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**Conference Paper**

## Methodological features of an estimation of investment appeal of large regional transport projects

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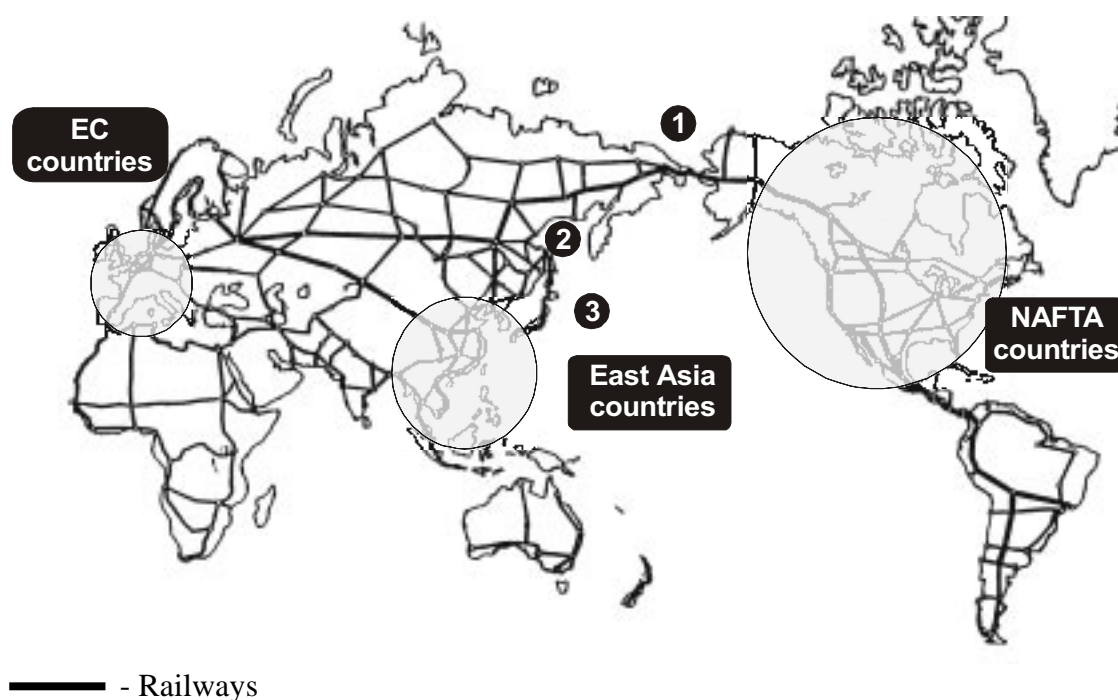
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The article deals with the problem of the strategy of the railway network development in the Asian parts of Russia. The creation of global land transport network that duplicates the system of marine shipping and competes with it is beneficial for all countries and political stability because the integration of regional transport systems makes this network indivisible and forms the base for steady and safe development of the world economy.

## METHODOLOGICAL FEATURES OF AN ESTIMATION OF INVESTMENT APPEAL OF LARGE REGIONAL TRANSPORT PROJECTS

### Problem

Recently the countervailing between the North and the South looks like rather aggravated. This situation requires consolidation between Russia and the West at a mutually beneficial base. It makes us to take into consideration not only Russia's appearance at the European scene by means of "cutting the window to Europe" which Peter I considered to be the forward movement to the American continents but potentially competitive direction leading to the West via the North America. Under possible global situation a land route, connecting the apexes of geostrategic triangle in XXI century which includes the NAFTA – ATR – EC countries (Fig. 1) may appear to be much more economically beneficial and strategically less dangerous means of communication than marine routes passing through the areas of civilizations conflicts. For the USA, Canada as well as for all NAFTA countries and Latin America this land route could provide safety and benefit. Besides, the countries of northern and southern America may obtain a direct land access to a great variety of Siberia and the Far East natural resources which will become scarce and as a result much more expensive in future.



