ANALYSIS OF THE CANADIAN 3500 MHz AUCTION

Results & Looking Forward

December 2021

Networks, Economics and Strategy (NE&S)

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1. Results & Comparison

Overall Canadian 3500 MHz Auction Results

						Ratio				Ratio	Ratio
licence Winners	**# of Licences Won**	**# of Transitioned Licences**	**Total # of Licences**	**Total Population Covered**	**Openning Price (Reserve Price)**	**Openning Price /MHz/Pop**	**Clock Price ($)**	**Assignment Price ($)**	**Total Price ($)**	**Price Paid /MHz/Pop**	**Price Paid to Reserve Price**
Bell Mobility Inc.	271	490	**761**	34,269,028	109,065,000	$ 0.161	$ 2,049,815,820	$ 24,272,877	**$2,074,088,697**	$ 3.058	19.0
Bragg Communications Inc.	50	-	**50**	2,332,044	4,087,000	$ 0.059	$ 27,918,000	$ -	**$ 27,918,000**	$ 0.403	6.8
Broadpoint	-	16	**16**	180,451	-	$ -	$ -	$ -	**$ -**	$ -	
Cogeco Connexion Inc.	38	80	**118**	10,295,549	51,928,000	$ 0.200	$ 291,236,100	$ 3,855,154	**$ 295,091,254**	$ 1.135	5.7
Comcentric Networking Inc.	-	15	**15**	321,414	-	$ -	$ -	$ -	**$ -**	$ -	
ECOTEL inc	2	-	**2**	101,609	52,000	$ 0.051	$ 692,000	$ 115	**$ 692,115**	$ 0.681	13.3
ISED	9	-	**9**	113,571	-	$ -	$ -	$ -	**$ -**	$ -	
Iristel Inc.	8	-	**8**	219,201	168,000	$ 0.050	$ 483,000	$ -	**$ 483,000**	$ 0.145	2.9
Rogers Communications Canada Inc.	325	509	**834**	34,955,719	153,019,000	$ 0.156	$ 3,316,732,814	$ 8,867,455	**$3,325,600,269**	$ 3.380	21.7
SSI Micro	-	5	**5**	35,975	-	$ -	$ -	$ -	**$ -**	$ -	
Saskatchewan Telecommunications	68	-	**68**	1,094,704	3,300,000	$ 0.058	$ 145,070,005	$ 13,969	**$ 145,083,974**	$ 2.550	44.0
Sogetel inc.	18	10	**28**	633,607	416,000	$ 0.051	$ 14,538,000	$ -	**$ 14,538,000**	$ 1.775	34.9
Star Solutions International Inc.	2	-	**2**	191	1,000	$ 0.051	$ 5,700	$ -	**$ 5,700**	$ 1.492	29.3
TBayTel	4	15	**19**	230,972	86,000	$ 0.051	$ 1,042,000	$ 64,743	**$ 1,106,743**	$ 0.651	12.9
TELUS Communications Inc.	142	86	**228**	24,918,405	96,698,000	$ 0.167	$ 1,905,883,244	$ 41,604,847	**$1,947,488,091**	$ 3.373	20.1
Thomas Communications Ltd.	4	-	**4**	30,719	32,000	$ 0.052	$ 310,000	$ -	**$ 310,000**	$ 0.505	9.7
Valley Fiber Ltd.	6	-	**6**	174,449	178,000	$ 0.051	$ 4,808,000	$ 14,000	**$ 4,822,000**	$ 1.382	27.1
Vianet	-	5	**5**	20,095	-	$ -	$ -	$ -	**$ -**	$ -	
Vidéotron ltée	294	5	**299**	29,968,515	148,519,000	$ 0.154	$ 829,448,411	$ 518,072	**$ 829,966,483**	$ 0.858	5.6
Wire IE	-	2	**2**	29,520	-	$ -	$ -	$ -	**$ -**	$ -	
Xplornet Communications Inc.	263	698	**961**	16,585,157	19,245,000	$ 0.066	$ 243,046,704	$ 1,322,513	**$ 244,369,217**	$ 0.834	12.7
Total	**1,504**	**1,936**	**3,440**	**156,510,895**	**586,794,000**	**$ 0.150**			**$8,911,563,543**	**$ 2.283**	**15.2**

Saskatchewan Telecommunications, Star Solutions, TELUS, Xplornet all won bundled product, which may cause slightly difference in the $/MHz/pop calculation.

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Previous CDN Spectrum Auctions

Frequency Band	Band Names	Main or Residual	Year	Auction Format	Tier level	Pro-competitive measure	Number of Qualified Bidders	Number of Properties on offer	Number of Winners	Number of Properties won	Proceeds (CDN)
24 & 38 GHz	24 & 38 GHz	Main	1999	SMRA	3	Spectrum Cap	13	354	12	260	**$ 171,838,520**
2 GHz	PCS	Main	2001	SMRA	2	Spectrum Cap	7	62	5	52	**$ 1,481,920,000**
2300 &3500 MHZ	WCS & FWA	Main	2004	SMRA	4	Spectrum Cap	22	849	22	392	**$ 11,240,615**
2300 &3500 MHZ	WCS & FWA	Residual	2004/2005	SMRA	4	Spectrum Cap	25	457	15	450	**$ 57,527,465**
1700/2100, 1900 & 1670 MHz	AWS-1/ PCS/ 1670 MHz	Main	2008	SMRA	2 & 3	Set-Aside	27	292	15	282	**$ 4,254,710,327**
850 MHz	Air-Ground	Main	2009	Sealed Bid	1	None	3	2	1	2	**$ 2,100,007**
2300 &3500 MHZ	WCS & FWA	Residual	2009	Sealed Bid	4	None	9	10	5	10	**$ 123,970**
700 MHz	MBS	Main	2014	CCA	2	Spectrum Cap	10	98	8	97	**$ 5,270,636,002**
1700 & 2100 MHz	AWS-3	Main	2015	Sealed Bid	2	Set-Aside	10	42	5	39	**$ 2,109,147,421**
2500-2690 MHz	BRS	Main	2015	CCA	3 & 4	Spectrum Cap	11	318	9	302	**$ 755,371,001**
700 & 1700/2100 MHz	MBS/AWS-3	Residual	2015	Sealed Bid	2 & 4	Spectrum Cap*	6	18	2	15	**$ 58,509,286**
700, 2500, 2300, 1900 MHz	MBS/ BRS/ WCS/ PCS	Residual	2018	Sealed Bid	2, 3 & 4	Spectrum Cap**	10	71	6	61	**$ 43,436,322**
600 MHz	600 MHz	Main	2019	CCA	2 & 4	Set-Aside	12	112	9	104	**$ 3,470,328,000**
3500 MHz	3500 MHz	Main	2021	Clock Auction	4	Set-Aside	23	1504	16	1495	**$ 8,911,563,543**

* for 700 MHz only, which remained unallocated

** for 700 MHz and 2500 MHz

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Explanations for 3500 MHz Auction Variances – *Macro & Micro Factors*

Individual auction outcomes depend on the complex interaction of macro & micro factors

Macro factors

- Economy:
  - Phase in economic cycle (expansion/recession) when the auction occurs & bidders' perceptions of future growth prospects
  - Discretionary income per capita
- Auction framework
  - Overall objectives of the Regulator for the auction
  - Auction format: SMRA, CA, CCA, etc.
  - Tier size
  - Reserve price
  - Use of Pro-competitive measures: bid caps and set asides
  - Conditions of licence: roll out requirements
- Technical characteristics of the band: coverage vs. capacity in function of intended use
- Approvals for use of the band by global standards bodies (ITU, 3GPP) & Development of commercial ecosystem

