

# The TMC ADVISOR

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## [New Cellular Options for Canada](#) *By Tony van Wouw*

Mobile Virtual Network Operators do not build their own networks. They buy wholesale capacity from a primary carrier and then resell it under their own brand name. Competition proponents love them, primary carriers hate them. Currently they are commonplace in the US but not legal in Canada. That may change as a result of current regulatory reviews—but will it mean lower prices, more choice and better service—or the reverse?



## [The Future of Jobs](#) *By Ellen Koskinen-Dodgson*

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## [Fast Recovery – a Five Step Process](#)

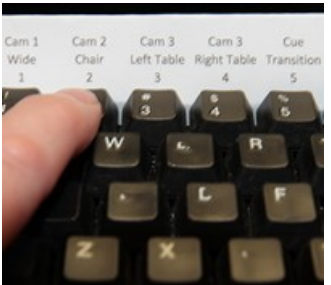
1. Assess your Disaster Recovery Plan – identify what's missing or out of date
2. Review your risks
3. Update your DRP
4. Activate mitigation plans including rearchitecting infrastructure for fastest recovery
5. Train and test

For a more extensive document, request "Fast Recovery" from [ellen@tmcconsulting.ca](mailto:ellen@tmcconsulting.ca).



## [Advanced Video Tricks](#) *By Peter Aggus*

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### **History**

Phone service used to be provided by a single company that owned the wires, the switches that connected calls and even the actual telephones. This model was efficient in its use of resources—and that should have made it a low cost solution.

However, providing rural service was expensive and Canadian policy required that city subscribers subsidize rural subscribers. Universal service was more important than low cost.

The advent of competition changed that model. Rather than laying lots of new cables the competitive model split service into layers with a wholesale rate established to allow new 'Service Providers' to buy capacity from the former monopoly operator and then re-sell that to their customer base.

### **The Cellular World**

This service layer approach is basically the Mobile Virtual Network Operator model which has operated in the US market for some time now. Unlike with land-line phone service, Canada doesn't (yet) license MVNOs. Many say that's why our cellular costs are higher than those in the US.

Potential MVNO entrants see a business opportunity. They would buy channel capacity in service areas



where they think that they can sell the service. Following the US model, they likely would not have roaming agreements to use other carriers where their own coverage is poor.

### **The Case For**

Advocates point out that MVNOs provide low cost service so that low income people can more easily access the service. In the US they account for most pre-paid and limited use plans. The Cellular network carriers here operate their own budget brands to cater to this market and perhaps, to forestall the arrival of MVNOs.

The proposed Rogers/Shaw merger will reduce competition. The introduction of MVNOs might be a way for the CRTC to stimulate new competition in a virtually stagnant

market.

While Telus is on record as being vehemently opposed to the concept, Rogers might see them as a bargaining chip to get the CRTC to sign off on the deal.

### **The Case Against**

The big guys say that the core network was expensive to provide and they would need to charge well above cost so the profits can be re-invested in the network. Shareholders, of course, demand dividends and are used to the big guys making lots of money.

Telus has said that they would reduce their build-out of new coverage areas if MVNOs were to be permitted.

### **Good For Canada?**

If you are a customer in the well-served part of the country then probably 'yes' as a way to get cheaper options. If you are a shareholder in one of the big guys then probably 'no'. If you're in a unserved or underserved area of the country, then certainly no.

If you'd like to comment on this article or explore these ideas further, contact me at [tony@tmcconsulting.ca](mailto:tony@tmcconsulting.ca).

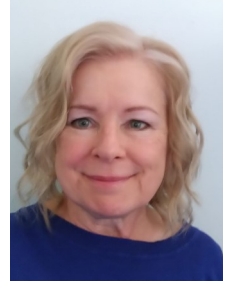
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## **The Future of Jobs By Ellen Koskinen-Dodgson**

The phrase “Future of Jobs” suggests impending disruption to our work-lives, and the World Economic Forum reports that it’s true, that this future has already arrived for a large majority of the white-collar workforce. 84% of employers are set to rapidly digitalize work processes, including a significant expansion of remote work—with the potential to move 44% of their workforce to operate remotely.