Barrier structures – tunnels under the straits of: **1** Bering, **2** Nevel'skoy, **3** Laperuse

Fig.1. Geostrategic triangle of the XXI century

The creation of eastern land corridor to the west gives Russia the opportunity to gain a considerable amount of freight service within the above mentioned triangle and obtain the benefit from the international transit of goods. Taking into consideration natural resources in the north - eastern and eastern parts of Asian regions of Russia as well as transport corridors from Russia to both Americas and south – eastern Asian countries, it will inevitably result in creating the transport network at sparsely populated and underdeveloped Russian vast areas.

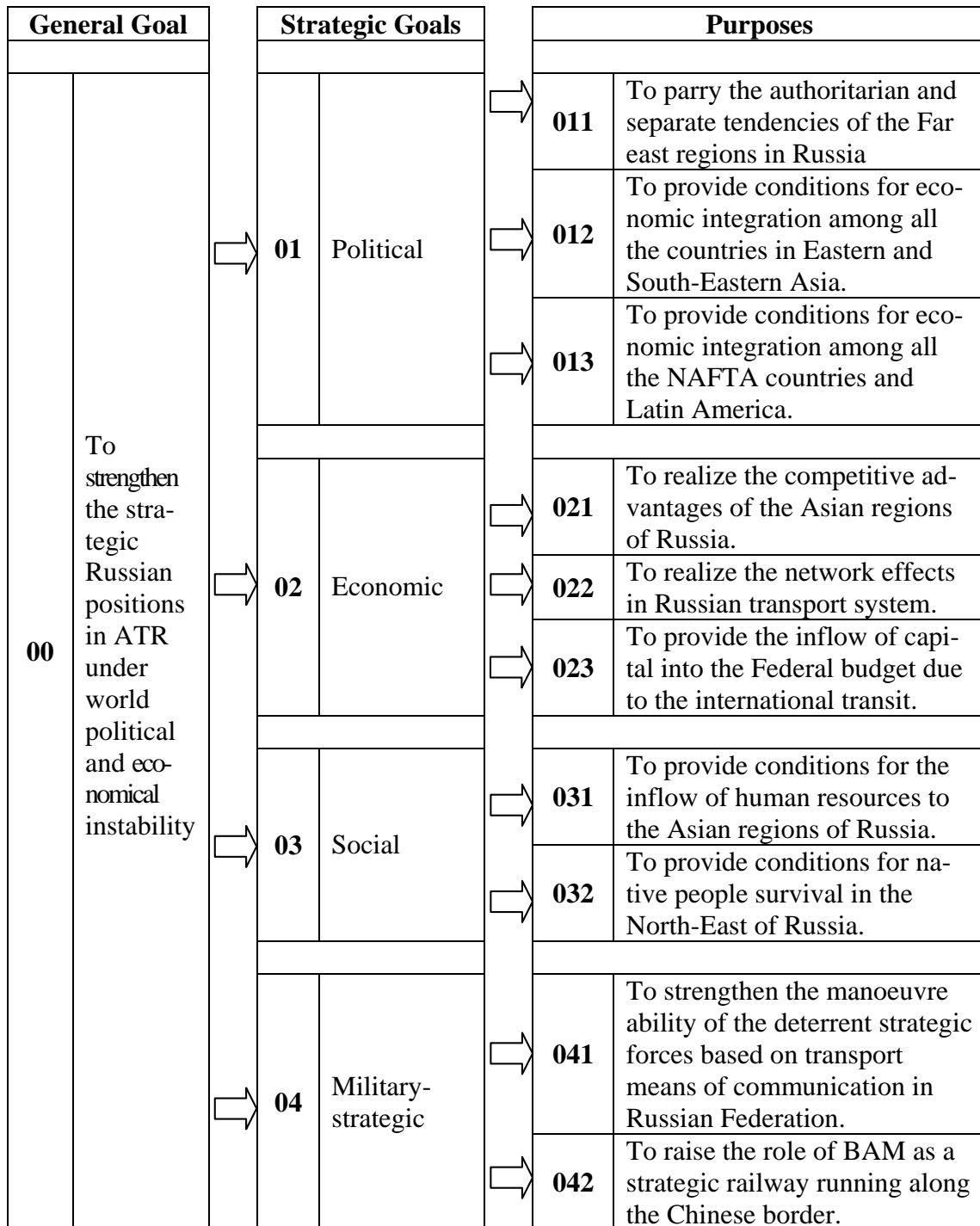


Fig. 2. The system of East transport policy goals of Russian Federation.

