

## WELCOME TO 2

#### THE YEAR OF LEVERAGING DATA

Say goodbye to traditional IT models in 2020, with so many industries embracing new avenues of gathering business intelligence. Corporate profitability has increasingly become dependent upon the efficiency and agility of a business, which means IT departments will be taking a larger role in transforming their organizations this new year. Companies have long been going to the cloud, searching for the best option to secure, store and analyze datasets, but we'll see a landslide of this activity in 2020 as organizations race to innovate to stay relevant. Those that don't evolve will get left behind. To help your organization strategize and hone your IT vision, we have compiled a list of predictions from our internal experts. Here's to a great new year from the InterVision family.

**AARON STONE** | President & CEO of InterVision





### COMPANIES WILL SEE THE LINGERING CHALLENGE OF DATA

Where's your data? In 2020, we'll see more and more companies grappling with the challenges of data storage and deployment. Data needs to move around fast at the speed of container deployment, but also securely. While containers have gained in popularity, they haven't fully solved for all IT needs. For example, containerization doesn't allow data to remain persistent without great difficulty. The primary challenge within the IT space will be in innovating a solution that works for both <u>storage</u> and usage states.



## MANY GOING TO THE CLOUD WILL TAKE THE REFACTOR ROUTE

For companies <u>migrating to the cloud</u> in 2020, it's better to do the work of modernizing IT applications, optimizing the quality of your datasets, and upgrading your operating systems before sending everything to the cloud. Many have found out the hard way that lifting and shifting large quantities of applications into the cloud, because the applications are not optimized to take advantage of cloud native strengths, do not lead to a great result. Doing the prep work prior to a full migration will save time, costs and headaches for everyone. For this reason, many businesses will take the refactoring approach to the cloud.

JOHN GRAY InterVision | CTO

### CLOUD GOVERNANCE WILL TAKE A BIG FOCUS

With increasing practices around security automation, software developed lifecycles and the overall adoption of cloud to assist in business functions, we'll see an increased attention on cloud governance. While the technology landscape finally has the capacity to address all the end-to-end needs of security and compliance, the larger business issues of cloud governance will be much more valuable than the tools themselves. We'll see more strategic teams leveraging existing governance practices such as financial cost controls by adding more robust security and compliance governance practices as well.

#### DEREK BROST

InterVision | Director, Professional Services, Security & Compliance

#### SAY HELLO TO THE WORLD OF HYBRID

No one wants to run a datacenter anymore. For companies whose core business strategy doesn't depend upon maintaining their own IT systems, such as government, healthcare, or the financial industry, we will see this huge shift toward hybrid environments as a way to both offload the heavy burdens of managing a datacenter and to fully virtualize IT systems for future challenges.



# COMPANIES WILL TAKE AN ROIDRIVEN APPROACH TO ARTIFICIAL INTELLIGENCE

Too often there's a perception that Artificial Intelligence (AI) needs to be a major organizational investment. But that's a myth. Many businesses will realize in 2020 that taking a methodical approach to AI, using machine learning (ML) for smaller, specified business projects, will yield a more immediate return on investment and allow for organizations to learn the ropes for full-scale AI rollouts. Not only will this approach save on budget; it will also allow businesses to see the benefits of AI before making a larger investment in it.

#### HARSHA GOPIANANDAN

InterVision | VP/GM, ML/Al Analytics

### MEDIA & ENTERTAINMENT WILL FULLY EMBRACE THE BENEFITS OF CLOUD

Media, entertainment & gaming companies will continue to embrace and increase the use of content production tools in the cloud, in order to keep up with the demand to create more content for more devices while keeping costs under control and predictable. For example: if a production shoots in Ireland and uploads the unedited original takes to a cloud-based platform, a post-production company could edit the takes in California and/or New York within hours—which saves valuable time in releasing a given project. Likewise, gaming companies will build more of their content and their games in the cloud to scale their own production demands to more markets across the globe. As a result, we'll see wider continued acceptance in the industry embracing an always-on, Opex model of content creation and production. We'll also see traditional software and hardware companies that create this tool switching.



RAY PANAHON

InterVision | Head of Technology, Media & Entertainment Solutions

## CYBER BREACHES WILL GIVE IOT A BAD NAME

The focus on harnessing connectivity with the Internet of Things (IoT) to improve every aspect of daily life will ultimately become the very downfall of the innovation. Anything connected to the outside world in your home or workplace can be hacked. For this reason, consumer education in this area will come at the cost of the companies building and deploying these devices. Right now, too many organizations are in a blissful state of ignorance to the security ramifications of this innovation or are externalizing this burden to their customers instead of owning the responsibility. Unfortunately, it will take a large-scale breach for everyone to wake up. What can a company be doing to safely use IoT? There are great options for controlled environments in the cloud. If each IoT device were to establish an individual, private connection (rather than a connection to a public environment), you could theoretically reduce the entry points for these devices, thereby making them more secure.



