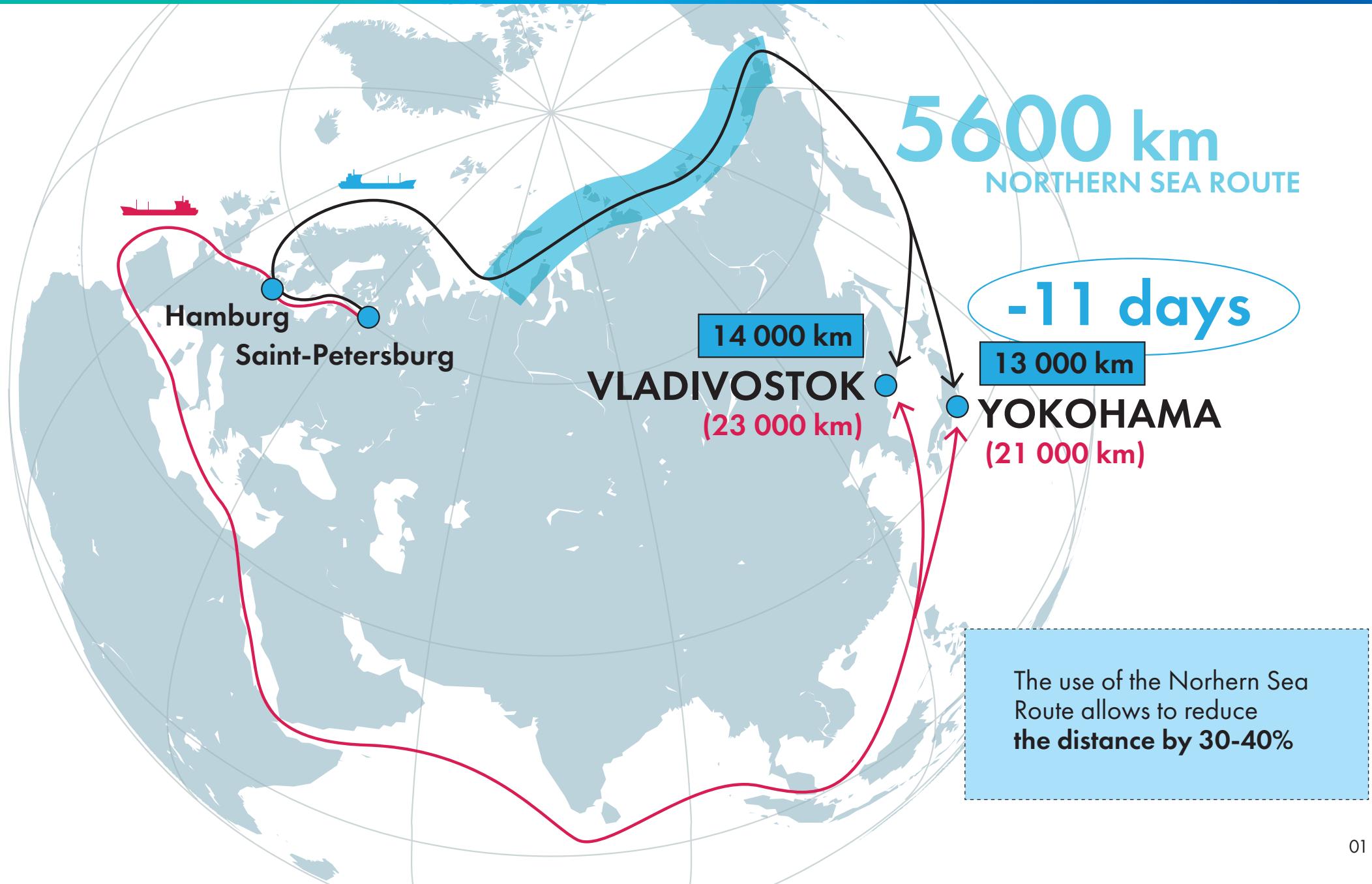




NORTHERN SEA ROUTE

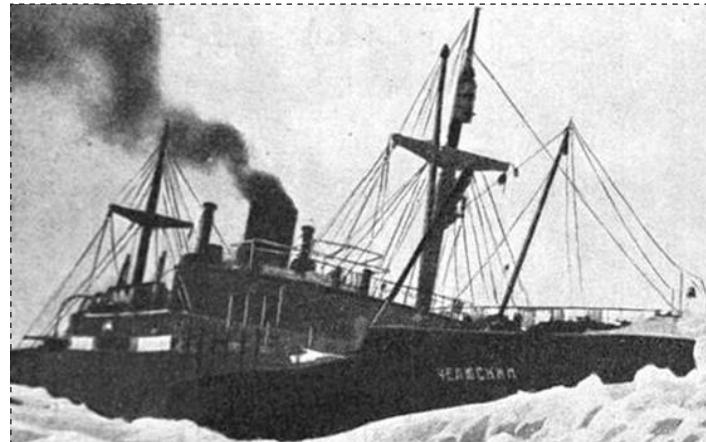
2015

NORTHERN SEA ROUTE



DEVELOPMENT OF NAVIGATION

1932 – Northern Sea Route was passed during a single navigation by Shmidt expedition



«Sibiryakov»



1957 – launched the first nuclear icebreaker "Lenin"



"50 Years of Victory"

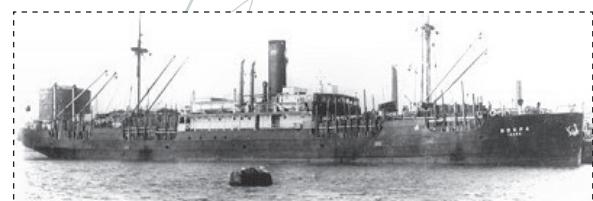


"Vaygach"



1959

"Lenin"



«Iskra»



«Vanzetti»

1938

Saint-Petersburg

Murmansk

1932

Arkhangelsk

Dudinka

1978

The route Murmansk – Dudinka
was opened for year-round navigation

Vladivostok

Universal Atomic
Icebreaker Project
22220 (IB60)

