

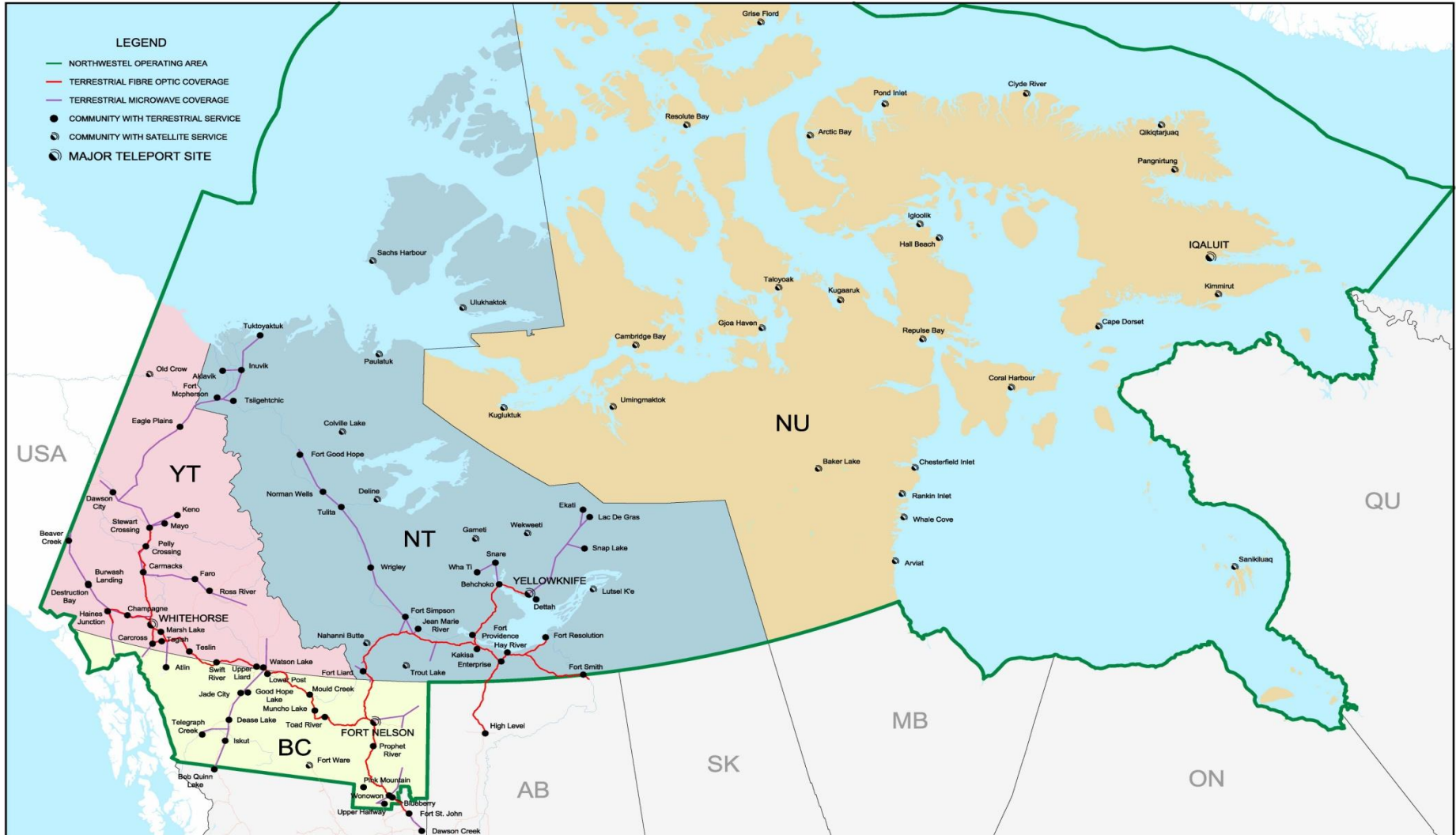
# **Northwestel Overview**

## **July 2016**

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President & CEO**



# Northwestel Operating Area



# Operating Environment

- Unique among Canadian Telcos
- Operating area 4 million square kms (40% of Can)
- 96 Communities (80% < 500 telephone lines)
  - Whitehorse is biggest at 27,000 people
- Serving 121,000 people (0.3% of Can)
- 43 communities have air access only
- Average cost/line > 7x that in the south

# Operating Challenges

## Travel

- Commercial flights limited & expensive
- Limited accommodation
- Weather challenging – winter storms, summer fog
- Charters required to address outages (\$7-\$30k/trip)

## Staffing

- >70% of communities have low volumes of work
- Cannot justify full-time staff
- Cost of living is very high
- Training, recruitment & retention of staff an issue

# Operating Challenges (cont'd)

## Power

- Commercial power largely limited to communities
  - Anywhere from 2 to 20x southern rates
- Self generated power even more costly (89 sites)

## Telecom Infrastructure

- 63% of communities terrestrial served, 37% satellite
- Terrestrial links to small communities costly to upgrade
- Satellite bandwidth very expensive, high latency
- Fibre - initial costs are high, but much easier to expand
  - Lack of redundancy exposes network to outages

# Arctic Bay, Nunavut



- Population 853, Lines 324
- Capital Investment per Line \$7,800
- Cost of return airfare to Iqaluit = \$4000
- Community serviced by part-time Technician





# Fraser M/W Tower (Northern BC)



# Status of Broadband

## Large Urban Terrestrial Centers

- Internet – 1 to 125 Mbps (\$42 to \$190/mth)

## Rural Terrestrial Areas

- Internet – 0.8 to 15 Mbps (\$38 to \$84/mth)

## Satellite Communities

- Internet – 0.5 to 5 Mbps (\$60 to \$180/mth)