### **WEF Expertise**

The World Economic Forum is an international, not-for-profit foundation headquartered in Geneva, Switzerland. The Forum engages senior political, business, cultural, and other leaders of society to provide input on important global topics such as the future of jobs and global risks.

### **Fewer Jobs**

We’ll see employment losses with 41% of businesses in the survey saying that they would expand their use of contractors for specialized tasks rather than training their employees how to do the work.

Workflow automation will reduce their workforce in 43% of respondents. Repetitive, simple tasks are easy to automate but even work that is considered skilled, such as law, will see job automation.

The pandemic has accelerated their time-scales. By 2025, time spent on current work tasks will be shared 50/50 between humans and machines.

Even though their forecast says that the number of new jobs of tomorrow will be greater than the number of lost old-school jobs – a potential of 97 million new jobs vs. 85 million jobs replaced by automation – there will be more losses than gains in the short term.



### **Skills Gap**

The current skills gap will widen. Increased demand for tech skills include digital transformation, big data analysis, e-commerce, encryption and security, AI, and nonhuman robotics. The top business skills will be critical thinking and analysis, problem solving and self-management such as active learning, resilience, stress tolerance, and mental flexibility.

Companies estimate that reskilling of up to six months duration will be required for 40% of their workforce over the next few years. Most business leaders (94%) expect employees to pick up new skills on the job. This is a large increase from the 64% percent expectation in the 2018 study.

### **More Inequality**

Crises and times of dramatic change often increase inequality – the gap between skilled workers and low wage workers, the young, and women. Currently the expected impact is forecast to be much worse than that of the financial crisis of 2008. Government programs will be required if this gap is to be reduced.

### **Isolation**

Economic upheaval and the shift to remote work increases concerns about productivity and well-being. About one-third of all employers expect to take steps to create an improved sense of community, connection and belonging among employees through the use of digital tools.

### **Looking Inwards**

As an employer or manager, there are two important issues. You need to plan for the growing skills gap as well as the expected psychological impacts of remote work and AI encroachment.

If you’d like to comment on this article or explore these ideas further, contact me at [ellen@tmcconsulting.ca](mailto:ellen@tmcconsulting.ca).

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## Advanced Video Tricks *By Peter Aggus*

Most video applications such as Zoom are built on a single fixed camera —sometimes intercut with a slide show. This talking head approach can cause viewer boredom. Broadcasters make things much more interesting by using multiple cameras and other video tricks. Recent changes pioneered in the gaming world have put 'broadcast technology' capabilities within anyone's grasp to support more engaging business meetings and training sessions.



### Your Brain on Video

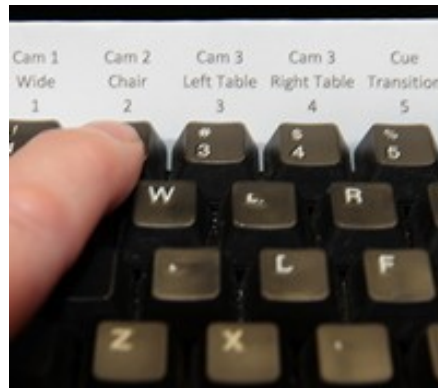
Most business video communications uses a single fixed camera and microphone—typically the ones built in to the laptop. Quality is not great, particularly with regard to sound. No wonder video meetings are more tiring than in-person meetings.

TV broadcasts that use video conferencing for contributions, require a professional camera and microphone with decent lighting at the remote end. They also know that there is a limit to how long a viewer will accept a fixed talking head pose. It is measured in seconds not minutes.

Similarly, if you attend a live lecture you do not spend an hour with your head fixed in one position looking at a podium-based presenter. You look around and the lecturer moves around - your brain is not over-stressed.

