

Backbone connectivity in Russia and CIS



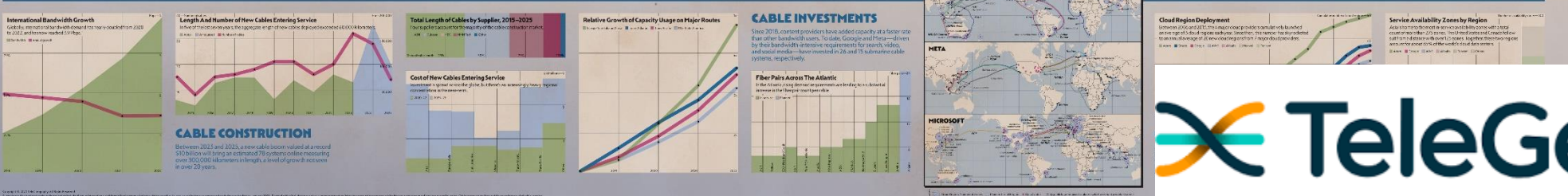
SUBMARINE CABLE MAP 2024



- Russia looks like a blank space
- Submarine cables account for over 90-99% of intercontinental data traffic
- There are about 550 active submarine cables right now in the world ...
- ... but many more terrestrial cables connect on land

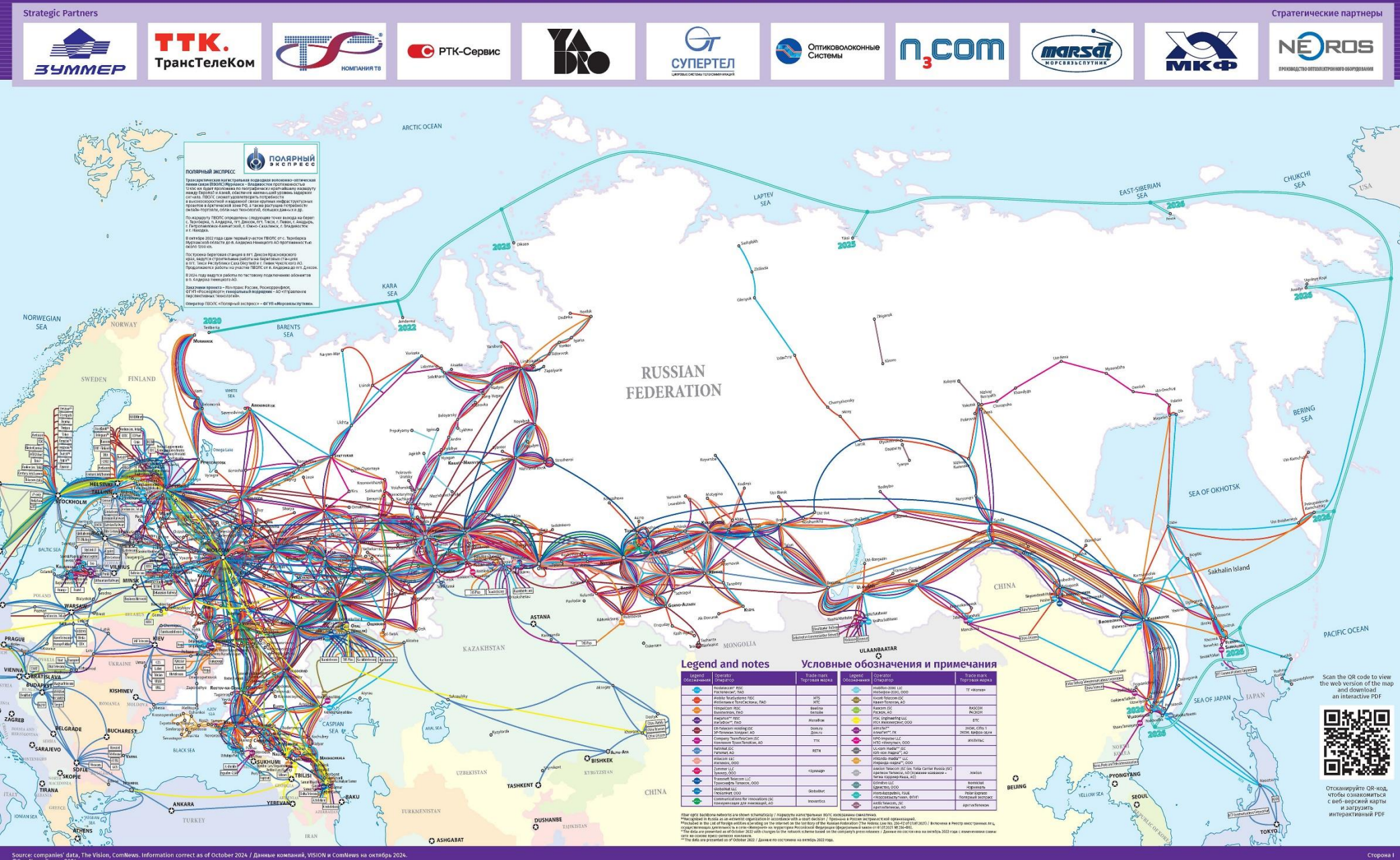
From **SEA**

To **CLOUD**

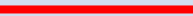

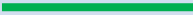



The missing link

- By 2022 the transit traffic volume between APAC region and Europe via Russia reached about 7 Tbps (9% of total APAC / Europe traffic).
- According to the Telecoms Market Development Strategy of Russian Federation, by 2035 the volume of Asia / Europe transit traffic should reach 280 Tbps (x40 compare to 2022)
- From 2023, Chinese operators add 1.5-2 Tbps transit capacity via Russian territory



Round Trip Delay (RTD) on Asia – Europe traffic route

	Route	RTD, ms*
	Trans-Pacific + Atlantic	310
	Trans-Indian	280
	Trans-Russia**	145
	Trans-Arctic***	90

* - Hong Kong - Frankfurt

** - Besides the East / West corridor, the North / South corridor (via Iran) is actively developing

*** - Planned cable system(s)

Asia - Europe traffic transit through the territory of Russia is the shortest route (with the minimal round trip delay), so it looks like a good alternative for the submarine cable systems over the oceans (Indian, Atlantic, Pacific).



Key Russian Backbone Network Operators