ICE CONDITIONS



Clear Water



Fast Ice



Old Ice



Ice Concentration
7-10 points



Ice Concentration
1-6 points



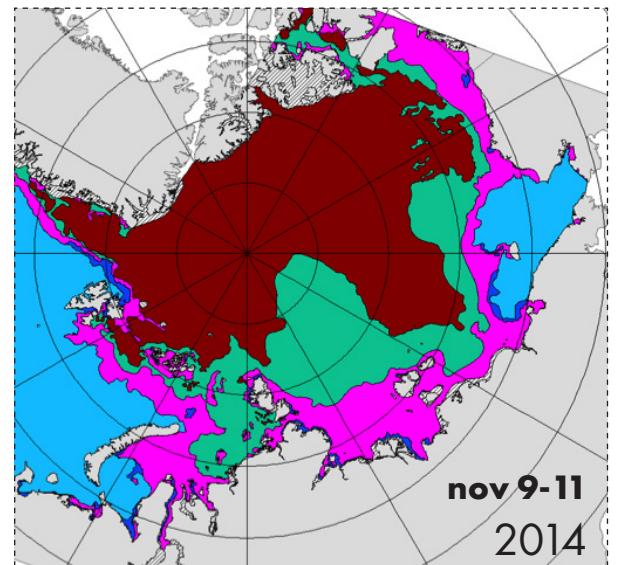
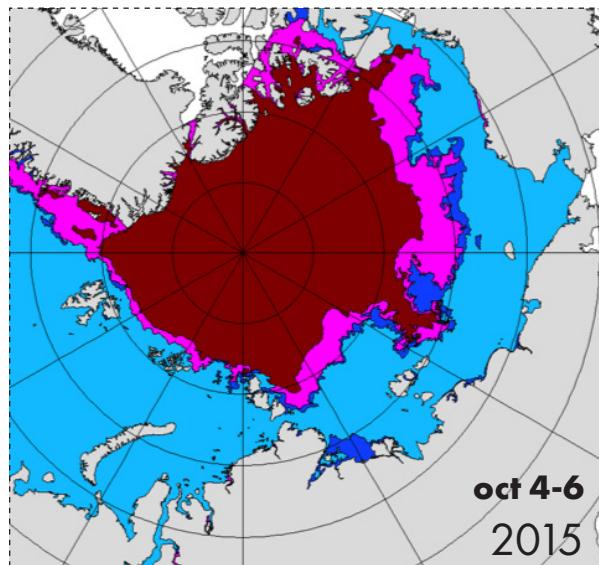