### Using More Cameras

Broadcasters use 'virtual cameras' where they use a digital zoom to cut to a close-up shot. They can have a fixed camera, looking at two people and generate two 'virtual cameras' from that one shot of the two people. That way they can cut in post-production between 2-person, person A, and person B—looking like they had three cameras. They also use additional cameras.



Systems like Zoom and WebEx allow you to select your video and audio sources. Typically we use the defaults—built-in camera and mike. However you can easily plug in a better camera and microphone. I use a video conference camera and a boom mike designed for podcasters as the first step in improved quality.

You can also run software, like OBS (Open Broadcast Software) to produce easy, impressive quality improvements. It can switch between more than one camera or between virtual cameras as the broadcasters do. The difference is that no post-production work is required. Each switch happens with a keystroke.

One virtual camera can use the picture in picture function so that a speaker can stand in front of their PowerPoint projection, as they would in a live presentation.

Look at the photo and see that I have set up a few keys so that I can switch between several virtual or real cameras. The OBS screen on my laptop shows the current camera view as well as the intended next camera view. When I'm ready to change, I press the transition key.

Watch a city council meeting on Facebook Live and consider what it might look like if they used several real and virtual cameras. You could have a camera for the presenter as well as virtual wide angle and close-up views of each council member. It's easy enough that a clerical person could attend the meeting and handle the camera transitions with almost no training.

### Recommendations

- Avoid static head-and-shoulders presenter view for long periods
- Consider your video presentation as a 'show' where you need to capture and keep your audience's interest
- Emulate the professionals where you can—they often do know best

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*Peter, as an engineer & technology management consultant, has developed innovative & cost-effective solutions for clients in many industries.*

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We tend to treat symptoms of eye strain as if they were something else. Headaches make us reach for that aspirin bottle and red, itching eyes lead to mirror inspections followed by a dash of Visine and a promise to "do something about those contacts". Eye strain at the office is common and can interfere with your ability to concentrate, sometimes seriously. There are multiple causes and some easy ways to improve your life.



### Causes

Bright light, either directly in your eyes, or reflected as glare can make reading an uncomfortable experience. HVAC systems can blow dry, dusty air into your face. Some people become so entranced with what they are reading that they neglect to blink. Reading computer screens seem to increase this effect. The result is dry eyes, which quickly become irritated.

### Mitigation

Here are our recommendations.

#### Counteract HVAC:

Keep the airflow away from your face and consider a humidifier.

#### Improve Your Lighting:

Our computer workstations are often surrounded by too much light, which washes out the image on the screen and forces our eyes to do more work than they should. It's not practical to dim lighting as it must remain bright for safety reasons. A monitor hood may be ideal, but even anti-glare filters placed over screens can decrease wash-out and enhance screen images.

If circumstances permit, turn off or reduce overhead lighting, use task lighting, don't face a white wall or



window, close the blinds and finally, adjust the contrast and brightness on your monitor.

#### Ergonomics:

The Mayo Clinic says that your monitor should be at arms-length away and the top of the monitor should line up with your eyes. Adjust the magnification as desired.

#### Support Your Eyes:

1. The rule of thumb: keep the thumb (and fingers) away from the eyes. You'll be transferring dust and microbes.
2. Make a conscious effort to blink.
3. Have your eyes examined at least every two years by an ophthalmologist or optometrist.

They will prescribe glasses that are appropriate for different activities, including extended periods of computer use. This will likely include a blue-blocker coating on the lenses.

4. Ocular R. & R. should include freedom from print, computer and phone screens, and bright lights. It should not involve newspapers or computer games. The Mayo Clinic suggests using the 20-20-20 rule: every 20 minutes look at something 20 feet away for at least 20 seconds.

#### Eye Fitness:

There are effective ways to exercise our eyes and strengthen the muscles that control them. These exercises often involve focusing on objects at different distances from the eye. Some sources suggest eye-targeted supplements as well.

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