

**Excerpts from:**

**TELUS CORPORATION**

**Management's discussion and analysis**

2019 Q1



**11.2 Operating indicators**

As a result of our subscriber definition changes effective the first quarter of 2019, certain subscriber units were moved from the mobile phones subscriber base to the newly created mobile connected devices subscriber base. Specifically, data-centric devices intended for limited or no cellular voice capabilities, such as tablets, internet keys, connected cars, and wearable technology were moved to the mobile connected devices subscriber base in alignment with the revised definitions. **Our newly created mobile connected devices subscriber base** combines these data-centric devices moved from mobile phone subscriber units with previously undisclosed Internet of Things and mobile health subscriber units.

The following measures are industry metrics that are useful in assessing the operating performance of a wireless and wireline telecommunications entity, but do not have a standardized meaning under IFRS-IASB.

**Mobile phone average billing per subscriber unit per month (ABPU)** for subscribers is calculated as network revenue derived from monthly service plan, roaming and usage charges, as well as monthly re-payments of the outstanding device balance owing from customers on contract; divided by the average number of mobile phone subscriber units on the network during the period and is expressed as a rate per month.

**Mobile phone average revenue per subscriber unit per month (ARPU)** for subscribers is calculated as network revenue derived from monthly service plan, roaming and usage charges; divided by the average number of mobile phone subscriber units on the network during the period and is expressed as a rate per month.

**Churn per month (or churn)** is calculated as the number of subscriber units deactivated during a given period divided by the average number of subscriber units on the network during the period, and is expressed as a rate per month. Mobile phone churn refers to the aggregate average of both prepaid and postpaid mobile phone churn. A TELUS, Koodo or Public Mobile brand prepaid mobile phone subscriber is deactivated when the subscriber has no usage for 90 days following expiry of the prepaid credits.

**Mobile connected device subscriber unit** is defined as an active data-centric recurring revenue-generating device (e.g. tablets, internet keys, Internet of Things, wearables, connected automobile systems) with a unique subscriber identifier (SIM or IMEI number) that is intended for limited or no cellular voice capability. In addition, TELUS has a direct billing or support relationship with the user of each device.

**Mobile phone subscriber unit** is defined as an active mobile recurring revenue-generating unit (e.g. feature phones, smartphones) with a unique subscriber identifiers (SIM or IMEI number) that is a multi-purpose mobile handset which provides cellular voice, text and data connectivity. In addition, TELUS has a direct billing or support relationship with the user of each device.

**Wireline subscriber unit** is defined as an active recurring revenue-generating unit that has access to stand-alone services, including fixed Internet access, TELUS TV and residential voice (previously residential network access lines). In addition, TELUS has a direct billing or support relationship with the user of each service.

**Caution regarding forward-looking statements**

By their nature, forward-looking statements are subject to inherent risks and uncertainties and are based on assumptions, including assumptions about future economic conditions and courses of action. These assumptions may ultimately prove to have been inaccurate and, as a result, our actual results or events may differ materially from expectations expressed in or implied by the forward-looking statements. Updates to the assumptions on which our 2019 outlook is based are presented in *Section 9 Update to general trends, outlook and assumptions, and regulatory developments and proceedings* in this Management's discussion and analysis (MD&A).

Risks and uncertainties that could cause actual performance or events to differ materially from the forward-looking statements made herein and in other TELUS filings include, but are not limited to, the following:

- Regulatory decisions and developments ...

disputes with certain municipalities regarding rights-of-way bylaws, and other potential threats to unitary federal regulatory authority over telecommunications, including provincial wireless and consumer protection legislation;

the CRTC's phase-out of the local service subsidy regime and corresponding establishment of a broadband funding regime to support the enhancement of high-speed Internet services focusing on unserved and underserved areas in Canada;

; spectrum and compliance with licences, including our compliance with licence conditions, changes to spectrum licence fees, spectrum policy determinations such as restrictions on the purchase, sale and transfer of spectrum licences, and the cost and availability of spectrum in the 3500 MHz and millimeter wave (mmWave) bands; the impact on us and other Canadian telecommunications carriers of government or regulatory actions with respect to certain countries or suppliers;

; and our ability to comply with complex and changing regulation of the healthcare and medical devices industry in the provinces of Canada in which we operate, including as an operator of health clinics.