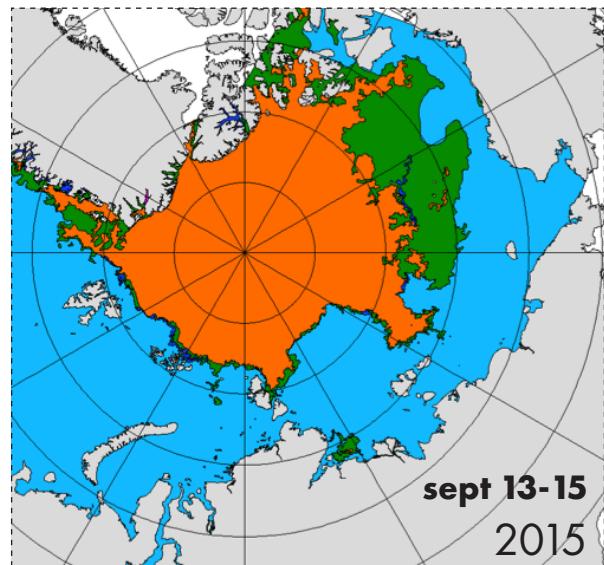
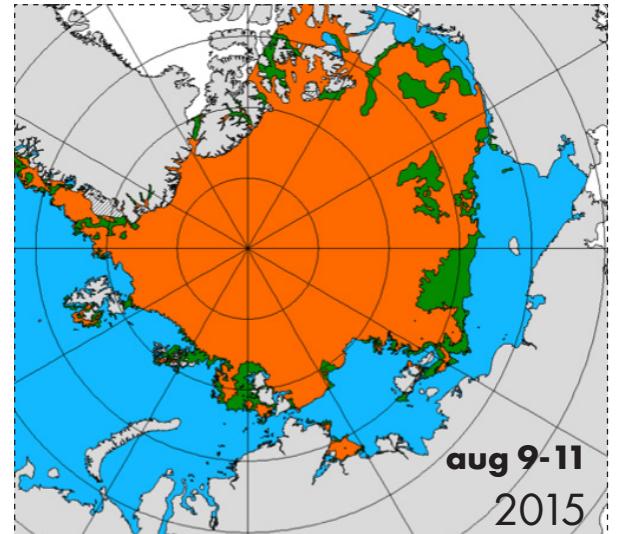
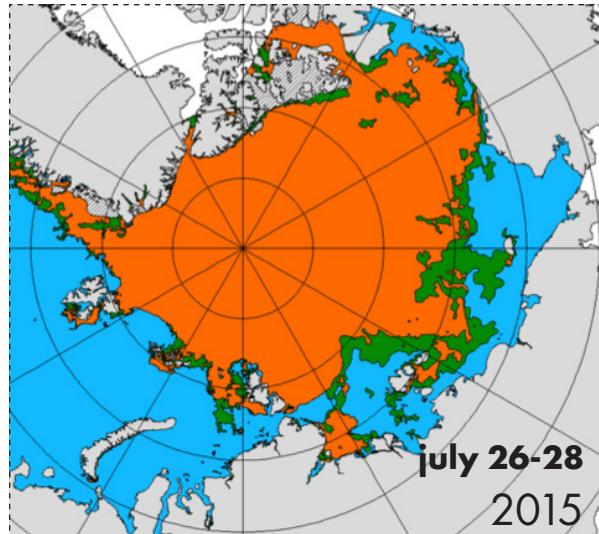
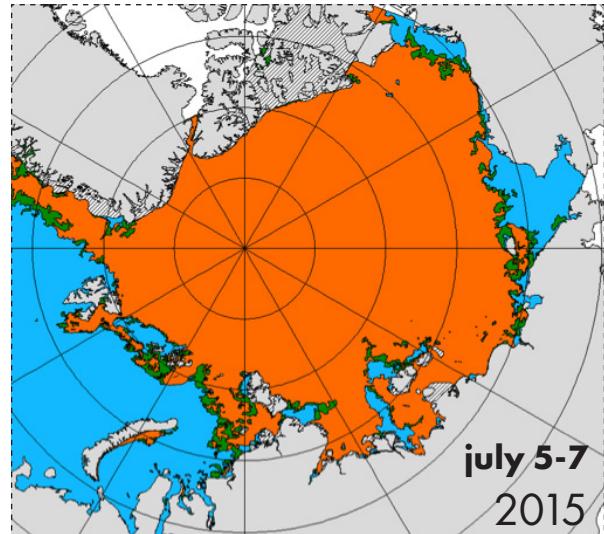
Extra Young Ice