DEREK BROST

InterVision | Director, Professional Services, Security & Compliance

## 5G WILL BE A FAST SWITCH, AND IOT WILL SEE THE BIGGEST GROWTH

The timeframe for widespread 5G adoption is set to happen in 2020, as many have been predicting for a while now. However, this switch be a fast transition, as cities will see their neighbors suddenly reaping the benefits of this lightning-fast internet speed and want it for themselves. Those providers that can't deliver 5G for their consumers will feel quite the hurt. But the biggest area of adoption will be in the realm of Internet of Things (IoT) devices, which bring the convenience of technology to the frontlines of consumer experience. Everything will become intelligent, from trashcans to thermostats, refrigerators to whiteboards.



# 5G WILL ALLOW THIRD-WORLD COUNTRIES TO LEAPFROG LONG-STANDING TECHNICAL HURDLES

As 5G continues to roll out to third-world countries in 2020 and beyond, it will allow many of these countries to leapfrog decades-old infrastructure challenges that other larger and bureaucratic countries are continuously encumbered by. We'll see faster adoption of this transport medium and further opportunities of innovation with 5G and IoT in the countries that are able to launch service easier and impactfully reach a wider base of customers.



## HARDWARE COMPANIES WILL NEED TO PIVOT

Everything is cloud-centric now. Companies that have continued to capitalize on the hardware market will need to find new lines of revenue in 2020, and fast. We'll see a major shift in the IT vendor landscape toward enabling clients to harness more complex <u>multi-cloud strategies</u>, creating virtualized software appliances that are deployed into cloud environments and APIs that are utilized from cloud environments, rather than pushing companies to refresh their existing infrastructure with the newest hardware models. Those that don't pivot to embrace cloud ecosystems will perish.

JOHN GRAY InterVision | CTO

## MOBILITY WILL SHAPE THE MAKEUP OF BUILDINGS

Now that most people have cell phones and <u>conduct their business</u> from them, desk phones are becoming a thing of the past. I can't think of the last time my desk phone rang and it wasn't someone trying to sell me something. With no more need to use desk phones, IT will stop wiring business buildings for phone systems to save on costs. Just like Apple did with removing headphone jacks from their iPhone models and it pushed the audio manufacturing market toward more Bluetooth connectivity, so too will this act normalize the remote workforce.



# SMART CITIES WILL SPURN NEW LEGISLATION SURROUNDING IOT USE

The Internet of Things (IoT) for "smart cities" could have disastrous consequences, leading to legislation surrounding the usage of IoT devices. Anything connected to the Internet especially cameras – are perennial targets for hacking. And these attacks have already been originating from overseas with the intent to weaponize the technology and launch more attacks inturn. It's not a far mental leap to imagine how foreign countries could use IoT devices for spying and attacking citizens. Worse, even after vulnerabilities are discovered, the manufacturers may not own the responsibility to fix it, necessitating either a lengthy revamp of the infrastructure with an eye for privacy protections, or a complete rip-and-replace from a more security-minded manufacturer.



DEREK BROST

InterVision | Director, Professional Services, Security & Compliance

### MACHINE LEARNING WITHOUT GUARDRAILS WILL REAP LITTLE VALUE

Machine Learning (ML) isn't a drag and drop scenario; it runs best when data is input with a clear purpose. An organization must therefore align company goals / key priorities with the advanced analytics capabilities and also ensure proper guardrails to reap expected benefits. Also, let's not forget that there's always a people component. People determine the strategy, manage the data collection and input, and review the output for accuracy. Because this can be time-consuming work, "Managed ML" will emerge as a valuable third-party solution for those departments that don't have the bandwidth to execute ML internally.

#### HARSHA GOPIANANDAN

InterVision | VP/GM, ML/Al Analytics



### GET READY FOR THE GAMING VERSION OF OLD-SCHOOL MTV

Traditional MSO's continue to decline in subscribers as customers continue the shift of viewing habits with the growing popularity of live-streaming models. However, we'll see revamped TV-style models that merge the successes of the past with the gaming culture of today to capture the attention of the ever-growing gaming audience. Music fans might remember the impact MTV had on grunge and pop of the '90s. We'll see a similar impact on culture with a dedicated network of gaming-focused streaming platforms like Twitch, Mixer, YouTube, and Venn TV, where celebrities, influencers, and professional gamers will continue to gain more acclaim and notoriety. We'll see these types of networks produce more subscriber-engaged live content and reach a much wider audience of players and fans across the globe.