The multiplication effect of the transport projects realization will give an incentive to economic development of the adjacent areas and favour their separate settlement. This fact has strategic significance because of the ethnic expansion in the XXI century from rapidly developing China<sup>1</sup>.

The creation of global land transport network that duplicates the system of marine shipping and competes with it is beneficial for all countries and political stability because the integration of regional transport systems makes this network indivisible and forms the base for steady and safe development of the world economy.

### **Objectives**

According to our opinion the system of goals for the eastern transport Russian policy (Fig.2) is directed from Russia's strategic interests and appears to be the starting point for structural approach to the problem mentioned in the previous section.

### **Strategy**

We use the term "strategy" as the means of achieving the system of goals which has been formulated above. These means represent all directions in the development of industries forming the transport complex in Russia. We do not belittle the significance of any branch in Russian transport complex as well as any its regional element and consider only the problems of the network development in the Asian parts of Russia. First of all, we consider this network to be the basic element that can unite some other elements of transport infrastructure. Secondly, the development of the railway network in the East of Russia will help it to enter the new global system of international relations, which is being formed rather effectively.

The strategy of the railway network development in the Asian parts of Russia should be gradually evolved in the following way:

- to create, as a reference point connecting with the system of goals (Fig.2) ) at the Asian parts of Russia, a "railway grid" (Fig. 3) that allows to organize the competitive parallel routes for freight and passenger traffic;
- to consider the globalization of Trans-Siberian railway i.e. connecting it to Japanese and Korean railways, and the provision of its external competition in shipping on the parallel railway and marine routes from Eastern and South-Eastern Asia to Europe to be the primary task;

- to consider the creation of inner strategic rivals to Trans-Siberian railway to be one more significant task which must be carried out simultaneously with the above mentioned one. The first pretender for inner competition is BAM which must be “uncorked” from the East by reconstructing the section from Komsomol’sk-on-Amur to Sovgavan’ as well as from the West by constructing Sevsib as BAM extension to the Middle Ob-river region and further to the European part of Russia.

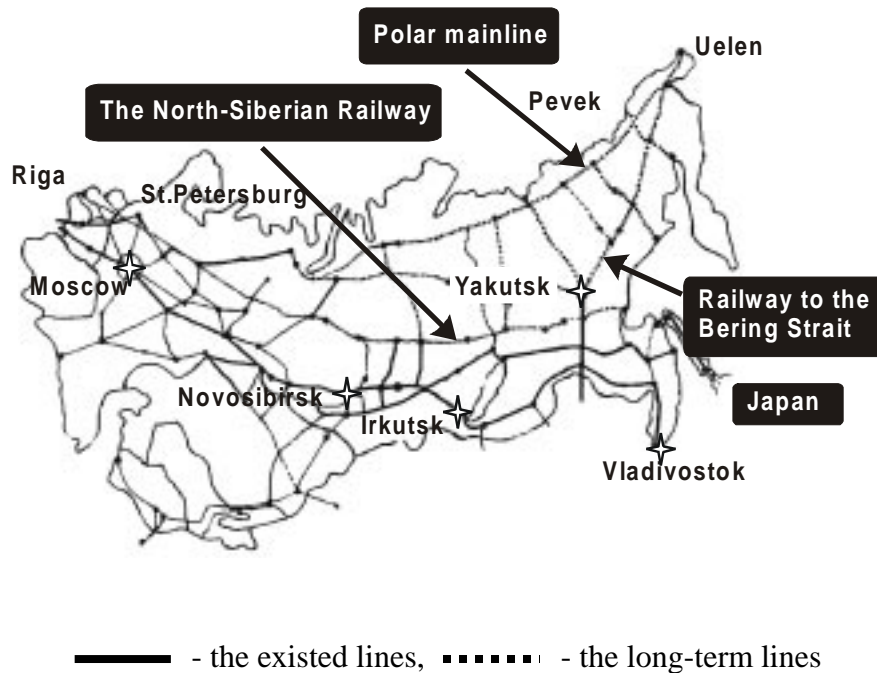


Fig.3. Railway network of Russia (Reference to: Cooper H.; Ishkov A.M.; Jakovlev V.N. Projects of Railway Construction in the Arctic Circle areas // Region: Economics and Sociology, № 4, 1997, p.132)