Micro

Bidders' behaviors are driven by:

- Number of qualified bidders
- Market power and bid budgets of the bidder and rivals
- Ability of dominant players to outbid smaller rivals

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Explanations for 3500 MHz Auction Variances – *Economic Cycle*

- 3500 MHz auction held in July 2021 - 18 months after the start of the COVID-19 pandemic
- The arrival of COVID-19 in February 2020, resulted in a temporary drop in GDP - following a long period of expansion since 2008;
- According to Stats Canada, *"Real gross domestic product (GDP) grew 1.4% in the first quarter of 2021, following increases of 9.1% in the third quarter and 2.2% in the fourth quarter of 2020. These gains more than offset the sharp drop (-11.3%) in the second quarter of 2020. Real GDP was up 0.3% compared with the first quarter of 2020. Total economic activity in July was about two per cent below pre-pandemic levels recorded in February 2020"*
- However, in the timeframe when bidders would be considering their bid budgets, most economists viewed Covid as temporary factor. For example, OECD's Economic Forecast in May 2021 indicated *"the economy will rebound strongly and grow by 6.1% in 2021 and 3.8% in 2022, thanks to reduced COVID-19 restrictions in the second half of this year and buoyant external demand."*
- Overall, <u>economic trends would have encouraged bidders to be aggressive in bidding</u>

Explanation of 3500 MHz Auction variances – *Auction framework*

- ISED's primary objective is to provide spectrum through regular auction events, to meet the needs of service providers in an ever-changing technology, commercial ecosystems and market environment. Auction proceeds flow to the CDN Treasury i.e., revenue generation is not a primary goal in auctioning spectrum.
- The CDN 3500 MHz auction event was held in June-July 2021 after a 6-month delay by ISED - due to COVID 19 and other factors during which development of the 5G commercial ecosystem made the 3500 MHz band every more valuable to bidders.
- In the same timeframe, the FCC held 2 C band auctions – the CBRS 3.5 GHz Auction (#105) in July-August 2020 and the C band 3.7 GHz (#107) in December 2020-February 2021.
- For the 2021 3500 MHz auction, ISED employed the Clock Auction (CA) format which limits information provided to an individual bidder: its current bid price & quantity and overall bidding activity. In this way, ISED wanted to encourage bidding based on the business plan of individual bidders and to dampen speculative bidding based on rivals' bids – which had been an issue under the SMRA format used in the early 2000s.
- Despite limited information, bidders have been able to game the rules notably by 'parking' points during the early and mid stages of CA auctions in the large metro markets in order to dampen price increases in their own target markets.

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Explanations for 3500 MHz Auction Variances – *Auction framework*
Use of Pro-competitive Measures

- Eleven (11) of the thirteen (13) Spectrum Auctions held in Canada since 1999 included Pro-Competitive Measures which to date, have either been in the form of:
  - a Spectrum Aggregation Limit (Spectrum Cap) – 8 auctions
  - a Spectrum Set-Aside – 3 auctions
- A Spectrum Cap limits the amount of spectrum an entity can acquire in a band or a set of bands.
- A **<u>Set-Aside</u>** reserves a portion of the spectrum on auction to new entrants which prevents the large national incumbents with superior financial resources: (Bell/Rogers/TELUS) from outbidding smaller rivals and thus, acquiring the entirety of spectrum being offered.

Explanation of 3500 MHz Auction Variances – *Auction Framework*
Set-Aside vs Non-Set-Aside

In CDN auctions, Set-Asides have only been used thrice since 2010:

In the 2015 AWS-3 sealed bid auction, Set-Aside eligibility rules were such that only new entrant bidders that were actively providing commercial **mobile wireless** services in the tier-2 area were eligible. As a result, only regional **MNOs** qualified to bid for the Set-Aside spectrum. This resulted in Set-Aside spectrum prices **28 times lower** than Non-Set-Aside spectrum prices

In the 2019 600 MHz CCA auction, Set-Aside eligibility rules were modified to include non-incumbent **wireline** facilities-based service providers providing commercial telecommunications services to the public in the relevant Tier-2 service areas. Additionally, 3/7 of the spectrum was designated as Set-Aside. This led to Set-Aside prices **2.3 times lower** than Non-Set-Aside prices.

In the 2021 3500 MHz auction, ISED applied a Set-Aside for **142** of the 172 service areas including:

- 50 MHz of unencumbered spectrum in 134 service areas
- 40 MHz of unencumbered spectrum in 4 service areas
- a mix of encumbered and unencumbered spectrum in 4 service areas (almost 50 MHz).

- Set-Aside eligibility rules were similar to the 600 MHz auction - save a clarification on the exclusion of broadcasting services.
- This led to prices of Set-Aside spectrum **3.1 times lower** than prices of Non-Set-Aside spectrum.*
- Shaw Cable was initially expected to qualify for the set aside eligibility. However, following the March 2020 announcement of Rogers intent to acquire Freedom - Shaw's wireless assets, Shaw did not participate into the auction. This event opened up the potential for significant spectrum acquisition by other regional providers.

**The assignment price of the auction includes bid for transitioned products, which slightly increases the ratio of price paid/reserve price.*

Explanation of 3500 MHz Auction Variances - *CRTC MVNO Decision*

On April 15th, 2021, the CRTC issued its new Policy on mandated wireless wholesale (mandated MVNO), bringing a conclusion to a review process initiated in February 2019:

- The CRTC mandated that incumbents having ‘market power’: 3 nationals Bell/Rogers/TELUS - as well as SaskTel - a regional (Saskatchewan): to provide wholesale access to mobile services for 7 years.
- In order to be eligible to use the mandated service, a wireless carrier had to possess a <u>spectrum licence at the Tier-4 level or higher</u> in a given Tier-4 area; this includes Tier-4 areas where the carrier already has partial coverage and Tier-4 areas it has yet to launch its own service.
- The new policy is clearly aimed at helping regional carriers expand.
- Qualified bidders like Cogeco, Videotron, Sogetel, Xplornet, all acquired spectrum in certain Tier-4 areas with the possibility of launching an MVNO business using the RAN of national players.
- CRTC’s requirement of spectrum ownership / Tier 4 for MVNO qualification is unique among global regulators

Price Comparison
3500 MHz Auction vs Other CDN Mid-band Frequency Auctions

Previous CDN mid band auctions generally provide the best results for comparison with the 3500 MHz auction:

- **2015 AWS-3 (**1755-1780 MHz & 2155-2180 MHz) sealed bid auction used a Set-Aside.
  - National average was **$1.32/MHz/Pop**.
  - The price paid by incumbents was $3.00/MHz/Pop.
  - Regional MNOs as set-Aside eligible bidders got a 'sweet deal' at $0.11/MHz/Pop (subject to eligibility rules that entities be mobile service providers in the area of interest).
- **2015 2500 MHz** CCA auction used a Spectrum Cap.
  - Prices paid for spectrum varied between $0.055/MHz/Pop and $0.415/MHz/Pop with a national average at **$0.29/MHz/Pop**.
- **2018 2500 MHz residual** sealed bid auction used a Spectrum Cap.
  - Cogeco paid $**0.29/MHz/Pop** for spectrum in areas in the Quebec/Windsor corridor that excluded the big metros
  - Other winners of 2500 MHz spectrum paid between $0.11/MHz/Pop & $0.17/MHz/Pop.

While 3500 MHz band has lesser propagation characteristics than the other mid-bands cited above, the fact that it is among the first internationally recognized 3GPP 5G bands certainly outweighs its propagation limitations.