Young Ice

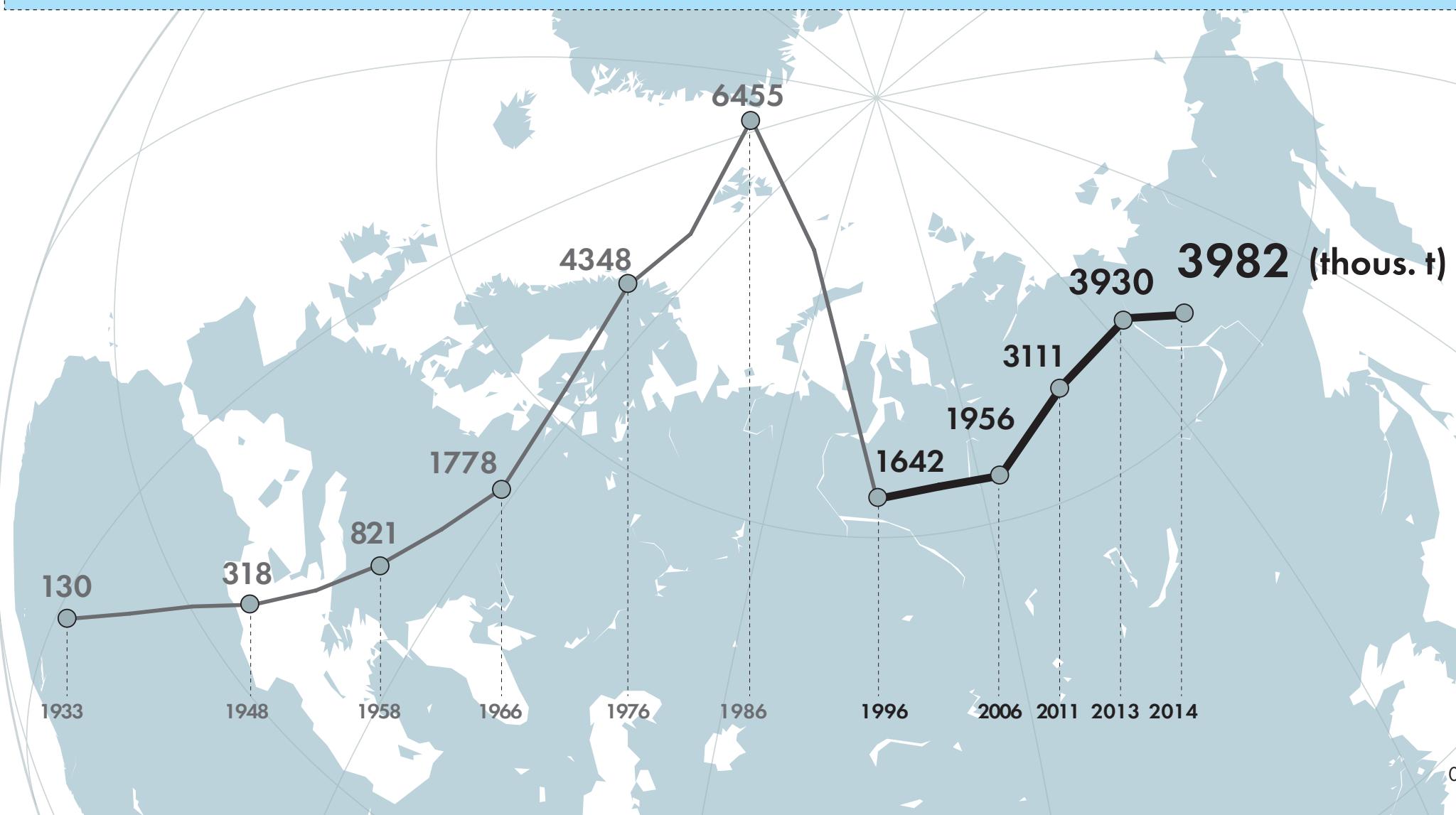