InterVision | Head of Technology, Media & Entertainment Solutions

# HEALTHCARE WILL REAP THE EARLIEST IMPACTS OF ARTIFICIAL INTELLIGENCE

Still in its earliest stages, Al won't see widespread adoption in every facet of our lives in 2020, but healthcare will be the industry to see the earliest benefits. Disease detection will see increased accuracy, faster recognition and new discoveries in the realm of what causes sickness. This means the populace will see the positive aspects of Al at a critical juncture to its adoption in other industries. With Al making major impacts on their health, people will temper perceptions and openness to Al in other areas of life.



#### SUBSCRIPTION FATIGUE WILL SET IN FOR STREAMING PLATFORMS

It seems everyone has, or is building, their own streaming platform today. While this is the direction of the market, the trend also spells trouble. With so many subscription choices, we'll soon see some fatigue among consumers in selecting which subscriptions make the most sense for their wallets. The market demand will continue to push more al-a-carte subscriptions and on-demand options. But this won't happen without first having a pricing competition for market dominance. For some, this intense competition in the streaming market isn't something they're interested in, so they are getting out now. A recent indicator of this was made by Sony. Playstation Vue recently announced they would be ceasing their streaming video service in January 2020.



RAY PANAHON

InterVision | Head of Technology, Media & Entertainment Solutions

# HIGH-QUALITY DATA COLLECTION WILL RULE THE FUTURE

Companies will focus on curating high-quality datasets in 2020, so that in future years they can effectively use Machine Learning and Artificial Intelligence solutions to maintain an advantage over competitors. Prepping the nuts and bolts (i.e. maintaining clean datasets) will help organizations move quickly when implementing data-driven solutions for long-term viability. Indeed, there is a widespread problem in almost every industry right now with dirty or insufficient data, and more importantly, improper labeling. Since all data analytics engines must have clean datasets and good labeling upon which to function and perform tasks, effective data collection /

curation will thus become a major focus for almost every business.

#### HARSHA GOPIANANDAN

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## THE PACE OF CHANGE WILL OUTPACE IT TEAMS

The ability to identify which new trend will impact your market vertical is difficult to predict in any business realm. Within the IT department of a business in 2020, it will be harder than ever to make investment predictions. This is because we're seeing another technology revolution, the likes we've not seen since the "Dot Com" era. Now, we have Virtual Reality, the Internet of Things, Artificial Intelligence, Cloud, Mobility, 5G and other innovations all hitting the market at the same time. To say it will be difficult to select technologies that will be relevant in the next five years is an understatement to say the least. As a result, we'll see more companies embracing third-party subscription models rather than capital investments. This way, IT can avoid sunk costs on outdated hardware and maintain the ability to move quickly to the next innovation as needed.



**JEFF TON** 

# THIRD PARTIES WILL RISE TO SOLVE FOR DATA OPTIMIZATION CHALLENGES

Dirty datasets will continue to plague most businesses, so more and more companies will be looking to <u>clean up their data</u> before leveraging it for data analytics, AI and ML projects. Many third parties will form or pivot to solve this problem, offering new "as a Service" models to optimize company data—and thus make major profits.



## PREDICTIONS

To transform business through the evolutionary power of technology...

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#### HINDSIGHT IS 2020

Whether executive leadership will be requesting your IT department to embrace Artificial Intelligence or automate operations for optimized efficiency, innovation with a focused eye on customers will drive the most transformative IT projects to a successful end. Whatever your unique scenario is, long-term strategy should be the primary, guiding factor in decision-making. As a leading strategic service provider, InterVision assists businesses in driving value and gaining a competitive edge by helping IT leaders solve the three most crucial challenges they face:

Right Technology: What is the best technology for my unique problems? Right Premises: Where do I put my workload(s)? Right Model: What resource model will enable ongoing success?

When it comes to technology, our 25-year-plus history has guided some of the largest and most influential companies in solving their problems with a broad range of innovative technologies ranging from network infrastructure to collaboration to cloud migrations. We help to refine your strategy with the right technology and the right cloud strategy, but also bring the resource models to take it to the finish line, assuring a powerful combination of vision and capability.

