. We are Canada's public broadcaster.

CBC supplements that revenue stream with revenues from advertising and we have been looking at a variety of optional/incremental service packages as well. So, in many ways the challenges we face are no different from other media companies. In fact, we see other media companies taking steps to create vehicles that they can use to develop direct relationships with their customers.

The aspirational goals I have described are our north star. We are working on a complete transformation of the CBC and it will take time to execute against this vision. This is not going to be a quick process but it is something we can steer by. We can tell if we are on-course or if we stray off course but we are committed to making progress each year. Our objective: Canadians are committed to the CBC as their trusted partners.

STEVE SHEPARD: The More Things Change



In my work with organizations all over the world, large and small, in vastly different industries, I have the good fortune to be situated so that I can see patterns emerging in their behaviors that can be tracked and analyzed. Lately I've been watching one particular behavior pattern that I think is interesting, because it transcends company and industry. It is indiscriminate—yet is important to all. And that is the struggle to maintain relevance in a time of increasingly granular and heterogeneous competition.

Many of these companies struggle because of a failure to adapt to the changing competitive landscape. It isn't that they are no longer good at what they do, or that their services are no longer desirable; it's more than that.

Jack Welch once said this: "Destroy your business—change or die. When the pace of change outside the business exceeds the pace of change inside the business, the end is near."

He's right, of course, but here's the problem: Too many businesses—leadership teams—develop scotomas—blind spots—to the change that's required. Keep in mind that it was the telecom industry that gave us the famous phrase, "If it ain't broke, don't fix it." Well, in many cases it is broke, and nobody notices.

When Blue Ocean Strategy first came out in HBR, many readers missed the most important message that it carried: *The goal is not to beat the competition; the goal is to make the competition irrelevant.* This doesn't happen because of head-to-head, traditional competitive business practices; it happens because a company figures out how to rise above the white noise of competition, and that only happens if the company and its people learn how to assess the competitive landscape from entirely different points-of-view.

CTM's AMP program was created to do precisely that: Provide an environment within which participants can learn to see in different ways, and then convert what they see into competitive action. We look forward to seeing you in the next program. (The next AMP is scheduled for May 6-10, 2019 in Los Angeles. You or a deserving colleague can register via the [CTM web site](#) or via this [Eventbrite link](#)).

THE I³ CORNER (I3.usc.edu)

The I3 consortium continues to make progress. The engineers at Viterbi have been making good progress with their efforts to bring the I3 core software to life based on the resources we have pulled together. Driven by inputs from the various government and private entities that have been driving the I3 Consortium, there is a solid plan in place to realize a pre-release version of the I3 system in time to support a targeted summer demonstration of I3. The engineers are confident this pre-release version of I3 would allow them to meet the goal of releasing a first release of I3 as a publicly available version late this year. (Note: if any I3 members require embellishments to this basic iteration of I3, those embellishments are still possible would need to be funded and scheduled)

Having this plan in place is great and it puts a significant amount of the focus of the I3 consortium on the applications and devices that will demonstrate the value of I3 to management, the press, the public, and other dignitaries. The next I3 meeting is scheduled for March 5 in Los Angeles and this will be a significant meeting it that it will be focused on organizing and scheduling the Consortium member efforts needed to participate in the summer demonstration. We expect this will be a sprint as interested members work to integrate their technologies with the I3 core as the pieces begin to fall into place.

READER CONTRIBUTION: 5G: The Next Wave of Media Transformation by Debra Kaufman



Download a movie in six seconds. Watch more immersive sports broadcasts. Enjoy sophisticated game play with only a few milliseconds of latency. Smart movie theater, smart home, smart car, smart personal devices connect effortlessly. Virtual reality, remote surgery ... all will be unleashed by the new 5G networks, claim the experts. Qualcomm's chief legal officer Don Rosenberg told the World Economic Forum that, "we're on the verge of a new age of interconnectedness, when the daily lives of people across the planet will be more closely intertwined than ever." "If past is prologue," he said, "this technological evolution will lead to dramatic societal changes."

Although it's too early in the game to experience 5G's most spectacular claims, the new networks are beginning to arrive, along with the very first (and very few) handsets and modems. AT&T, Sprint, Verizon, T-Mobile all are either rolling out 5G service in parts of cities around the country, or have plans to do so later this year.