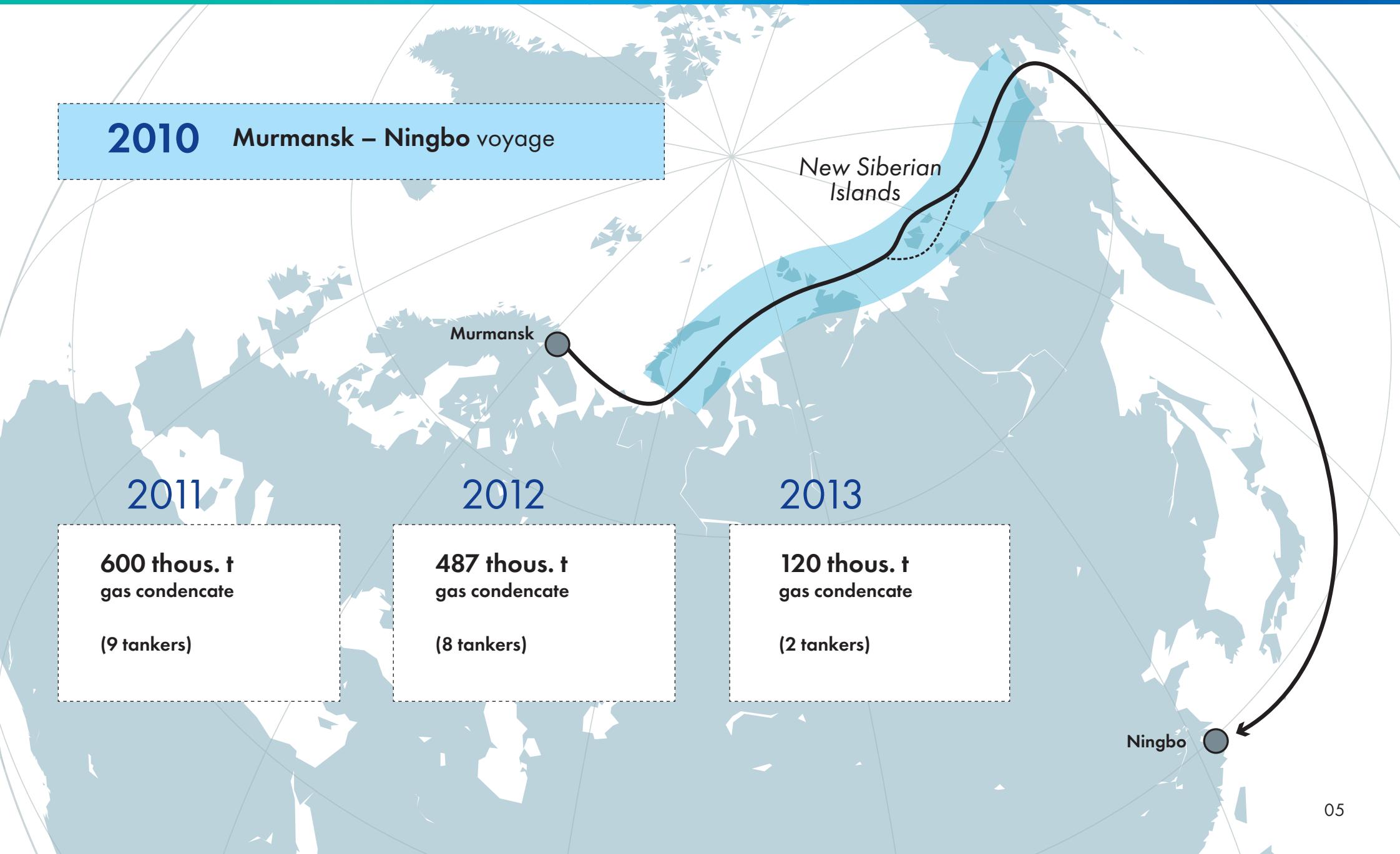
One-Year Ice
(30-200 cm)