Price Comparison

3500 MHz Auction vs Other Foreign Mid-band Frequency Auctions

- Average price paid for C-band spectrum (3400-3800 MHz range) in recent spectrum auctions have varied between USD **$ 0.05/MHz/Pop** and $**1.55/MHz/Pop*** (see table)
- Comparability requires adjustments to raw data for exchange rate, purchasing power parity (PPP) & licence term
- Benchmark comparisons are useful for service providers & regulators in estimating market price of the spectrum - along with other methods such as fundamental value, deprival value, etc.
- Further analysis of factors that influence specific auction outcomes: economic cycle, technology window, auction format, pro-competitive measures, number of bidders, conditions of licences (build out requirements) is required

Country/ Region	Auction Year	Adjusted Price (USD/MHz/Pop)
Canada	2021	1.55
US	2021	0.93
UK	2021	0.07
Sweden	2021	0.05
Taiwan	2020	1.32
US	2020	0.29
France	2020	0.18
Germany	2019	0.19
HongKong	2019	0.11
Italy	2018	0.47
South Korea	2018	0.34
Australia	2018	0.27
UK	2018	0.15

** The prices are adjusted for PPP in 2020 USD and normalized for a 15-year licence term.*

Synopsis of Information Published by Global Regulators

Auction Name	Information Published
ISED 3500 MHz Auction (2021)	Final Results & Bidding Information
ISED 600 MHz Auction (2019)	Final Results & Bidding Information
ISED 2500 MHz Auction (2015)	Final Results & Bidding Information
FCC Auction 110 - 3.45 GHz (2021)	Clock Phase Product Status
FCC Auction 107 - 3.7 GHz Service (2020)	Final Results & Bidding Information
FCC Auction 904: Rural Digital Opportunity Fund (2020)	Final Results & Bidding Information
Ofcom 700 MHz and 3.6-3.8 GHz Spectrum Auction (2020)	Final Results & Bidding Information
Ofcom 2.3 and 3.4 GHz Spectrum Auction (2018)	Final Results & Bidding Information

Notes:

- *Almost all jurisdictions publish the auction results with bidding information - with varying delays.*
- *FCC hasn't provided the bidding information for the most recent auctions – 3.45 GHz Auction – expected in the near future.*

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2. 3500 MHz Auction Results for Selected Bidders

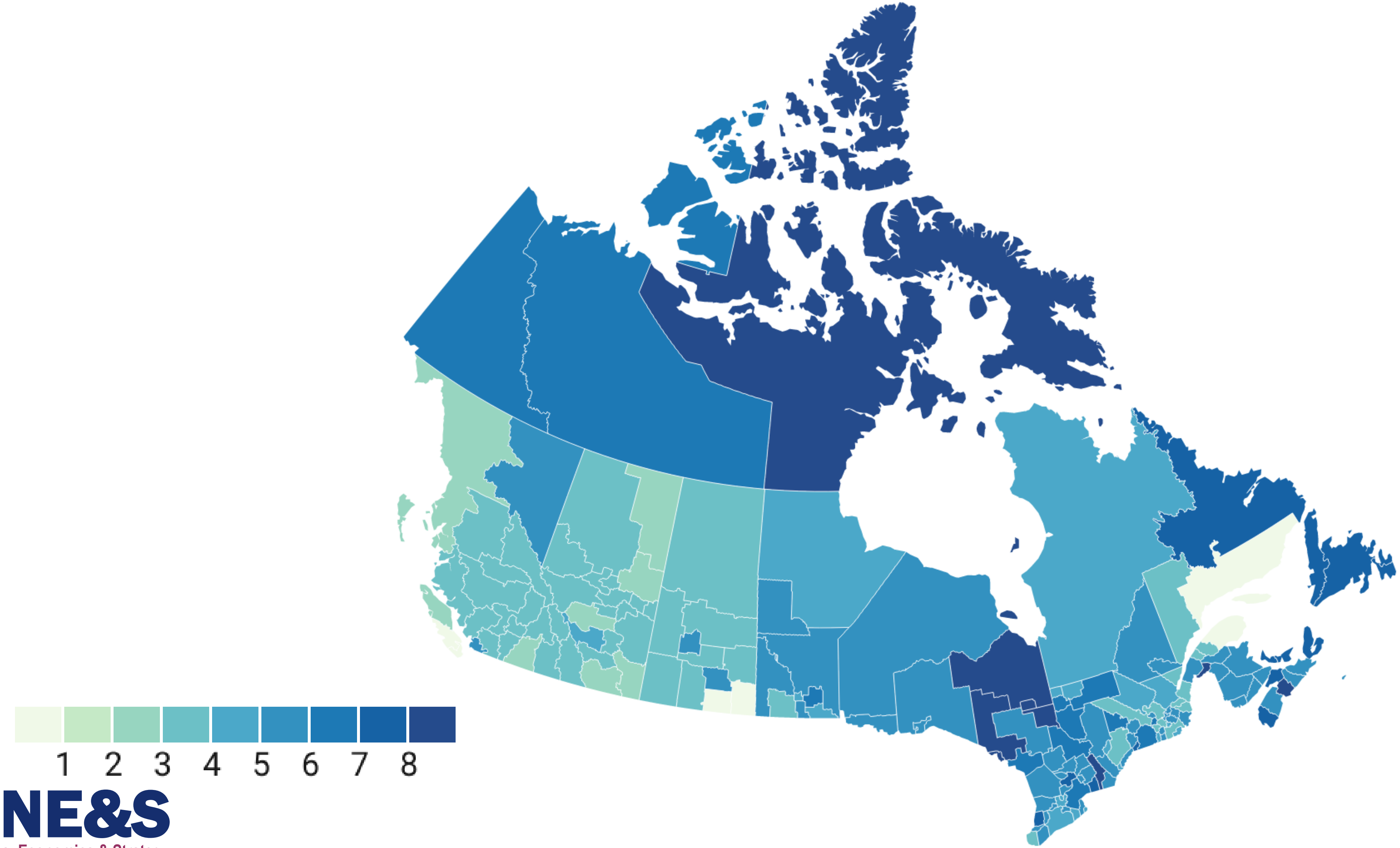
3500 MHz Auction Results– by Service Provider Category

- Of 21 bidders for the 1495 licences on offer, there were 15 winners. The top 3 won 57% of the total licences - comprised of 2 national (Rogers, Bell) and 1 regional (Videotron) providers.
- The 3 national players won 46% of total licences – with Rogers, Bell & TELUS obtaining 22%, 15% and 9% respectively
  - Bell and Rogers, co-owners of Inukshuk, were allowed to split the Inukshuk transitioned licences between them, resulting in approximately 30 MHz of spectrum for each MNO in 157 of 172 Tier 4 areas – in effect, further levering the licences won by transitioning Inukshuk licences into larger contiguous spectrum blocks
- 6 regional providers won a combined 48% of the licences.
  - Videotron was the biggest winner with 20%, expanding beyond its Quebec base into BC, Alberta, Manitoba & Ontario. Xplornet was 2nd with 18%. The remaining 10% was divided in descending order: SaskTel, Bragg/Eastlink, Cogeco, and TbayTel.
  - The 3500MHz spectrum will increase the regional players' ability to offer competitive services in the mobile market.
- Only 11 smaller providers participated in the auction. Of the 11, 6 won a combined total of 2.7% with Sogetel claiming 1.5% or 18 licences.

3500 MHz Auction Results for Key Players - *Bell*

- Bell won 271 licences or approximately 30% of the licences available to national carriers. Combined with its 490 transitioned licences, Bell obtained a total of 761 licences across Canada.
- Bell paid $2.07B for the 271 licences - which is 19 times the reserve price.
- Along with its previous extensive low and mid band holdings, this acquisition is expected to enable a quick roll out of Bell's 5G services across Canada.