We're in the early days of learning more about what 5G can and can't offer us. First, 5G networks won't initially be able to provide the oft-cited speeds of four to 100 times that of 4G, and 4G LTE itself will continue to evolve and remain relevant for some time. Although 5G excels at speed and low latency, it's not so good at wide coverage or penetrating walls or trees. That means that, to reach your home or business, 5G requires many more small cell installations. The good news is that the 5G small cells are small and easily installed; the bad side is that any change is disruption and not all communities or groups will welcome the new installations.

Most importantly, 5G is not a single monolithic signal, but is actually made up of three types of spectrum: low-band or 600MHz spectrum, dubbed "sub 1GHz," offers great coverage and penetration but its speed tops out at 100Mbps. T-Mobile is the big player in this spectrum. Mid-band spectrum, mainly owned by Sprint, offers speeds up to 1Gbps – but similarly has a hard time penetrating buildings; Sprint is using another technology, Massive MIMO, to compensate for this.

The most spectacular buzz, however, describes high-band spectrum, also called millimeter wave or mmWave, which offers with peak speeds of 10Gbps. This spectrum, which will be offered by AT&T and Verizon, also has issues with limited coverage and penetration. Still, all the major U.S. telecoms have demonstrated 5G and either launched it or have plans to do so, while Intel and Qualcomm are working on 5G modems for phones, cars and other devices. Companies as diverse as tractor manufacturer John Deere to Audi, BMW and Volkswagen are testing out 5G capabilities.

Media and entertainment also stand to gain immense efficiencies from 5G networks. Several major studios are currently conducting tests to examine how 5G could transform their production of both live events and recorded film and TV content, as well as enable the creation of new forms of personalized and immersive experiences. To that end, USC's Entertainment Technology Center will hold a Digital Town Square in downtown Los Angeles on March 28. The event will take a deep dive into foundational technologies of 5G, and focus on the practical applications of 5G to professional content creation and delivery and the consumer experience. More information is available at 5g@etcusc.org.

On the horizon, 5G is predicted to be a very big business: Moor Insights & Strategy estimated that infrastructure spending will exceed \$326 billion by 2025. More than 20 billion Internet of Things devices will connect to a projected 14 billion sensors, according to Ericsson. By 2025, predicted global wireless trade group GSMA, 1.2 billion people will have access to 5G networks (one third of who will be in China). "It will transform people, businesses, and society," said Verizon chief executive Hans Vestberg. "It's going to change everything."

READINGS FROM THE EDITOR'S DESK

- [The doorbells have eyes: The privacy battle brewing over home security cameras](#). Home security systems can do more than protect homes - they can help protect the community but that requires a trusted relationship between homeowner, system supplier, and the government. This is achievable but only if there is bilateral respect and transparency between the citizen and the government.
- [Cyber resiliency crucial to beating hackers, expert says](#). Efforts to secure a network are important and always will be! However, there is no perfect security that can guarantee protection. Therefore, just as much attention has to be put into cyber resiliency as is put into cybersecurity -perhaps this is even more important as the bad guys get more sophisticated.
- [Digital Transformation By Department: Marketing, Are You Ready?](#) By their nature, digital transformation projects are disruptive. Marketing departments are very data dependent and as a result, marketing processes will have to change significantly as this technology revolutionizes our concept of marketing. Ultimately, marketing has to move from being a sales support function to becoming a metric driven customer experience driver which tracks activity throughout the customer lifecycle.

- [AI & Data: Avoiding The Gotchas](#). Artificial Intelligence (AI) can do great things but that power requires 1) a lot of attention to collection and validating data and 2) validating the derived output. It is essential to ensure the data going into the system is good data on one side. On the other side, it cannot be assumed the AI engine will always produce good results. AI can be a great productivity enhancer but these AI support roles are complicated tasks that are often not given the attention they deserve.
- [Product Lifecycle Marketing: What Matters Most at Every Stage](#). Marketing strategies must be carefully matched to the product and its position in the product and customer life cycle. The goal is to obtain the right message to the right customer at the right time. This implies there is a marketing strategy life cycle that has to be time synced to a specific product and managed as the product matures and as customer use of the product evolves.
- [What data dominance really means, and how countries can compete](#). CTM and other research has shown that organizations that are able to embrace and utilize new technologies can achieve a significant market advantage over their competitors. The World Economic Forum has expanded this concept and applied it at the country level to show that countries who are able embrace new technologies grow faster than laggards. This is good for early adopter countries but as the laggard countries fall behind global inequalities will increase. This is problematic because advanced countries depend on these other countries to be successful because in doing so, they expand the market for all.
- [A guide to robotic process automation](#). There are two types of business automation tools, RPA (Robotic Process Automation) and IA (Intelligent Automation). RPA improves efficiency/ effectiveness of a static process. IA utilizes cognitive decision making process flow that depends on the content of the data. The important point for both is that the automated process be simple to evolve; processes should be considered as dynamic flows that should gracefully evolve over time regardless of whether that evolution is driven by efficiency improvements or opportunity expansion.
- [The Mobile Economy 2019](#). As Mobile World Congress draws to a close, it is interesting to note that 67% of the world has a mobile service subscription; for many, smartphones are the primary internet access interface. This is in itself a significant accomplishment but as 5G spins up, high bandwidth and low latency will accelerate the forces that allow us to become an increasingly mobile society. The expectation should not be that mobile penetration expands linearly but that it begins to grow exponentially with these expanded capabilities.