#	Operator	Length of the backbone network, km
1	Rostelecom	500,000
2	MTS	281,800
3	VimpelCom (Beeline)	190,800
4	MegaFon	146,500
5	ER-Telecom	96,520
6	TransTeleCom (TTK)	78,315
7	RetnNet	34,200
8	Milecom	32,408
9	Zummer	20,650
10	Transneft Telecom	18,000

Smaller market players: GlobalNet; Inoventica, Motiv/Mobifon-2000; Kvant-Telecom, Rascom and several other

Russia - Kazakhstan border crossing points

There is more than enough border crossing points and capacity between Russia and Kazakhstan, as well as between Kazakhstan and other Central Asian countries to exchange telecom traffic directly (1:1) – without complicated routes and loops.

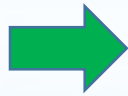
There is more than enough border crossing points and capacity between Russia and Kazakhstan, as well as between Kazakhstan and other Central Asian countries to exchange telecom traffic directly (1:1) – without complicated routes and loops.

Bandwidth at Russia - Kazakhstan border crossing points



Kazakhtelecom
Jusan Mobile
TNS Plus

Vozhskij / Akkol
Vozhskij / Ganyushkino
Moskalenki / Bulaevo
Ozinki / Uralsk



Kazakhtelecom
Jusan Mobile
TNS Plus
Transtelecom

B.Chernigovka / Uralsk
Ozinki / Uralsk
Sol-Iletsk / Aktobe
Petukhovo /
Petropavlovsk
Rubtsovsk / Semey



Kazakhtelecom
Jusan Mobile
TNS Plus
Transtelecom

B.Chernigovka / Uralsk - **1 Tbps**
Isilkul / Bulaevo - **100 Gbps**



Kazakhtelecom
Jusan Mobile
TNS Plus
Transtelecom

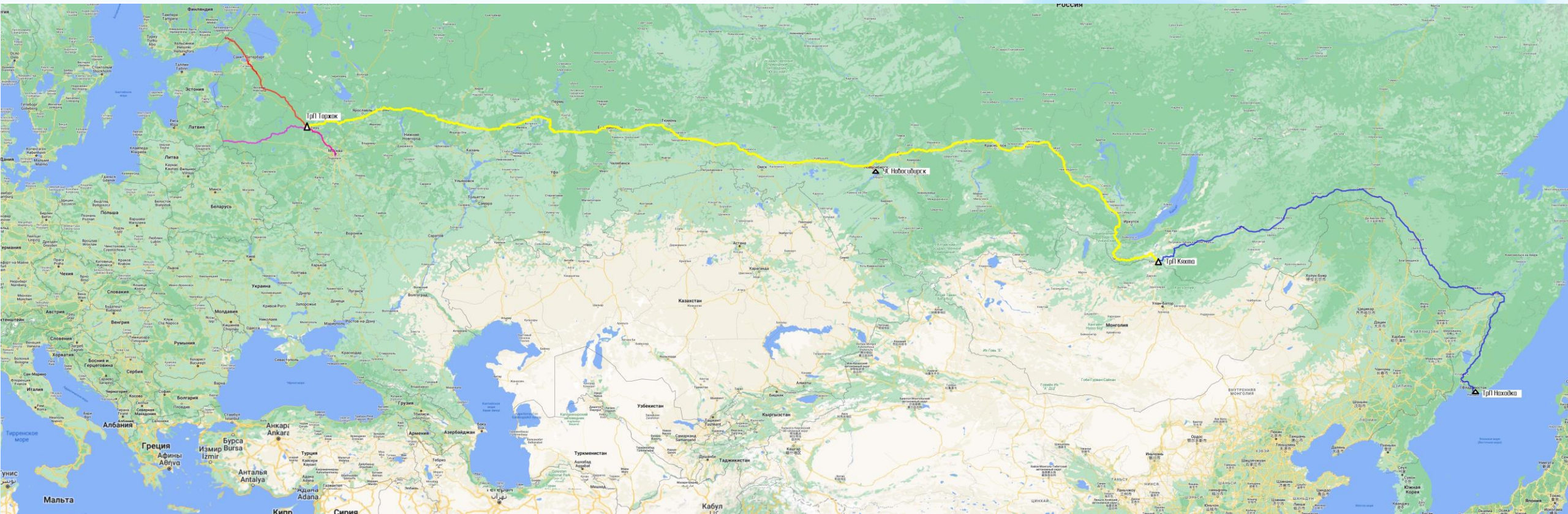
Aksarayaskaya / Akkol
Ozinki / Uralsk
Petukhovo / Petropavlovsk
Isilkul / Bulaevo