- to construct the Transcontinental main line across the Bering Strait and the Lena-Enisejsk branch of this mainline as a future rival for Trans-Siberian railway;
- to construct one more rival – the Polar main line which is to pass along the direction of the Salekhard-Nadym-Igarka “dead road”. This task is not considered to be among the primary ones but the situation can be cardinally changed in the case of active development of natural resources in Arctic Ocean offshore;
- to create the system of competitive latitude railway main lines for connecting the inner Russian railway network to the international railway system as well as to create the international meridian transport corridors to the rich mineral deposits in the North. This system will turn into a “railway grid” and its typical line could be Amur-Yakutsk main line which completion is also among the primary tasks;

- to create multimodal transport junctions at the points where meridian and latitude railway lines turn into their branches. Based on information technologies and logistics principles these multimodal transport junctions could provide steady freight and passenger traffic within the “railway grid” without any hindrance. First of all such junctions should be created at Tynda, Irkutsk, Krasnojarsk, Novosibirsk (Fig.4), Tjumen, if their creation begins in the East and moves to the West.

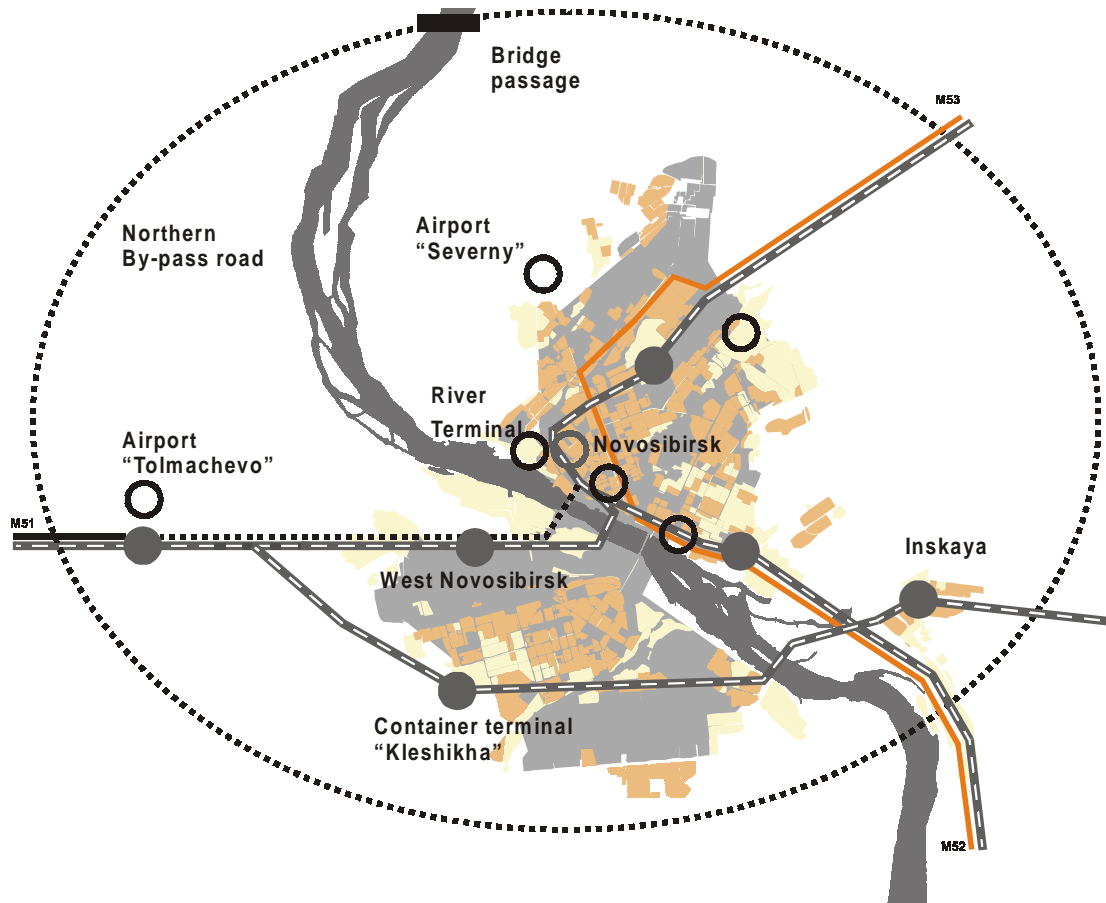


Fig.4. Multimodal transport junction scheme at Novosibirsk