Bell 3500 MHz Spectrum licence Holding



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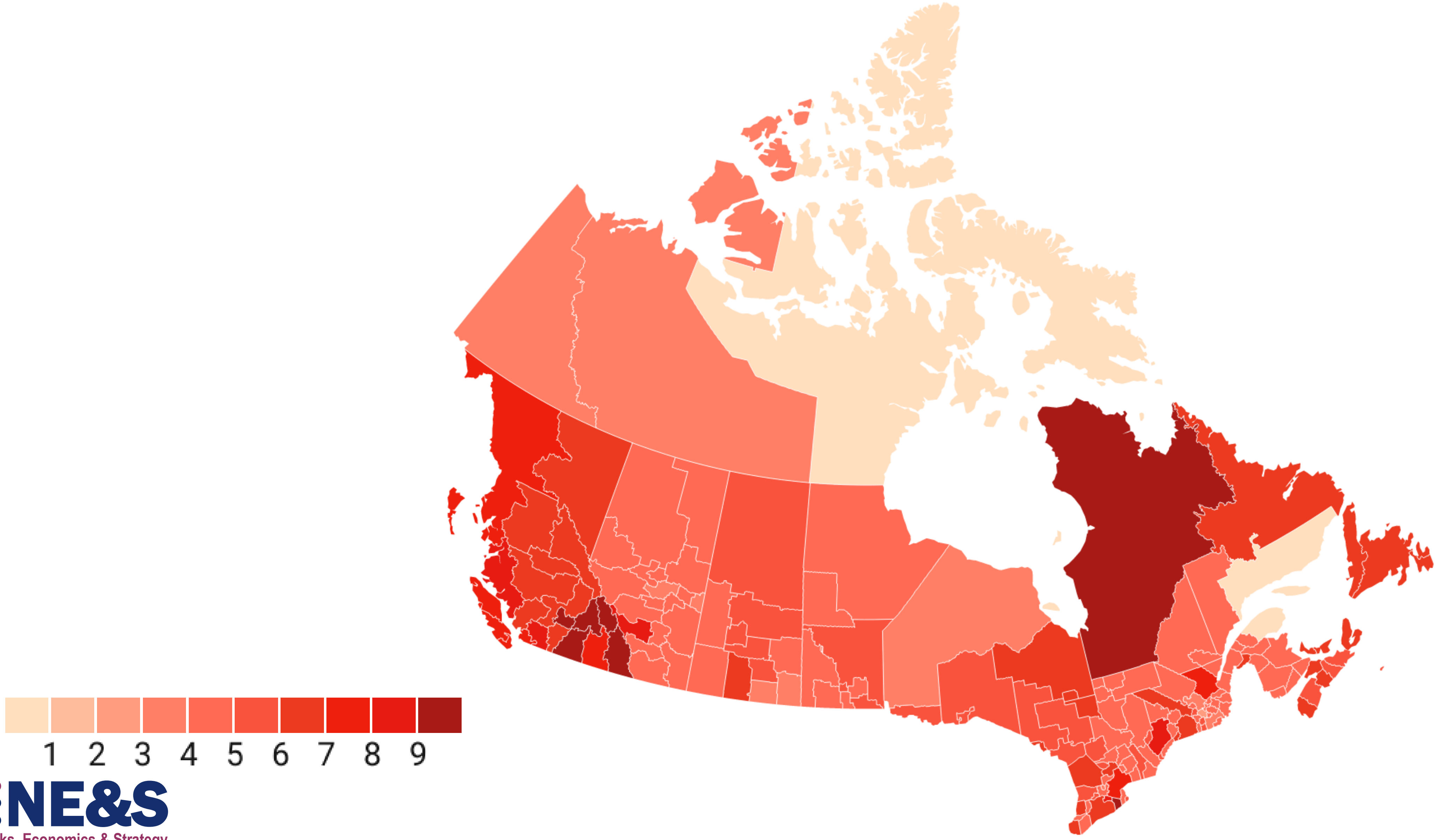
3500 MHz Auction Results for Key Players - *Rogers*

- Rogers won 325 licences in the 3500 MHz auction. With the 509 transitioned licences, Rogers owns a total of 834 licences all around the country.
- The total price paid for the 325 licences was $3.33B, which is 21.7 times the reserve price.
- Rogers’ 3500 MHz spectrum holdings cover 99.4% of the Canadian population. This investment in spectrum makes Rogers the largest single investor in 5G spectrum in the country.
- 3500 MHz spectrum complemented Rogers foundational investments in low-band 600 MHz spectrum across the country to enhance its 5G network.

Rogers 3500 MHz Spectrum licence Holding



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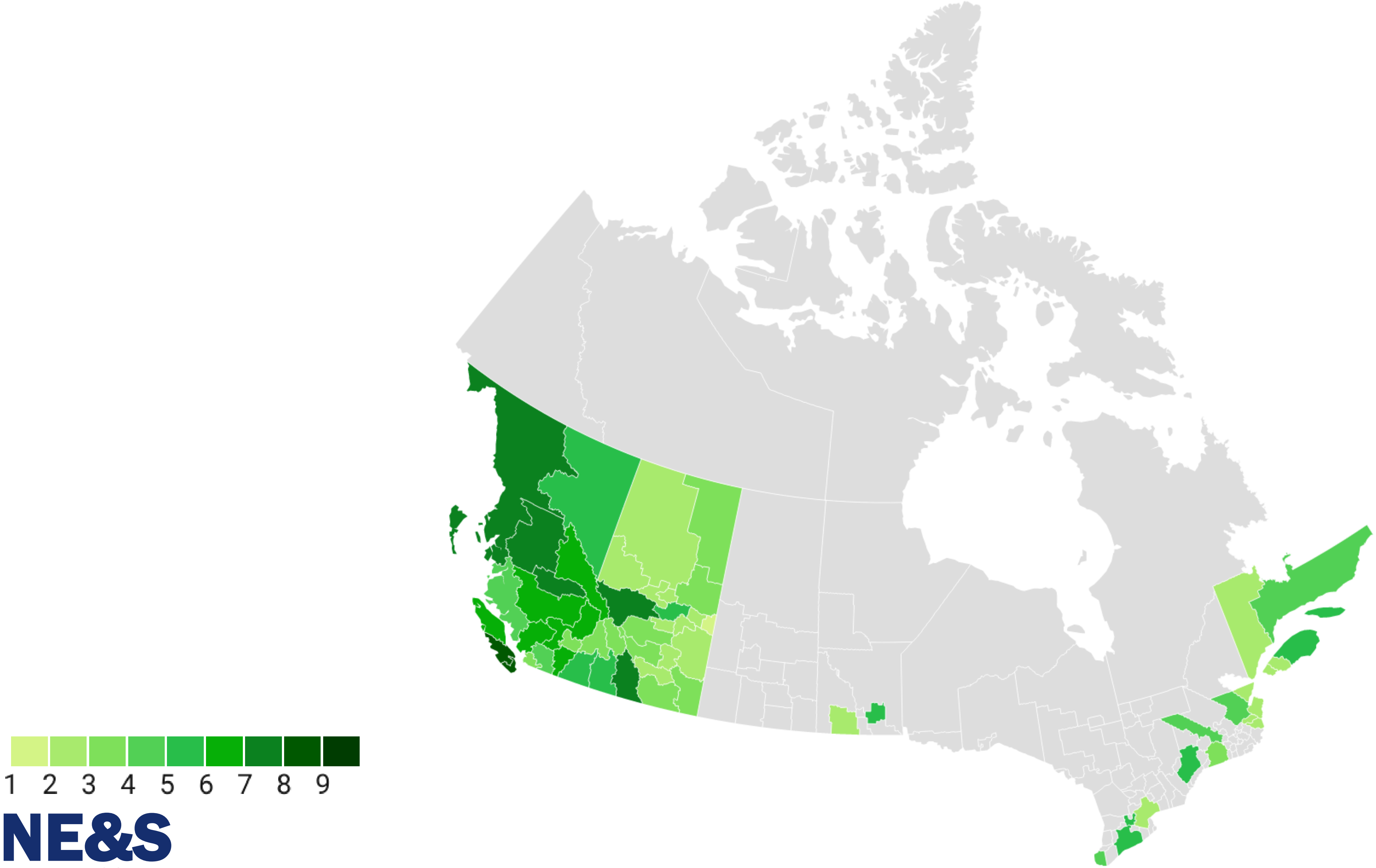
3500 MHz Auction Results for Key Players - *TELUS*