CTM RESOURCES

CTM has a history of making topical and thoughtful information available to the CTM community. In support of our community, the following may be of interest to our readers. See marshall.usc.edu/ctm for a complete list of resources.

- [The Need for a Fourth Industrial Revolution Operating System \(free\)](#). The adoption of Fourth Industrial Revolution thinking to our data-centric world may require that we rethink the macro systems that govern the way that humans relate to the data that surrounds them. In the 4th Industrial Age it is interesting to think of the technology around us as resources which could be managed by a societal operating system.
- [How AI Could Tackle City Problems Like Graffiti, Trash, and Fires \(free\)](#). Cities operate fleets of diverse vehicles to serve their citizens. If these vehicles were equipped with video cameras, the captured images could be used by video analytic programs to self-detect many city operational issues in need of attention so appropriate crews could be dispatched without waiting for citizen complaints to be registered.
- [I3: An IoT Marketplace for Smart Communities \(free\)](#). I3 (The Intelligent IOT Integrator) is a data governance vehicle that manages IOT data flows for many independent device owners. It supports the user's need to self-manage their own data streams, manages participation incentives, privacy, and monitors device security. This curated environment creates the free and open IOT data marketplace needed to accelerate IOT adoption.

- [The Evolving Internet of Healthcare Things \(free\)](#). Healthcare IOT applications can be divided into hospital, doctor, and consumer applications. Over time these isolated worlds will blur and there will no longer be a single administrator that oversees the network infrastructure; healthcare data networks will be an open and fluid environment. New systems will be needed to manage vendor neutral data repositories and to govern data flows.
- [The Fan Multiplier Effect \(free\)](#). Marketing Programs should be driven by behavioral objectives and measured by metrics. Instead, many marketing campaigns focus revenue driven objectives even though campaigns designed to increase fan engagement can often drive greater strategic value. This paper focuses on efforts to drive fans to advocate for a product or service so that they become your revenue drivers.
- [Internet of Things \(IOT\) Model](#). CTM has developed an Internet of Things (IOT) model that allows users to identify profit pools within the larger IOT market, test how changes in pricing will affect demand, and see how different functional characterizations impact the model. The modeling tool is sufficiently flexible that the users can adjust the parameters in order to develop a personal view of market evolution.

SUPPORT CTM

Please feel free to forward this email to your friends and colleagues who you believe would benefit from participation in the CTM community. For those of you who wish to be included in the CTM family of people who believe that technology is a tool and that business success is achieved by skilled wielding of the tools available to us, you can join the CTM family by registering [on our home page](#). A voluntary subscription would be appreciated for those that want to give back and help grow the CTM community [\(click here to contribute\)](#). If you have suggestions, topics you want to see included in future newsletter updates, or other general inquiries, feel free to email us at ctm@marshall.usc.edu. For physical mail correspondence: USC-Marshall-CTM, 1149 S Hill Street, 9th floor, Los Angeles CA 90015.

The idea 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 USC, Marshall, CTM or the wider CTM community.

GOT A BUSINESS, TECHNOLOGY, STRATEGY ISSUE?

The CTM team is dedicated to working with its member companies to better understand the increasingly dynamic business world in which we live. We believe that companies must lead in order to prosper in a world where the threats and opportunities facing us are constantly evolving. Feel free to reach out to the CTM team via email at ctm@marshall.usc.edu if you would like to start a conversation.

ABOUT CTM

Founded in 1985, the Institute for Communication Technology Management (CTM) is the world's foremost institute at the intersection of technology and content and represents a powerful network of industry leaders involved in every facet of the digital media value chain. For more about CTM go to marshall.usc.edu/ctm.