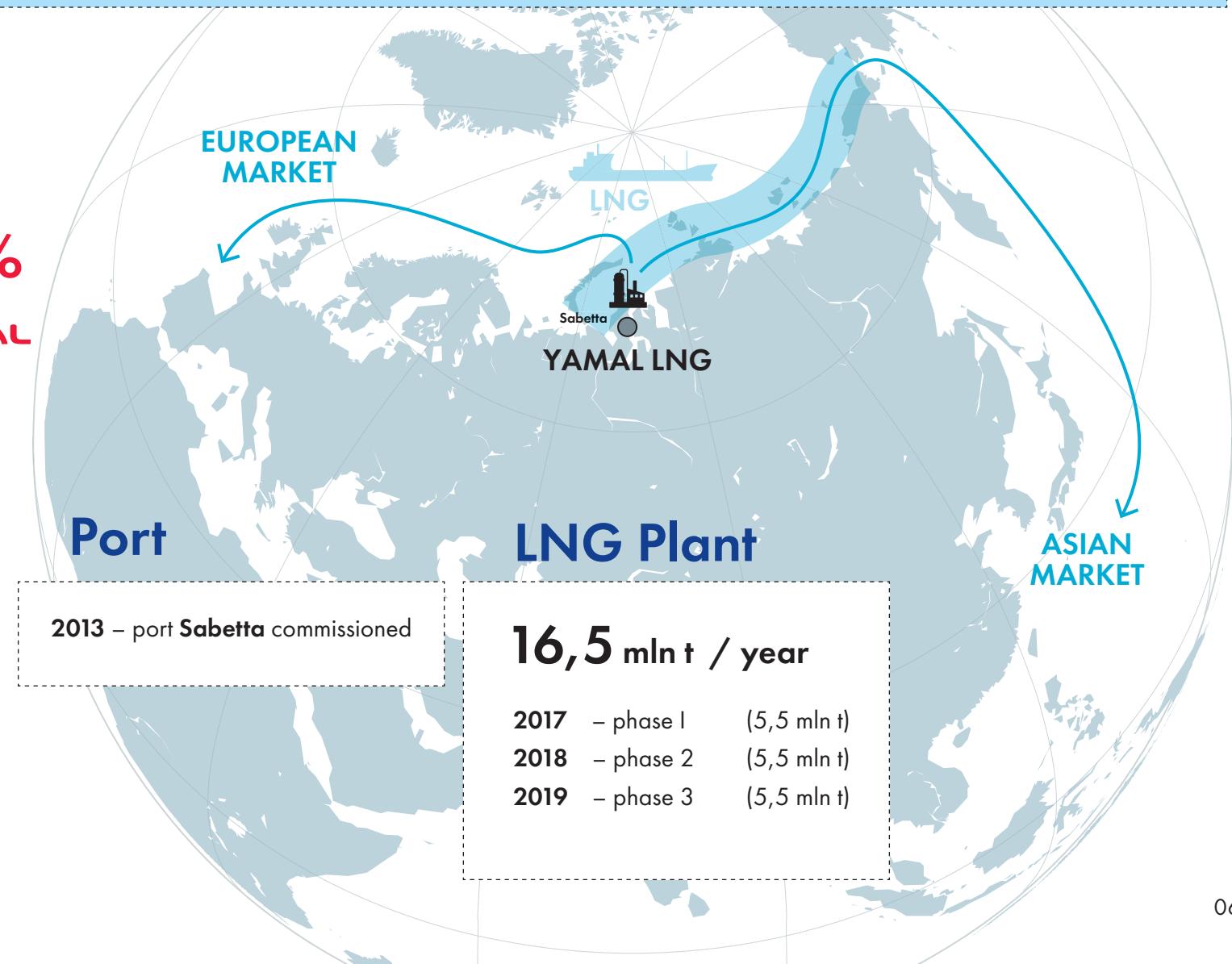
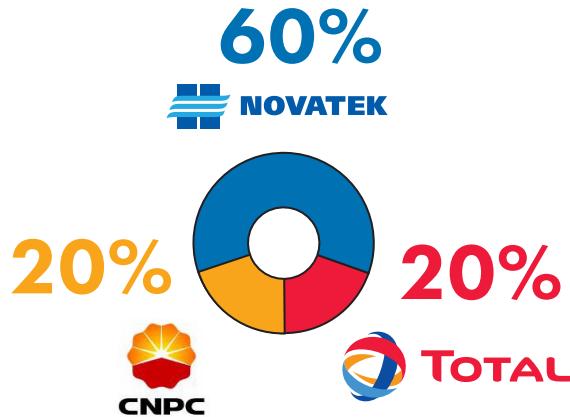
NORTHERN SEA ROUTE TRAFFIC