+ Milecom (300 Gbps), Zummer (400 Gbps), Transneft Telecom,
Kvant-Telecom (17 Gbps), MSC Engineering (4.8 Gbps)

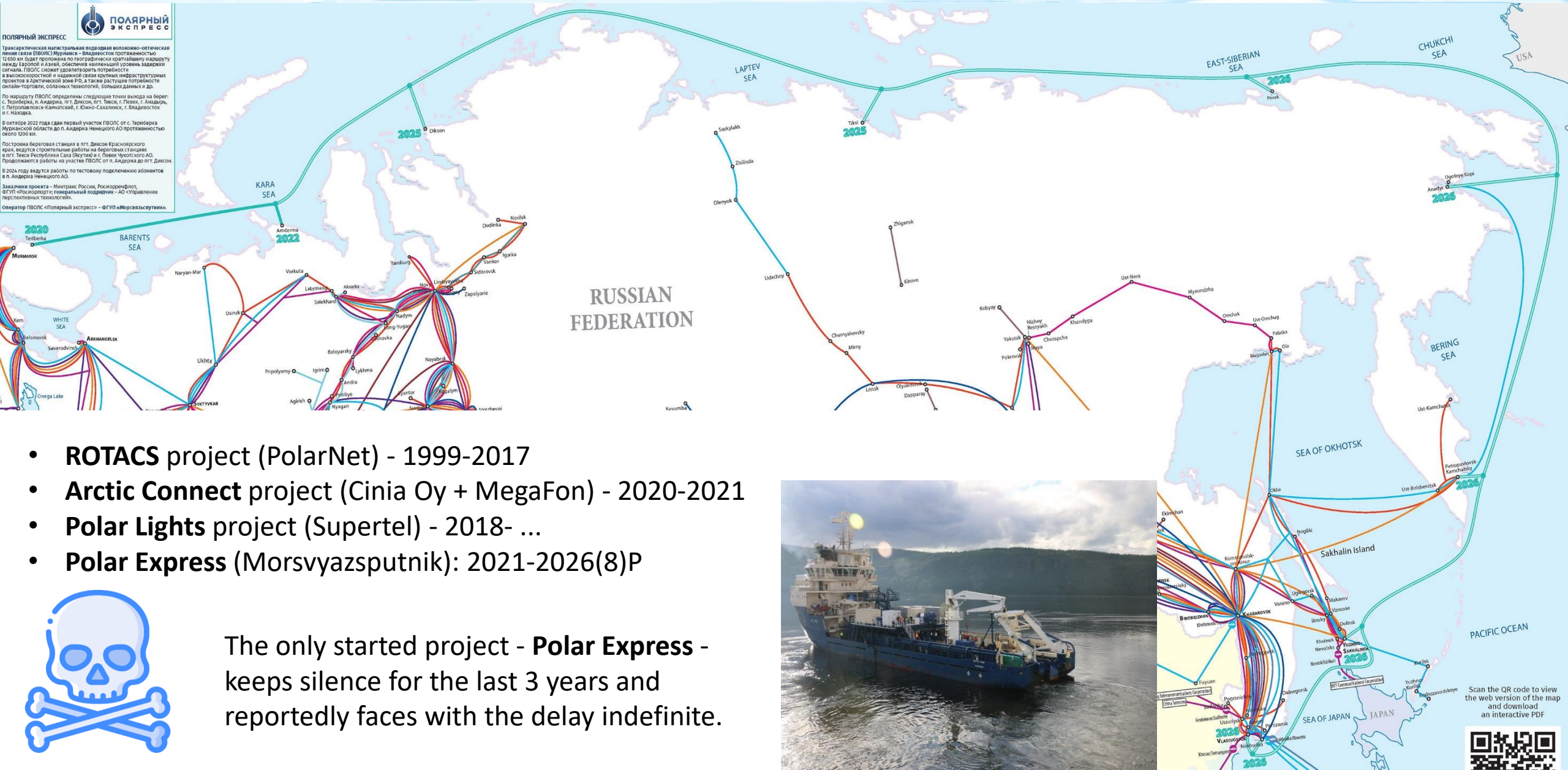
TEA Next – new Trans Europe – Asia backbone