- TELUS won 142 licences in the 3500 MHz auction. With the 86 transitioned licences, TELUS owns a total of 228 licences.
- The total price paid for the 142 licences was $1.95B, which is 20.1 times the reserve price.
- TELUS’ 3500 MHz spectrum holding3500 MHz Auction mainly focus on B.C., Alberta, Manitoba, Ontario and Quebec. In its licence areas, TELUS holdings average 25 MHz of 3500 spectrum and most importantly, 40 MHz in its key urban markets.
- TELUS was, and continues to be relatively ‘spectrum poor’ relative to its 2 MNO rivals. Thus, even though it won fewer licences than its national rivals, its 142 licences won are critical to the carrier’s rollout of 5G services.
- Post auction, TELUS claimed that the Canadian carriers paid much more than their international counterparts in the 3500MHz 5G spectrum auction and challenged the use of set asides in ISED’s 3500 MHz Auction framework.

TELUS 3500 MHz Spectrum licence Holding



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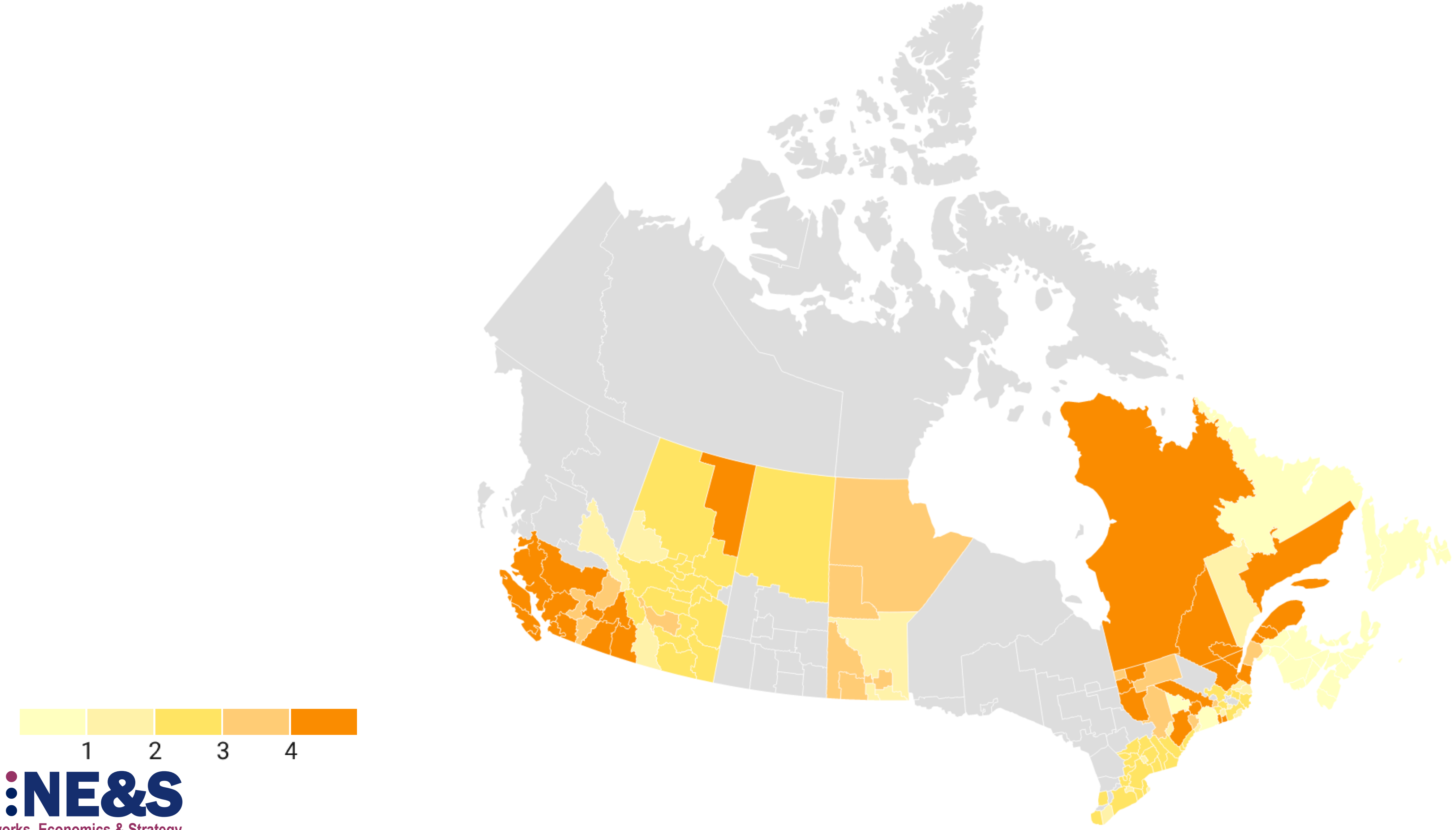
3500 MHz Auction Results for Key Players - *Videotron*

- Videotron won 294 licences in the 3500 MHz auction. With its 5 transitioned licences, Videotron owns a total of 299 licences. The total price paid for the 294 licences was $830M, which was 5.6 times the reserve price.
- More than half of the spectrum licences (175) were acquired outside of its historical Quebec service area, in southern and eastern Ontario, Manitoba, Alberta and British Columbia. This strategic investment is a key step for Quebecor's ambition to grow Videotron as a strong 4th player in the national market.
- The expansion of its wireless footprint outside Quebec also enables Videotron to obtain full MVNO access to incumbent networks in other provinces.

"Our success in Quebec has served Quebecers well. Today, we are taking another step towards bringing leading-edge technology and healthy competition to more Canadian consumers."