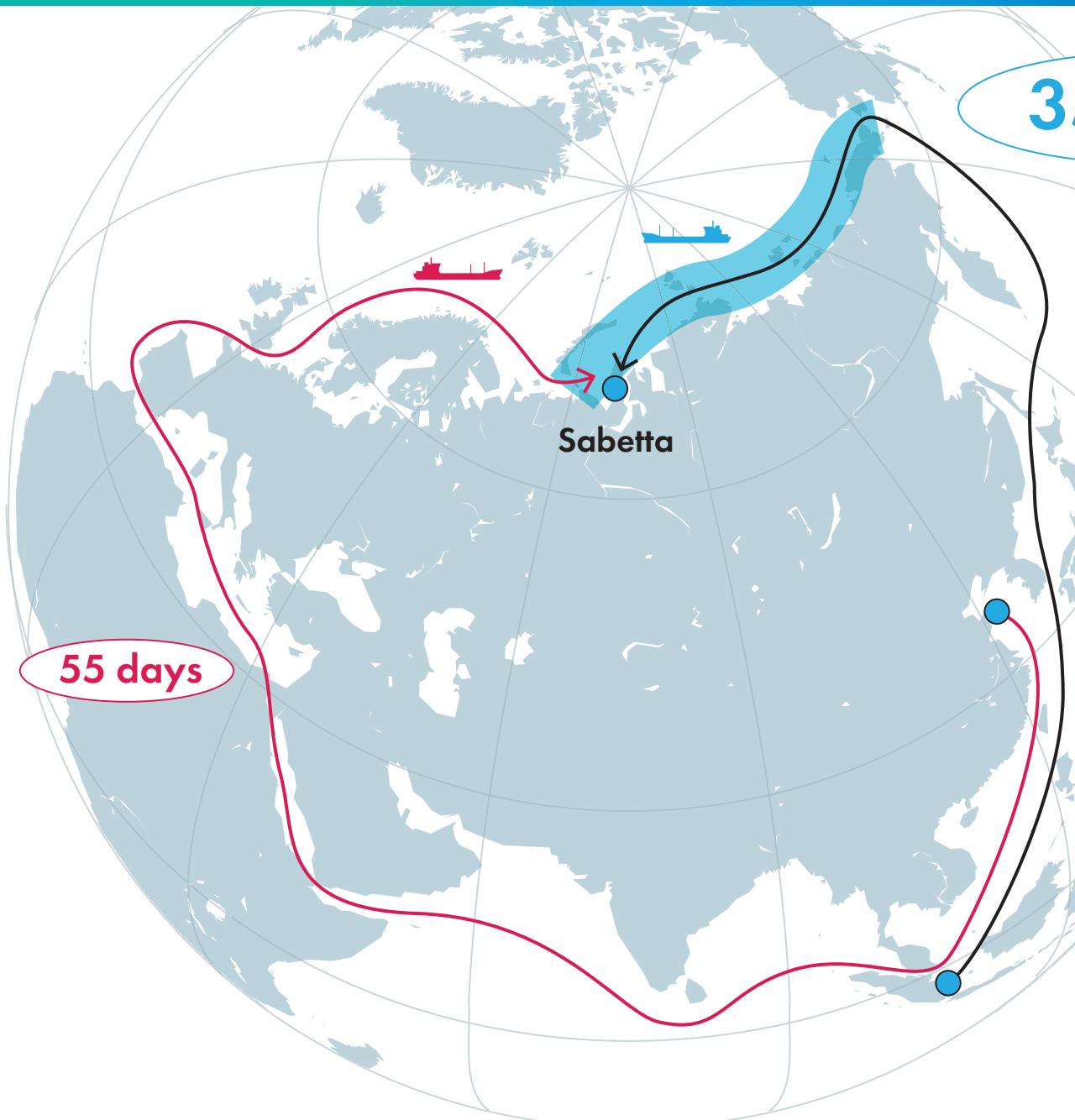
The cargo turnover of the Northern Sea Route has significantly increased in recent years
This is due to the restoration of transit volumes and the resumption of the supply shipments to arctic ports