The above mentioned projects, at the case of their realization, will not only compete with the Trans-Siberian railway and form the base for the “railway grid” in the Asian parts of Russia. It will change the entire transport flows configuration in the geo-strategic triangle of XXI century – Europe – Northern America – Eastern and South – Eastern Asia countries for the benefit of Russia. It is highly probable that under favourable political situation only the forecasted annual flow of international transit via Siberia and the Far East may reach the quantities shown at fig.5.

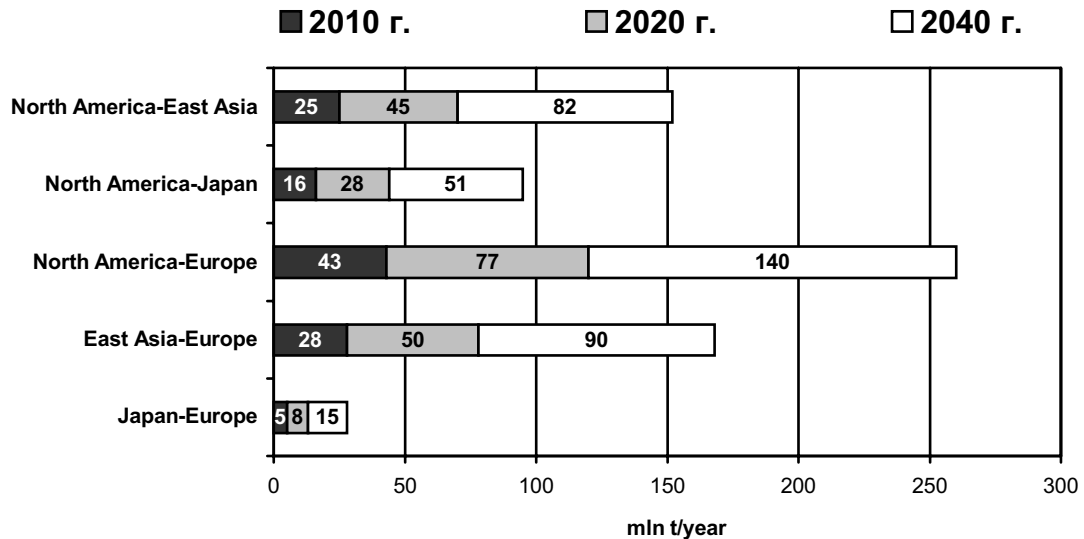


Fig. 5. The forecasted annual flow of international transit via Siberia

Figure 5 demonstrates that from 2010 the potential transit capacity of each “railway grid” element will reach the market efficiency and show the tendency to growth. The tentative calculations of capital investment for the “railway grid” creation could be about \$ 400 bln and this sum could be compared with the annual Gross Domestic Product of Russia as well as with the total volume of the world investment in 2000 which is equal to \$ 1.2 trillion. According to the forecast the annual net income based on keeping the “railway grid” running at full capacity cannot be lower than \$ 25 bln. Therefore the term of recoupment of the investments into this megaproject will be about 16 years which is quite admissible indicator for the forecasted efficiency for Russian and foreign investors.

### Ministry of Railways Strategies and Reforms

The above mentioned strategies have originated on the base of the current situation which provides starting conditions for the development of these strategies. That is why it is interesting to consider the situation in the system of railways under the market reformation.

