

Federal state unitary enterprise



ROSMORPORT



FSUE ROSMORPORT

VTS in Russia

- History
- Nowadays
- Prospects

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A Brief History

- In the October 1960 first shore based radar was established in port of Leningrad, USSR
- Radar surveillance improved the safety of navigation in bad weather conditions
- It was commencement of development VTS concept in Russia





Development

- During next years VTS projects spreads almost on all sea areas of Russia
- The development of modern technology improved quality of VTS service
- Using of multiply sensors greatly extended areas of control
- In 2002 FSUE “Rosmorport” was created to provide use, maintain and development of assigned federal property including VTS
- Information is available here:
www.rosmorport.ru





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Nowadays

- Harbour VTS - 21
- Coastal VTS - 1
- Regional VTS - 3



Taganrog
and Azov VTS

Astrakhan and
Olya VTS

Novorossiysk VTS

Tuapse VTS

Sochi VTS

Makhachkala VTS

Black Sea

Caspian Sea

Regional VTS of the
Kerch Strait:
Port of Kavkaz VTS
Temryuk VTS
Taman VTS



Kola Bay VTS

White Sea

Arkhangelsk VTS

Gulf of Finland

Kaliningrad VTS

Regional VTS of the Eastern Part
of Gulf of Finland:
coastal VTS of the Eastern Part
Saint Petersburg VTS

Vysotsk VTS 1

Primorsk VTS 2

Ust-Luga VTS 3



Magadan VTS

Sea of Okhotsk

Aniva Bay VTS

Vanino VTS

Regional VTS of the Peter
The Great Gulf:
Vladivostok VTS 1
Nahodka VTS 2

Sea of Japan

VTS legislations in Russia

**IMO
Resolution
A.857(20)**

IALA

- ☐ Guidelines
- ☐ Recommendations
- ☐ Manuals

**Ministry
of Transport RF**
☐ establishment of
standards

**FSUE Rosmorport
as VTS Authority**

- ☐ conformity to standards
- ☐ establishment of
procedures

Harbour Masters

- ☐ control of conformity
- ☐ supervision

*Russian Federation
is a IALA member
state*





VTS categorizations

Superior

Traffic density
more than 5000
vessels per year

VTS control area
more than 100
sq. miles

At least 3 sectors,
3 radars, AIS,
CCTV, VHF

First class

Traffic density
less than 5000
vessels per year

VTS control area
more than 36
sq. miles

At least 2 sectors,
2 radars, AIS,
VHF

Second class

Traffic density
less than 1000
vessels per year

VTS control area
more than 10
sq. miles

1 VTS sector,
at least 1 radar,
AIS, VHF

VTS categorizations



Superior

- Coastal VTS of the Eastern Part of Gulf of Finland
- Arkhangelsk VTS
- Kaliningrad VTS
- Kola Bay VTS
- Nahodka VTS
- Novorossiysk VTS
- Port of Kavkaz VTS
- Saint Petersburg VTS
- Vladivostok VTS



First class

- Aniva Bay VTS
- Astrakhan and Olya VTS
- Primorsk VTS
- Taganrog and Azov VTS
- Sochi VTS
- Taman VTS
- Temryuk VTS
- Tuapse VTS
- Vysotsk VTS



Second class

- Machachkala VTS
- Magadan VTS
- Vanino VTS
- Ust-Luga VTS

VTS Equipment (conformity with IALA V-124)



Radar systems of X-band, S-band, Ku band frequencies



CCTV provides quick assessment of situation in VTS area of responsibility



AIS provides automatic identification of targets, information exchange



VHF communication, RDF, hydrological/metrological equipment



VTS data system provides storage, security and presentation of necessary information



Constructions

- Solid towers are used for dispositions of the radar aerials, VHF and RDF antennas, CCTV cameras
- The constructions of towers depends on climate area, landscape and volume of technical means to be disposal
- Information is transmitted to the VTS control centers via radio-relay mostly





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VTS control centers

- Buildings of different design contains accommodations for VTS personal and facilities
- Some of VTS control centers surmounted with sensor antennas