-- Pierre Karl Péladeau, President and CEO of Quebecor

Videotron 3500 MHz Spectrum licence Holding



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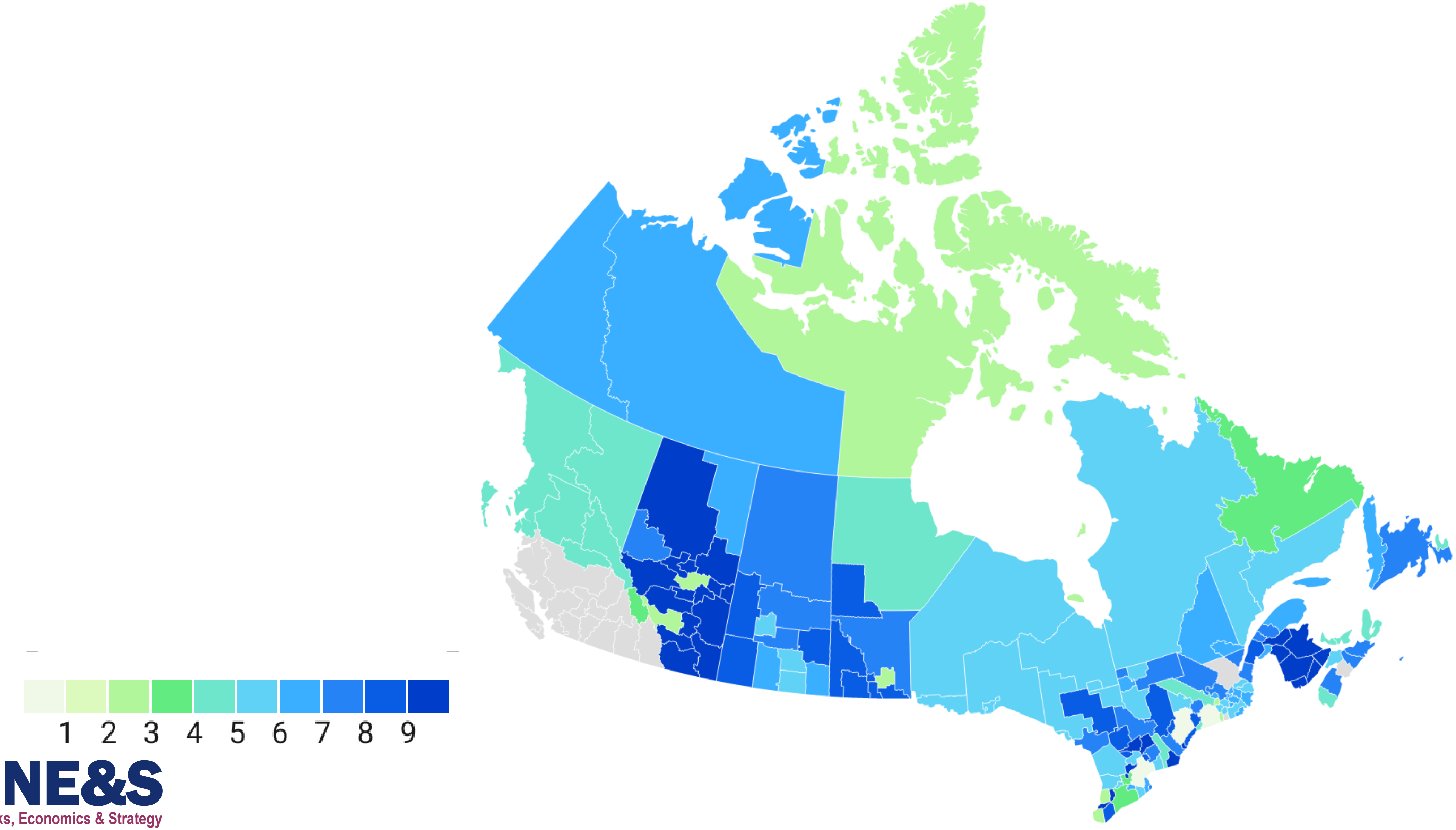
3500 MHz Auction Results for Key Players - *Xplornet*

- Xplornet won 263 licences in the 3500 MHz auction and was able to further lever its licences won by transitioning 698 existing licences (i.e., more than Bell or Rogers). Xplornet now owns a total of 961 licences in the 3500 MHz band across the country.
- Xplornet paid $244M for 263 licences, which is 12.7 times the reserve price. This represents Xplornet's largest spectrum investment to date.
- In 2020, Stonepeak Infrastructure acquired a controlling stake in Xplornet for a reported amount of $2B and corresponding, provided the deep financial resources to enable Xplornet to win significant spectrum in the 3500 MHz auction.
- While transitioned licences added a premium to the price paid for 3500MHz licences compared to other jurisdictions, it allows Xplornet to
  - Create continuous blocks of 3500MHz spectrum which enhance speeds & reduce costs.
  - Create a diversified spectrum portfolio of 3500 MHz, 2500 MHz, 600 MHz, 700 MHz and AWS-1 bands.
  - The leverage of the auction results with the transitioned licences has significantly increased the value of Stonepeak's investment in Xplornet

Xplornet 3500 MHz Spectrum licence Holding



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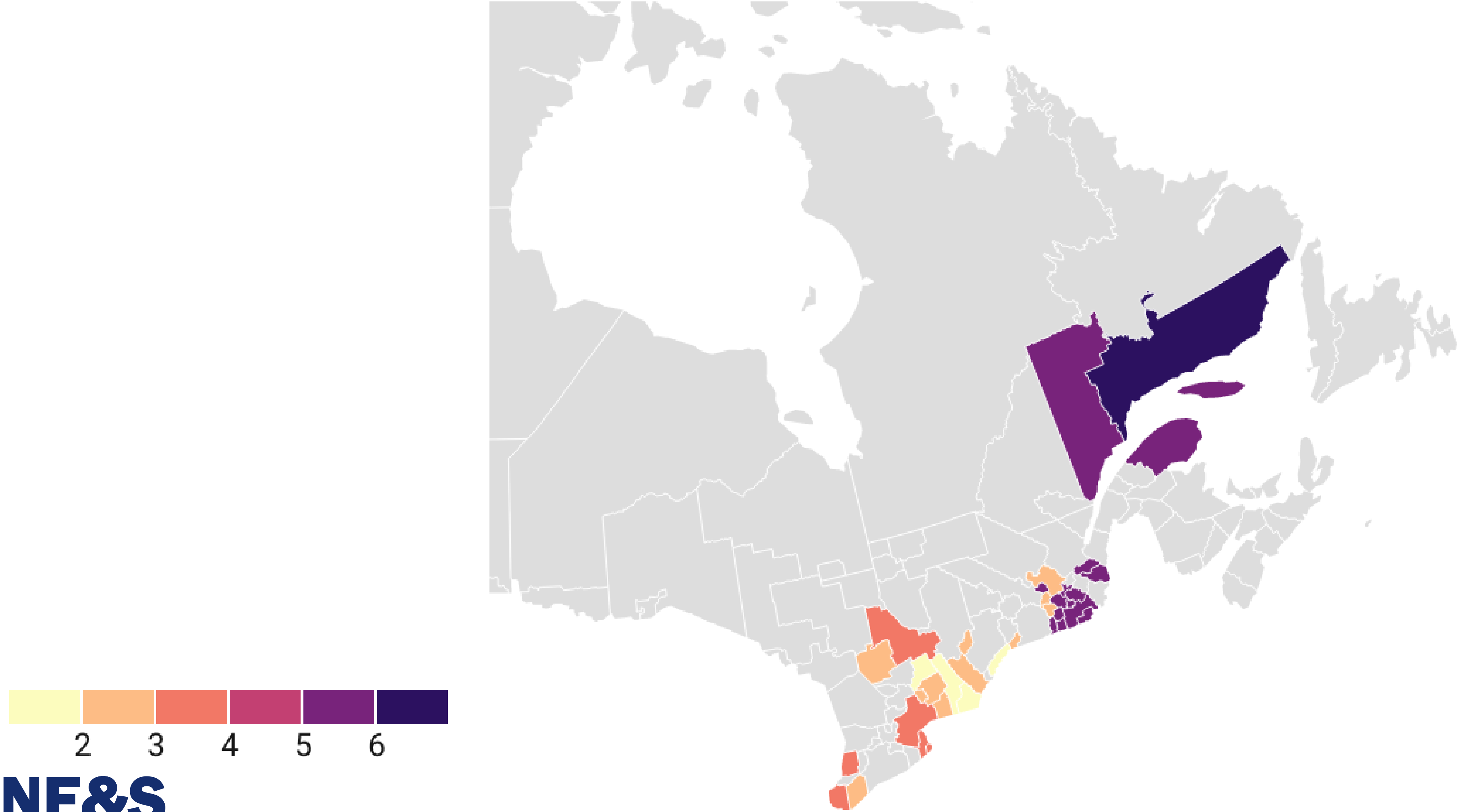
3500 MHz Auction Results for Key Players - *Cogeco*

- Cogeco won 38 licences in the 3500 MHz auction. With 80 transitioned licences, Cogeco obtained a total of 118 licences in the 3500 MHz band in Quebec and Ontario.
- Cogeco paid $295M for its 38 licences, which was 5.7 times the reserve price.
- Around $205 million of the investment (almost 70%) was used to acquire 30 MHz of the spectrum in the GTA area, representing approximately 33% of Cogeco's wireline broadband footprint in Ontario. *(Reference: newswire.ca)*
- With these new spectrum holdings and previously acquired licences, Cogeco Communications now has spectrum that covers 91% of its Canadian wireline (cable and fibre) broadband footprint.
- Cogeco is well positioned to deploy mobility services in urban areas, but lack of low band spectrum is still going to be a challenge for Cogeco.