- Total length – 11.700 km (96 fibers)
- Round trip delay Moscow-Vladivostok: <85 ms
- Unique business model (from telco): physical infrastructure (dark fibers) sale or lifetime rent
- By 2027 the terrestrial part of TEA Next within Russian territory to be completed



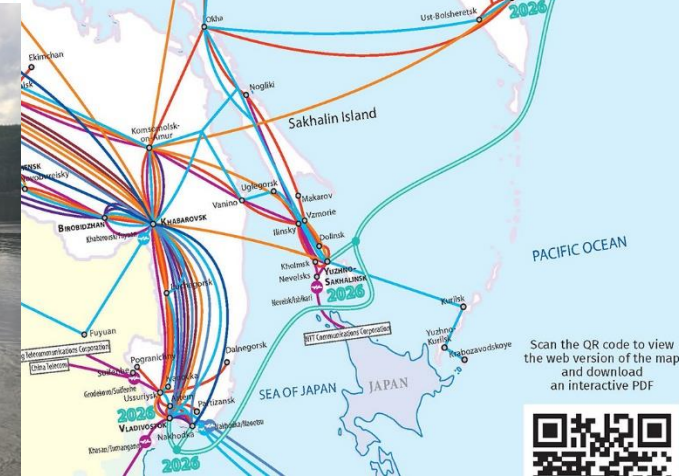
Arctic Submarine Cable Systems' Death Valley



- **ROTACS** project (PolarNet) - 1999-2017
- **Arctic Connect** project (Cinia Oy + MegaFon) - 2020-2021
- **Polar Lights** project (Supertel) - 2018- ...
- **Polar Express** (Morsvyazsputnik): 2021-2026(8)P



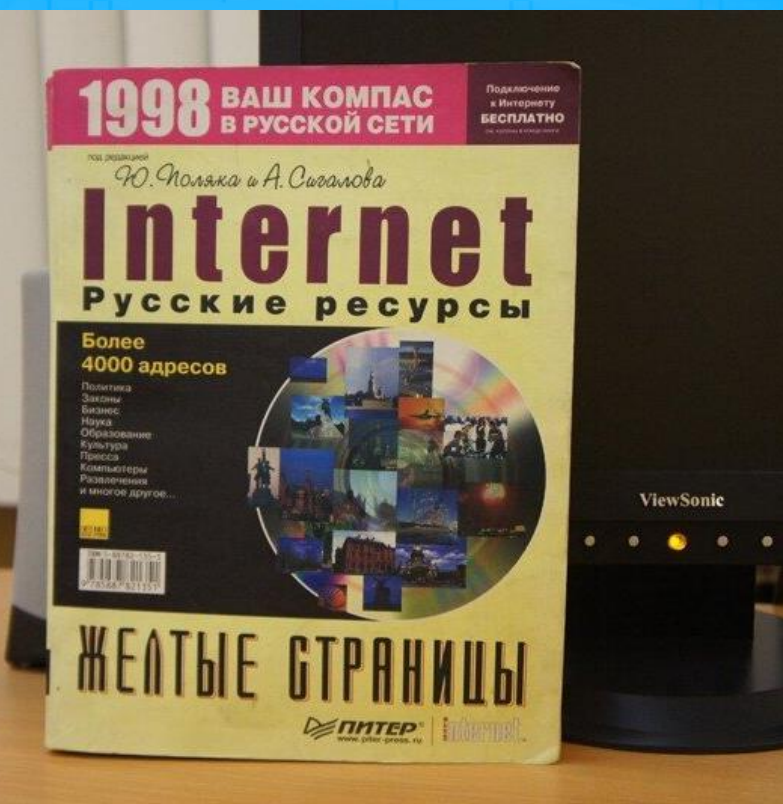
The only started project - **Polar Express** - keeps silence for the last 3 years and reportedly faces with the delay indefinite.



When ComNews was established in 1998, there were less than 4,000 web sites in Russia - easily listed in the Yellow Pages directory



Leonid Konik
CEO – Editor-in-Chief
ComNews Group
+7 901 315-6799
editor@comnews.ru



No ComNews – no comments