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WHEN IT COMES TO SELLING THE VIRTUES OF THEIR SERVICES, MOBILE OPERATORS APPEAR TO BE STUCK IN THE 1970's

Philip Laidler, Partner and Consulting Director

In the middle of the 1970s' oil crisis, many auto ads were promoting power and speed of their products, even for family saloons (warning: anyone looking to verify this assertion, will find the auto advertising industry objectifying women with jaw-dropping regularity). The car industry has evolved…a bit. Much advertising now promotes the virtues of fuel efficiency and low emissions (or in the case of EVs, range). It isn't that the car industry is enlightened. It is responding to regulatory and market pressure. And pressure is mounting. 2020 saw an **explosion of campaigns** seeking outright bans on SUV advertising.

So… what has this got to do with telecoms? Partly encouraged by industry comparison sites such as Opensignal, telecoms operators promote the ever-faster download (and now upload) speeds enjoyed by their customers. This is presented as providing an objective yardstick to guide consumer decisions. Consumers have been trained to consider average network download and upload speeds (along with coverage) as the most desirable attributes from their provider. On the face of it, this is a good thing. Independent reporting exposes false claims and forces operators out of complacency. But metrics matter and the current ones need refining. It is time to take some lessons from the car industry.

I recently discussed energy efficiency best practice with a telecoms executive who highlighted that operators were reluctant to implement sleep modes in 4G and 5G networks for fear of having lower average performance reported by independent tests.

- Explainer: Today, most networks are on full power 24hrs a day 365 days a year. Network vendors have introduced a host of technologies that allow 4G and 5G networks to be partly shut down during off-peak times, thereby reducing energy consumption and improving energy efficiency. However, this may result in lower download and upload speeds at off-peak times when there are very few users on the network, so operators are reluctant to implement sleep modes and other similar energy optimizing measures for fear of being reported to under-perform against rivals.

This leads to inefficient, wasteful outcomes and greenhouse gas emissions that nobody wants. So, the challenge for the industry, media and the independent performance reporting organisations, is to agree on better metrics that should be presented to consumers for comparing operators' performance. Here are a few starting suggestions:

- Peak-hour average download speeds (instead of simply daily averages)
- Peak-hour average upload speeds (instead of simply daily averages)
- Network energy efficiency: Defined as the energy per unit of data transmitted over cellular networks. Based on the work undertaken by STL Partners, the current target should be 1 Joule of energy per KB of data for most networks.
- Network emissions efficiency: Defined as CO_2eq emitted per unit of data transmitted over cellular networks. We propose that the industry start with considering the

emissions arising from the direct and indirect use of energy, excluding any offsetting and for now, excluding embedded emissions. Targets will need to vary by country due to different grid electricity generation profiles.

One final lesson that telecoms should take from the car industry is that it is better to do this pro-actively rather than respond belatedly to the demands of society, advocacy groups, investors, regulators and ultimately customers. Oil and airlines may be the current climate pariahs. Let's make sure telecoms is not next.