Cogeco 3500 MHz Spectrum licence Holding



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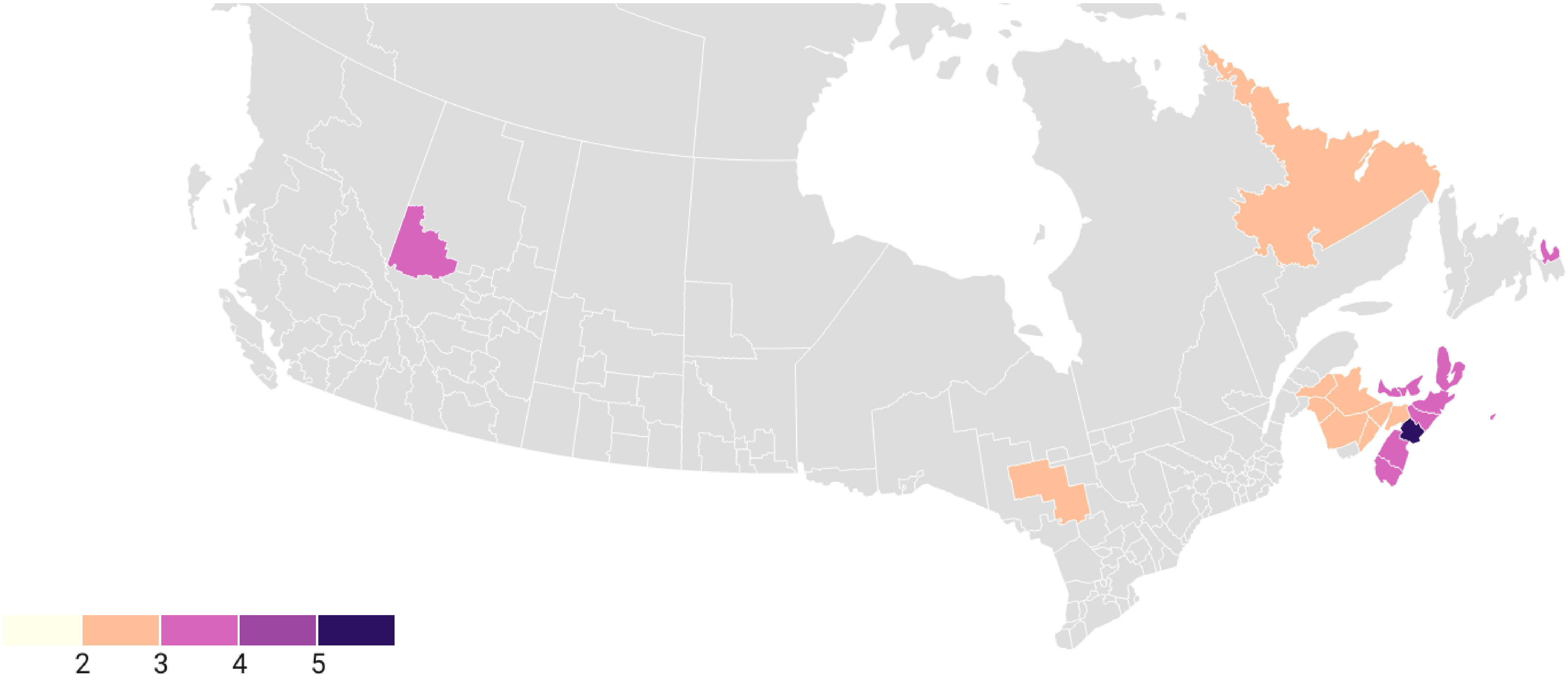
3500 MHz Auction Results for Key Players – *Bragg/Eastlink*

- Bragg (operating as Eastlink) won 50 licences in its core cable footprint markets in the Atlantic, mid-north Ontario & Grande Prairie Alberta regions.
- Bragg/Eastlink paid $27.9M for its 50 licences, which represents 6.8 times the reserve price. Bragg did not transition any 3500 MHz licences.
- With this new spectrum acquisition, Bragg/Eastlink, owns 50 licences of 3500 MHz spectrum *(Tier 4)* and 4 licences of 600 MHz spectrum *(Tier 2)* in Atlantic provinces.
- In June 2021, Eastlink disclosed plans to roll out 5G network before the end of the summer. In September, the company announced a $26M investment on mobile network expansion in NB.

Bragg 3500 MHz Spectrum licence Holding



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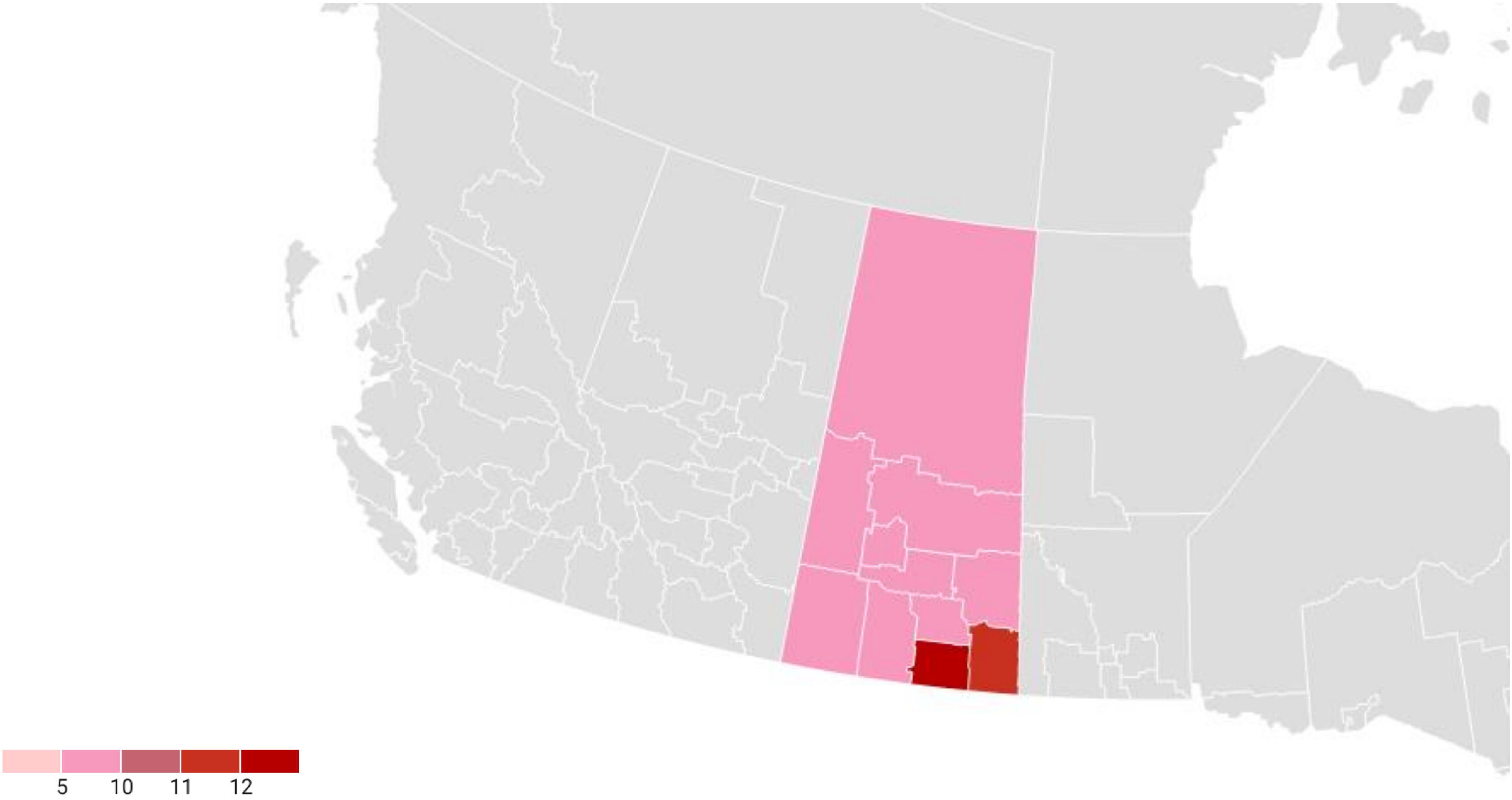
3500 MHz Auction Results for Key Players - *SaskTel*