Cola Bay VTS



Tuapse VTS



Vladivostok VTS



Nahodka VTS



Novorossiysk VTS





VTSO working places

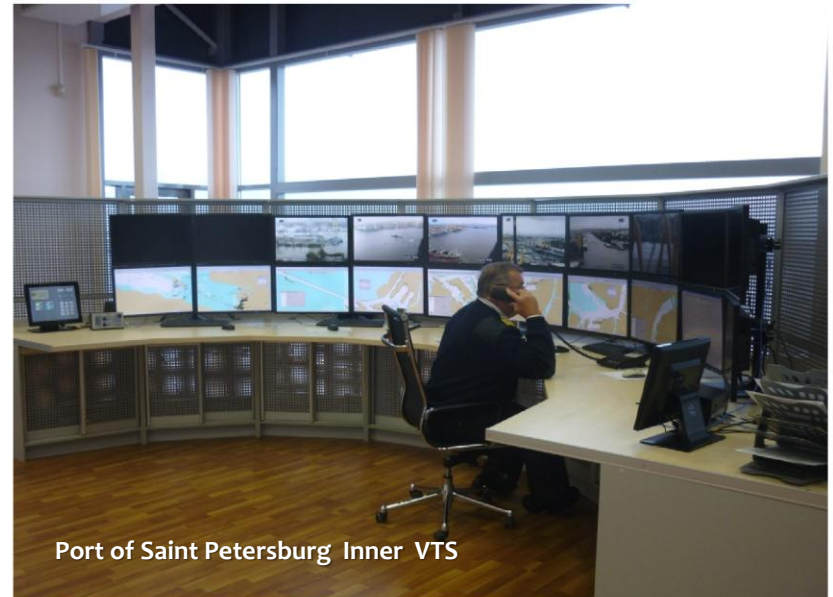


Novorossiysk VTS

- Design of VTSO work station depends on extension of VTS sectors, difficulties of waterway and number of sensors involved
- In superior VTS working place of the supervisor provided