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- Competitive environment including: our ability to continue to retain customers through an enhanced customer service experience, including through the deployment and operation of evolving wireless and wireline infrastructure;

government actions and customer usage patterns;

; our ability to compete successfully in customer care and business services (CCBS) given our competitors' brand recognition, consolidation and strategic alliances as well as technology development and, in our TELUS Health business, our ability to compete with other providers of electronic medical records and pharmacy management products,

- Technological substitution

- Technology including: high subscriber demand for data that challenges wireless networks and spectrum capacity levels and may be accompanied by increases in delivery cost; our reliance on information technology and our need to streamline our legacy systems; the roll-out and evolution of wireless broadband technologies and systems, including video distribution platforms and telecommunications network technologies (broadband initiatives, such as fibre to the premises (FTTP), wireless small-cell deployment, 5G wireless and availability of resources and ability to build out adequate broadband capacity); our reliance on wireless network access agreements, which have facilitated our deployment of wireless technologies;

; our expected long-term need to acquire additional spectrum capacity through future spectrum auctions and from third parties to address increasing demand for data; deployment and operation of new wireline broadband network

technologies at a reasonable cost and availability and success of new products and services to be rolled out using such network technologies;

customers; and uncertainties around our strategy to replace certain legacy wireline network technologies, systems and services to reduce operating costs.

- Capital expenditure levels and potential outlays for spectrum licences in spectrum auctions or from third parties, due to: our broadband initiatives, including connecting more homes and businesses directly to fibre; our ongoing deployment of newer wireless technologies, including wireless small cells to improve coverage and capacity and prepare for a more efficient and timely evolution to 5G wireless services;

. Our capital expenditure levels could be impacted if we do not achieve our targeted operational and financial results.

- Operational performance and business combination risks

orders); our ability to identify and manage new risks inherent to new service offerings that we may provide, including as a result of acquisitions, which could result in damage to our brand, our business in the relevant area or as a whole, additional exposure to litigation or regulatory proceedings;

- Data protection including risks that malfunctions or unlawful acts could result in the unauthorized access to, change, loss, or distribution of data, which may compromise the privacy of individuals and could result in financial loss and harm to our reputation and brand.

- Security threats

- Business continuity events including: our ability to maintain customer service and operate our network in the event of human error or human-caused threats, such as cyberattacks and equipment failures that could cause various degrees of network outages; supply chain disruptions, delays and economics, including as a result of government restrictions or trade actions;

Litigation and legal matters including: our ability to successfully respond to investigations and regulatory proceedings; our ability to defend against existing and potential claims and lawsuits

- Health, safety and the environment including: lost employee work time resulting from illness or injury, public concerns related to radio frequency emissions.

Readers are cautioned not to place undue reliance on forward-looking statements.

## **Management's discussion and analysis (MD&A)**

May 9, 2019

### **600 MHz spectrum auction**

On April 10, 2019, we announced we were the successful bidder on 12 wireless spectrum licences in B.C., Alberta, Saskatchewan, Ontario and Quebec in Innovation, Science and Economic Development Canada's (ISED) 600 MHz wireless spectrum auction. The 600 MHz band is important for its ability to travel great distances in rural areas and infiltrate barriers to better reach in-building locations such as elevators and parking garages, making it highly conducive to 5G deployment. The licences, acquired for \$931 million (\$2.35 per MHz-pop, where pop refers to the population in a licence area), equate to a national average of 11.3 MHz and will enable us to deliver enhanced mobile broadband connectivity as the industry transitions from 4G LTE to 5G. The design of the combinatorial clock auction (CCA), coupled with a 30 MHz set-aside for regional carriers (representing 43% of the spectrum at

auction), led to national carriers paying a 134% premium over regional operators, and to the best of our knowledge, the highest prices for 600 MHz spectrum in the world. Outside of Canada, set-asides are very rare, and the few instances where there were CCAs with set-asides, the set asides have only been for approximately 5% of the spectrum at auction. We remitted an initial payment of \$186 million to ISED on April 26, 2019, and the remaining balance of \$745 million will be paid on, or before, May 27, 2019.

## Operating highlights

- **Consolidated operating revenues** increased by \$129 million in the first quarter of 2019:

Service revenues increased by \$134 million in the first quarter of 2019, mainly due to growth in wireless network revenue and wireline data services revenue, partly offset by the ongoing declines in wireline legacy voice and legacy data service revenues.