NOVATEK, TOTAL and CNPC are developing YAMAL LNG Project





35 days



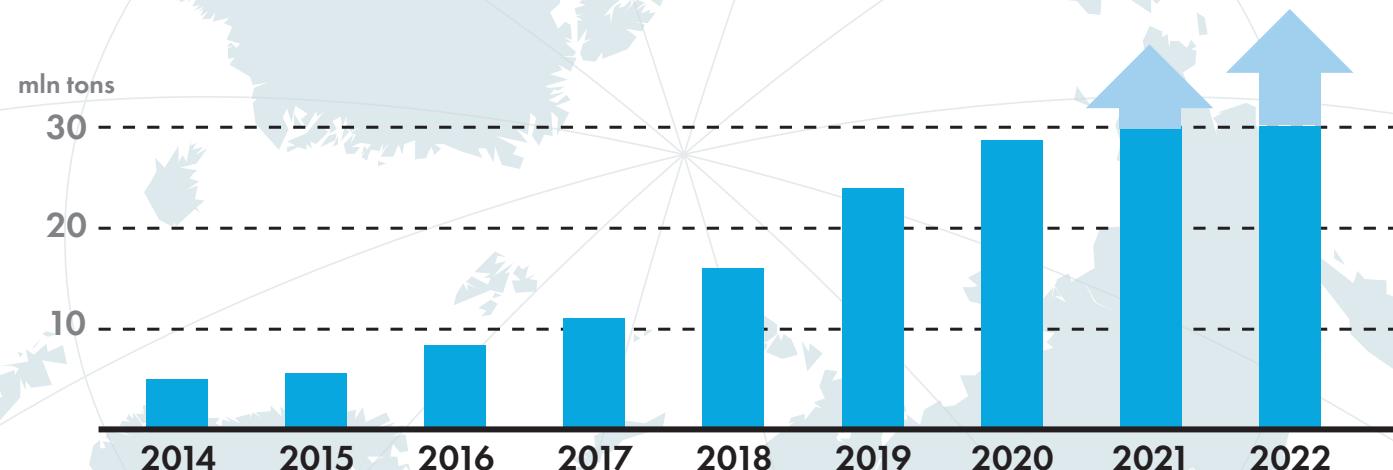
The modules for the LNG Plant
were shipped by the Northern Sea Route

Novatek resources in region
let to increase the LNG and condensate
production capacity up to

35 mln t /year

15 Arc7 LNG carriers
will be used by the project

ARCTIC PROJECTS



Rosneft

Operations
on Licensed Areas

operations
of shelf deposits
survey

Till 2023

Yamal LNG

(port Sabetta)

18 mln tons
LNG and condensate

2018 – 2040

GazpromNeft

Novoport Oil Deposit
(Noviy Port)

8,5 mln tons
crude oil

2015 – 2035

Norilsk Nickel

(port Dudinka)

1,3 mln tons
nonferrous & precious
metals

2018 – 2030

JSC Independent Oil
and Gaz Company

Payaha Oil Deposit

3 mln tons
crude oil

Constant