Regional VTS of the Kerch Strait



Port of Saint Petersburg Inner VTS



VTS type service

**Information
Service (INS)**

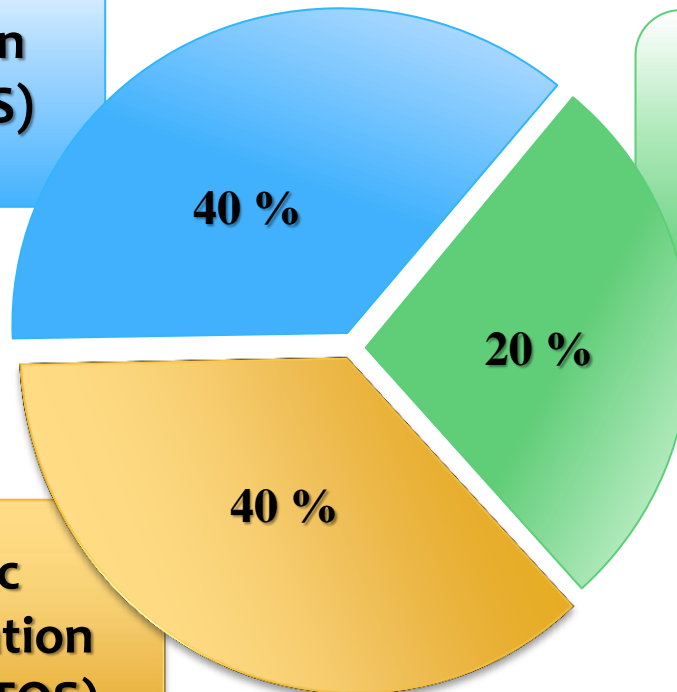
40 %

**Navigational
Assistance
Service (NAS)**

20 %

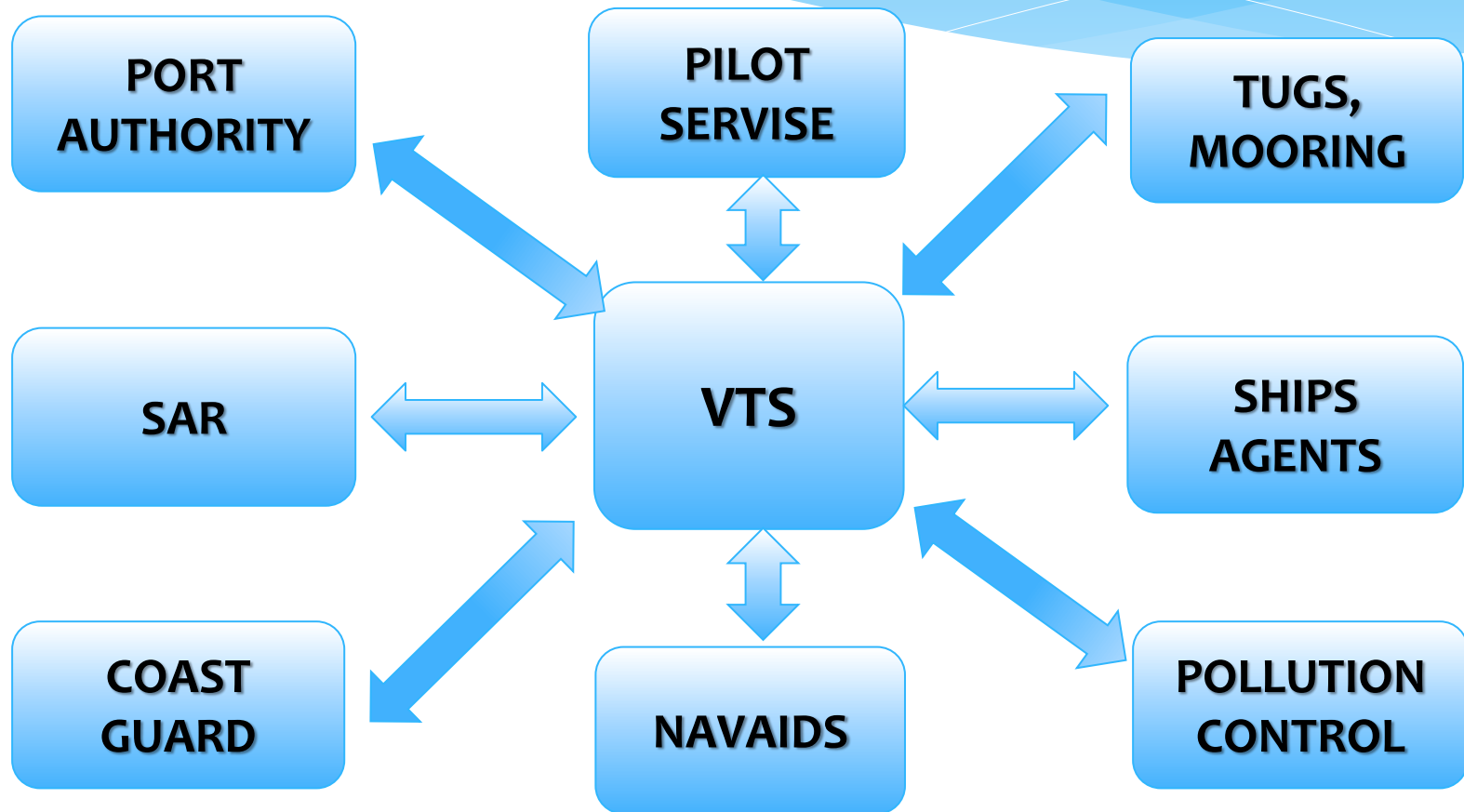
**Traffic
Organization
Service (TOS)**

40 %





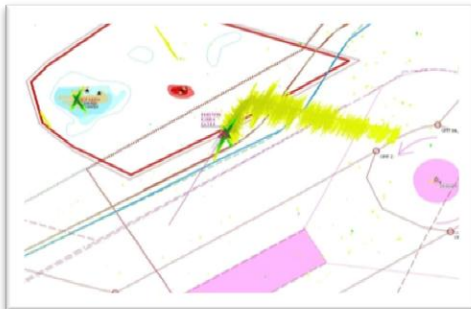
Co-operation with allied services



VTS tasks



- ✓ Enhancing effectiveness of port operations in conditions of traffic density increasing



- ✓ Improvement safety of navigation



- ✓ Supporting of Ships Reporting Systems



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VTS tasks



✓ Participation in SAR operation

✓ Providing Maritime security



✓ Attention to marine environment monitoring

✓ Information support of stakeholders





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VTS Prospects



- Adding additional sensors and widening of control areas
- General integration and data exchange
- Creation of united information space
- Development regional VTS system of Northern Sea Route
- Innovative activity in sphere of eNavigation

**THANK YOU
FOR YOUR
ATTENTION**