Equipment revenues increased by \$4 million in the first quarter of 2019, primarily due to increased wireless revenue mainly from more higher-value smartphones in the sales mix and growth in revenue per handset.

- During the 12-month period ending on March 31, 2019, our total **subscriber connections** increased by 548,000 reflecting a 3.1% increase in mobile phone subscribers, an 18.9% increase in mobile connected device subscribers, a 7.4% increase in Internet subscribers and a 0.5% increase in TELUS TV subscribers, partly offset by a 3.5% decline in residential voice subscribers.

Internet net additions were 22,000 in the first quarter of 2019, flat year over year. TELUS TV net additions were 17,000 in the first quarter of 2019, up 11,000 year over year. Our continued focus on expanding our addressable high-speed Internet and Optik TV® footprint, connecting more homes and businesses directly to fibre, growing our diverse product offerings, and bundling these services together, as well as our ongoing focus on putting our customers first, resulted in a lower customer churn rate and contributed to combined Internet and TV subscriber growth of 137,000 or 4.8% over the last 12 months. We had made TELUS PureFibre® available to approximately 63% of our broadband footprint by March 31, 2019.

## 3. Corporate priorities for 2019

Our annual corporate priorities are used to advance our long-term strategic imperatives and address near-term opportunities and challenges. The following table provides a discussion of activities and initiatives that relate to our 2019 corporate priorities.

### Honouring our customers, communities and social purpose by our team delivering on our brand promise

- In April 2019, the Commission for Complaints for Telecom-television Services (CCTS) issued its mid-year report for the period August 1, 2018 to January 31, 2019, and TELUS again received the fewest customer complaints among the national service providers.

### Leveraging our broadband networks to drive TELUS' growth

- We continue our significant ongoing investment in rural and remote communities to provide broadband Internet to all Canadians. In aggregate, we have invested more than \$175 billion in infrastructure and operations since 2000, and plan to invest approximately \$40 billion in infrastructure and operations over the next three years, for a total of \$215 billion.

## Driving emerging opportunities to build scale in TELUS Health and TELUS International

- In March 2019, we launched Babylon by TELUS Health, a virtual healthcare solution that provides Canadians with access to doctors and healthcare information where and when they need it through a new smartphone app.

Since mid-2013, we have invested more than \$4.6 billion to acquire wireless spectrum licences in spectrum auctions and other transactions, which has more than doubled our national spectrum holdings in support of our top corporate priority to put customers first. Wireless data consumption has been increasing rapidly and we have responded by investing to extend the capacity of our network to support the additional data consumption and growth in our wireless subscriber base. This includes investments in wireless small cells connected to our fibre technology to improve coverage and capacity and to prepare for a more efficient and timely evolution to 5G wireless services.

### Wireline

We are continuing to invest in our incumbent local exchange carrier (ILEC) urban and rural communities with commitments to deliver broadband technology capabilities to as many Canadians as possible. We are expanding our fibre footprint by connecting more homes and businesses directly to fibre in communities across B.C., Alberta and Eastern Quebec. In addition, we have increased broadband Internet speeds, expanded our IP TV video-on-demand library and high-definition content, including 4K TV and 4K HDR capabilities, and enhanced marketing of data products and bundles resulting in improved churn rates. Our fibre technology is also an essential component of our wireless access technology and will enable 5G deployment in the future as referenced above. Our home and business smart technology (including security) lines of business integrate security and safety monitoring with smart devices.

## 4.4 Changes in internal control over financial reporting

### Disclosure controls and procedures

#### 5.1 General

A significant judgment we make is in respect of distinguishing between our wireless and wireline operations and cash flows (and this extends to allocations of both direct and indirect expenses and capital expenditures). The clarity of such distinction has been increasingly affected by the convergence and integration of our wireless and wireline telecommunications infrastructure and technology. The continued build-out of our technology-agnostic fibre-optic infrastructure, in combination with converged edge network technology, has significantly affected this judgment, as has the commercialization of fixed-wireless telecommunications solutions for customers and the consolidation of our non-customer facing operations. As a result, it has become increasingly difficult and impractical to objectively and clearly distinguish between our wireless and wireline operations and cash flows, and the assets from which those cash flows arise. As we do not currently aggregate operating segments, our reportable segments as at March 31, 2019, are also wireless and wireline. Segmented information in Note 5 of the interim consolidated financial statements is regularly reported to our Chief Executive Officer (CEO) (our chief operating decision-maker).