- SaskTel won 68 licences across the province and correspondingly, paid $145M, which is 44 times the reserve price.
- SaskTel paid the highest price paid/reserve ratio compared to the rest of auction winners. All licences won are located in Saskatchewan.
- SaskTel exercises market power in Saskatchewan and thus is required by CRTC to provide access to their mobile network to other entities in the new MVNO regime, - contrary to other regional service providers.
- Earlier in March, SaskTel selected Samsung as the sole vendor for its 5G network deployment. The company was also committed to investing $324M across Saskatchewan in 2020-21 and over $1.6B through to 2025 to improve communication and entertainment services.
- The addition of 3500 MHz spectrum will enable SaskTel’s 5G strategy.

SaskTel 3500 MHz Spectrum licence Holding



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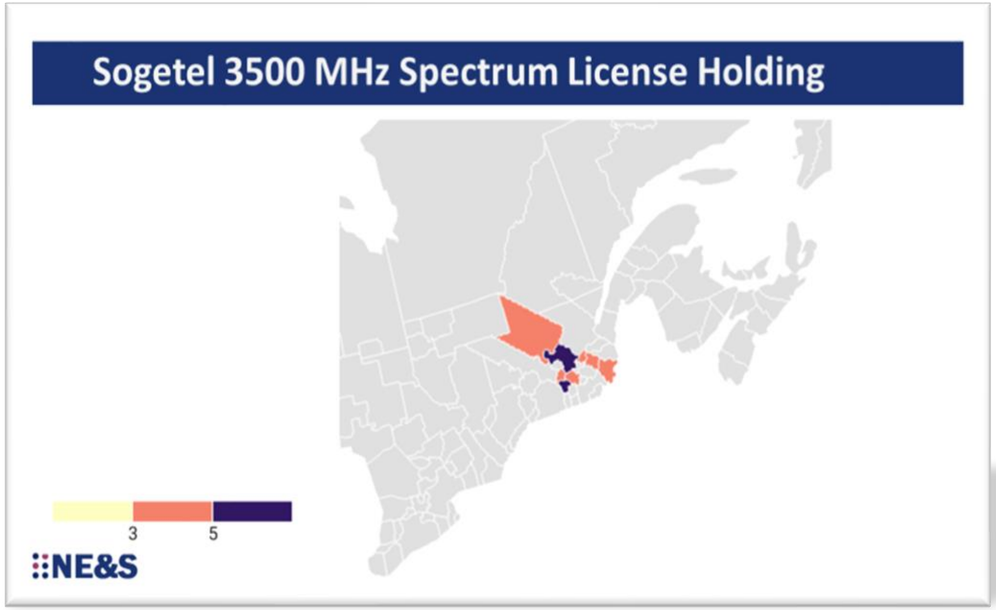
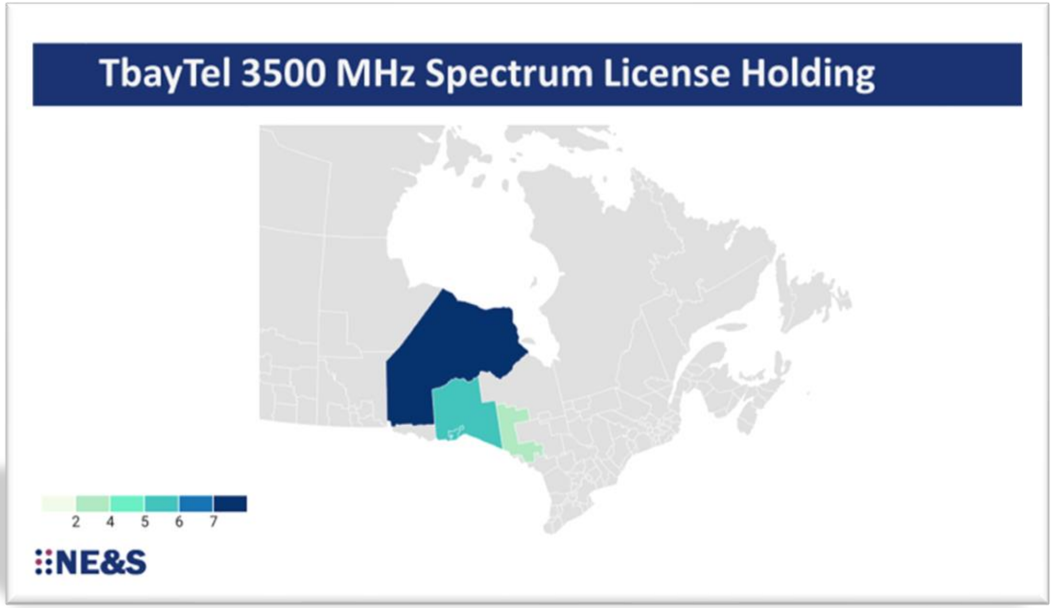
3500 MHz Auction Results for Key Players - *Sogetel*



- Amongst smaller service providers, Sogetel was the most successful bidder in the 3500 MHz auction - having spent $14.5M for the 18 licences.
- With its 10 transitioned licences, Sogetel now owns a total of 28 licences in the 3500 MHz band in Quebec. The price paid for the 18 licences was 34.9 times the reserve price.
- Sogetel's success likely surprised rival bidders - notably Videotron and Cogeco.

3500 MHz Auction Results for Key Players - *TBayTel*

- TBayTel paid $1.1M for 4 licences.
- With 15 transitioned licences, TBayTel now owns 19 licences in the 3500 MHz band in Northern Ontario.
- The price paid for the 4 licences represents 12.9 times the reserve price.
- Coupled with the 600MHz spectrum Tbaytel won in 2019, the new spectrum strengthens Tbaytel's position for addressing the long-term wireless needs of customers in northern Ontario.
- TBayTel's mid-band and low-band licences should enable the company to launch next generation 5G wireless services within its footprint in the future.



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