### Trends

The trend of year-over-year increases in consolidated revenue reflects: (i) wireless network revenue generated from growth in our subscriber base; and (ii) growth in wireline data services revenues, including customer care and business services (CCBS), Internet and enhanced data, TELUS Health, TELUS TV services, and home and business smart technology (including security). Increased CCBS revenues, TELUS Health revenues, home smart technology and business smart technology revenues include revenues from business acquisitions. Increased Internet and TV service revenues are being generated by subscriber growth and higher Internet revenue per customer. Year-over-year wireless equipment revenues generally increased from a higher volume of new contracts and higher-value smartphones in the sales mix.

The trend of year-over-year increases in Financing costs reflects an increase in long-term debt outstanding, mainly associated with our generational investments in fibre to homes and businesses and wireless technology

Consolidated operating revenues increased by \$129 million in the first quarter of 2019.

- **Service revenues** increased by \$134 million in the first quarter of 2019, reflecting growth in wireless network revenue and wireline data services, partly offset by the continuing declines in wireline legacy voice and legacy data service revenues. Wireless network revenue increases reflect a growing wireless subscriber base. The increase in wireline data service revenue reflects increased CCBS revenue growth, as well as increases in Internet and enhanced data services, TELUS Health revenues, TELUS TV revenue and revenues from our home and business smart technology lines of business, partly offset by decreased legacy data service revenues. Internet and TV revenues increased due to subscriber growth, as well as higher Internet revenue per customer.

## 5.4 Wireless segment

### Wireless trends and seasonality

The historical trend over the last eight quarters in wireless network revenue reflects growth in our subscriber base, as well as higher-value smartphones in the sales mix of gross additions and retention units. There has been a general year-over-year increase in equipment revenues from a higher volume of new contracts and higher-value smartphones in the sales mix. The general trend of year-over-year increases in subscriber net additions resulted from the success of our promotions; the effects of market growth arising from a growing population, changing population demographics and an increasing number of customers with multiple devices; and continuous improvements in the speed and quality of our network, combined with our low churn rate, which reflects our focus on customers first initiatives. Our expenditures on network improvements increase capacity and coverage, allowing us to grow revenue through net additions of wireless subscribers. Although there have historically been significant third and fourth quarter seasonal effects that result in increased loading, competitive intensity in both the consumer and business markets, launches of new devices and the strategic decision to focus on margin-accretive loading as opposed to lower-margin subsidized tablet loading and non-accretive prepaid-to-postpaid migrations, may impact subscriber addition results and trends for future periods.

increasingly available Wi-Fi hotspots have put downward pressure on mobile phone ABPU growth; partly offset by (ii) an increased mix of higher-priced rate plans, such as data share plans, in addition to more higher-value smartphones in the sales mix, and an increased proportion of higher-rate customers in the subscriber mix. As a result of increased competitive pressures, customers have been able to gain access to higher network speeds and larger allotments of data included for a given price point.

Our connected device subscriber base has been increasing with our expanded IoT offerings. IoT technologies are expected to continue their growth and IoT customers, along with other connected device subscribers, will be able to realize greater benefits that are dependent upon 5G deployment.

## Operating revenues — Wireless segment

Total wireless operating revenues increased by \$36 million in the first quarter of 2019.

## 5.5 Wireline segment

### Wireline trends

The trend over the last eight quarters of increases in wireline service revenue reflects growth in Internet and enhanced data services, CCBS revenues, TELUS TV revenues, TELUS Health revenues, and home and business smart technology revenues, and is partly offset by declining wireline legacy voice and legacy data revenues. The increases in Internet and TV service revenues are being generated by subscriber growth and higher Internet revenue per customer resulting from upgrades to faster speeds, larger data usage rate plans and expansion of our fibre

**footprint.** We expect continued Internet subscriber base growth as the economy grows and as we continue our investments in expanding our fibre-optic infrastructure.

## Wireline operating revenues

**Total wireline operating revenues increased by \$99 million in the first quarter of 2019.**

- **Residential voice net losses** were 11,000 in the first quarter of 2019, as compared to residential voice subscriber net losses of 16,000 in the first quarter of 2018. **The residential voice subscriber losses continue to reflect the trend of substitution to wireless and Internet-based services,** partially mitigated by our expanding fibre footprint and bundled product offerings, and the success of our stronger retention efforts, including lower-priced offerings.

## Commitments and contingent liabilities

### **Claims and lawsuits**

**A number of claims and lawsuits (including class actions and intellectual property infringement claims) seeking damages and other relief are pending against us and, in some cases, other wireless carriers and telecommunications service providers.** As well, we have received notice of, or are aware of, certain possible claims (including intellectual property infringement claims) against us and, in some cases, other wireless carriers and telecommunications service providers.

It is not currently possible for us to predict the outcome of such claims, possible claims and lawsuits due to various factors, including: the preliminary nature of some claims; uncertain damage theories and demands; an incomplete factual record; uncertainty concerning legal theories and procedures and their resolution by the courts, at both the trial and the appeal levels; and the unpredictable nature of opposing parties and their demands.

However, subject to the foregoing limitations, **management is of the opinion, based upon legal assessments and information presently available, that it is unlikely that any liability, to the extent not provided for through insurance or otherwise, would have a material effect on our financial position and the results of our operations,** including cash flows, with the exception of the items disclosed in *Note 29* of the interim consolidated financial statements.

## **9.1 Communications industry regulatory developments and proceedings**

**Our telecommunications, broadcasting and radiocommunication services are regulated under federal laws by various authorities, including the Canadian Radio-television and Telecommunications Commission (CRTC), Innovation, Science and Economic Development Canada (ISED), Canadian Heritage, and the Competition Bureau.**

**The following is a summary of certain significant regulatory developments and proceedings relevant to our business and our industry.**

### **Radiocommunication licences and spectrum-related matters**

#### ***Repurposing the 3500 MHz spectrum to support 5G***

On December 18, 2014, ISED released its *Decisions Regarding Policy Changes in the 3500 MHz Band (3475 — 3650 MHz) and a New Licensing Process* noting the band would be fundamentally reallocated for flexible (mobile and fixed) use in the near future. On June 6, 2018, ISED released its *Consultation on Revisions to the 3500 MHz Band to Accommodate Flexible Use and Preliminary Consultation on Changes to the 3800 MHz Band*, proposing to claw back 56 to 66% of the band from fixed wireless incumbents (predominantly Inukshuk, which is a joint venture owned by Bell and Rogers, and Xplornet) and to auction the amount clawed back in 2020. **In our consultation response, we called for a 100% clawback in large population centres.** After ISED issues a transition decision, it will then consult on a licensing framework (i.e. auction rules and conditions of licence) for the 3500 MHz band. **There is a risk that the transition decision and the auction rules will favour certain carriers over us and impact our ability to acquire 3500 MHz band spectrum.**

### *Repurposing mmWave spectrum to support 5G*

On June 5, 2017, ISED issued a *Consultation on Releasing Millimetre Wave Spectrum to Support 5G*, proposing to release 3.25 GHz of millimetre wave (mmWave) spectrum for licensed use and 7 GHz for licence-exempt use largely in line with recent U.S. mmWave developments. On June 6, 2018, ISED released an *Addendum to the Consultation on Releasing Millimetre Wave Spectrum to Support 5G*, proposing to release an additional 1 GHz of spectrum in the 26.5 — 27.5 GHz range. After issuing a repurposing decision, ISED will then consult on a licensing framework (i.e. auction rules and conditions of licence) for the mmWave bands. There is a risk that the repurposing decisions and the auction rules will favour certain carriers over us and impact our ability to acquire mmWave band spectrum.

### *Wireline wholesale services follow-up*

On July 22, 2015, the CRTC released *Review of wholesale wireline services and associated policies, Telecom Regulatory Policy CRTC 2015-326*. The major component of this decision was that the CRTC ordered the introduction of a disaggregated wholesale high-speed Internet access service for Internet service provider (ISP) competitors. This will include access to fibre to the premises (FTTP) facilities. This requirement is being phased in geographically beginning in the largest markets in Ontario and Quebec (i.e. in the serving territories of Bell, Cogeco, Rogers and Videotron). The CRTC initiated a follow-up proceeding to determine the technical configurations, appropriate costs and wholesale cost-based rates in those regions.

Given the phased implementation of the mandated provision of wholesale access to our FTTP network, it is too early to determine the impact *Telecom Regulatory Policy 2015-326* will have on us in the longer term.

### *Competition Bureau market study on competition in broadband services*

The Bureau intends to publish a draft report in May 2019, at which point it will hold public consultations and then publish a final report in June 2019.

Study is found here: <https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04469.html>