The analysis of the two strategic documents or projects “Programme of Structural Reform in the system of railways” (Ministry of Railways and Mineconomrazvitija, March 2001, further – Programme of Reforms) and Federal Programme for special purposes “Russian Transport System Modernization” – Subprogramme “Railways” (Giprotranstei, 2001 – further Programme of Modernization) shows that these documents are



not coordinated conceptually and are worked out for different objects. The undesirable effect of reformation is conditioned by the gap between the organizing–economic mechanism of the Ministry of Railways system and the long term spatial development of resource-technological and information base of railways. It may result in tempo deceleration of the structural reform as well as in derangement in the Programme of Modernization and network development. The after-effects of such “non-connection”, to a great extent, will influence the railway network of Siberia and the Far East because of its treelike structure and the only system-forming trunk – the Trans-Siberian main line. This structure does not permit to organize the freight and passenger traffic as the alternative railway routes at the Asian parts of Russia. It results in preventing the effective competition, which is the necessary condition and the main factor for any progress: the profitability increase, decrease of traffic rates as well as the rise of stability, safety and quality of railway service. These positive changes in Russian railway network may be expected as a result of the transforming from mainly functional – territorial principle of management, that is used now, to another kind of management based on different types of operating.

To involve Siberia and the Far East into the railway system reformation, the institutional transformation of Ministry of Railways that is aimed at solving the current operation problems, should be coordinated with the problems of the future railway network development at these regions which are of vital importance for Russia. But it is a regretful fact that the above mentioned documents as we see it do not co-ordinate the work and the documents should be corrected. This could be done in the following way.

In the Programme of Reforms there are references to foreign models of organizational and economic mechanisms of railway transport of different countries - the Australian, European and North American models.

Formally, it follows from the dot analysis in the Programme of Reforms that the USA model is the most effective one and as for its freight turnover it is the closest to Russia. However spatial analysis shows that the American railways throughout the country have a configuration of “crossing networks”. They form a so called “railway grid” as well as provide the effective competition for vertically integrated private railway companies that include their local infrastructure (railway track, track facilities, communication, etc.) at these routes. This “railway grid” provides alternative routes. Thus there is a competition “on rails” (among the freightage companies) and “for rails” (among vertical companies).

The “railway grid” in Russia in its “American” variant exists only in separate lines in the European part where the railway network as a whole has a type of a web with the center in Moscow transport junction. In Siberia and the Far East as it was noted above the network has a tree-like structure. Taking this into account, the original variant of reforming of the Ministry of Railways (1998) was to be oriented towards the national model of the organizational and economic mechanism (Fig.6) that resembles the structure of the Australian model. During the next three years the original model was being “liberalized” more and more, i.e. “was drifting” towards the American model. In the latest known variant of the Programme of Reforms at the third stage description (2006-2010), the possibilities for creation of several competing vertically-integrating railway companies (with their infrastructure and rolling stock) are examined. These companies may compete at lines that have parallel routes (perhaps in the European part of Russia).

And what is about Siberia and the Far East? The Programme of Modernization at its section concerning the Development of Network and Reconstruction of other objects of railway transport provides only the construction of new approach lines from BAM to Elginsky and Chineysky deposits, as well as a new line connecting the mainland and Sakhalin Island. Nothing more is foreseen. There is no information on the creation of a high-grade railway grid in the Asian part of Russia in the Programme at all. Even the section “The International transport corridors” doesn’t consider the problem of parallel transport corridors in the East of the country as a base for the future “railway grid”. The Programme underlines the only direction - the extension of the Kritsky corridor №2: Nizhny Novgorod – Ekaterinburg – Tjumen – Omsk – Novosibirsk – Ulan-Ude – Khabarovsk – Nakhodka, i.e. from Ekaterinburg to Nakhodka that is the Trans-Siberian railway.

As Siberia and the Far East railway systems are underdeveloped they are to be the last section in the Programme of Reformation of the Ministry of Railways. Sparsely populated North – Eastern Russian areas because of their infrastructure underdevelopment, i.e. the absence of railway links with the other parts of the country are strategically dangerous in the global world. Showing their hostility in solving global problems some ill-disposed persons are eager to realize three real variants:

1. the incapsulation model – “throwing” Russia to the North – East of Euroasia and “forgetting” about it;
2. the Kosovo model – the “crawling” ethnic Chinese expansion in the Far East and Siberia with the following territorial claims;

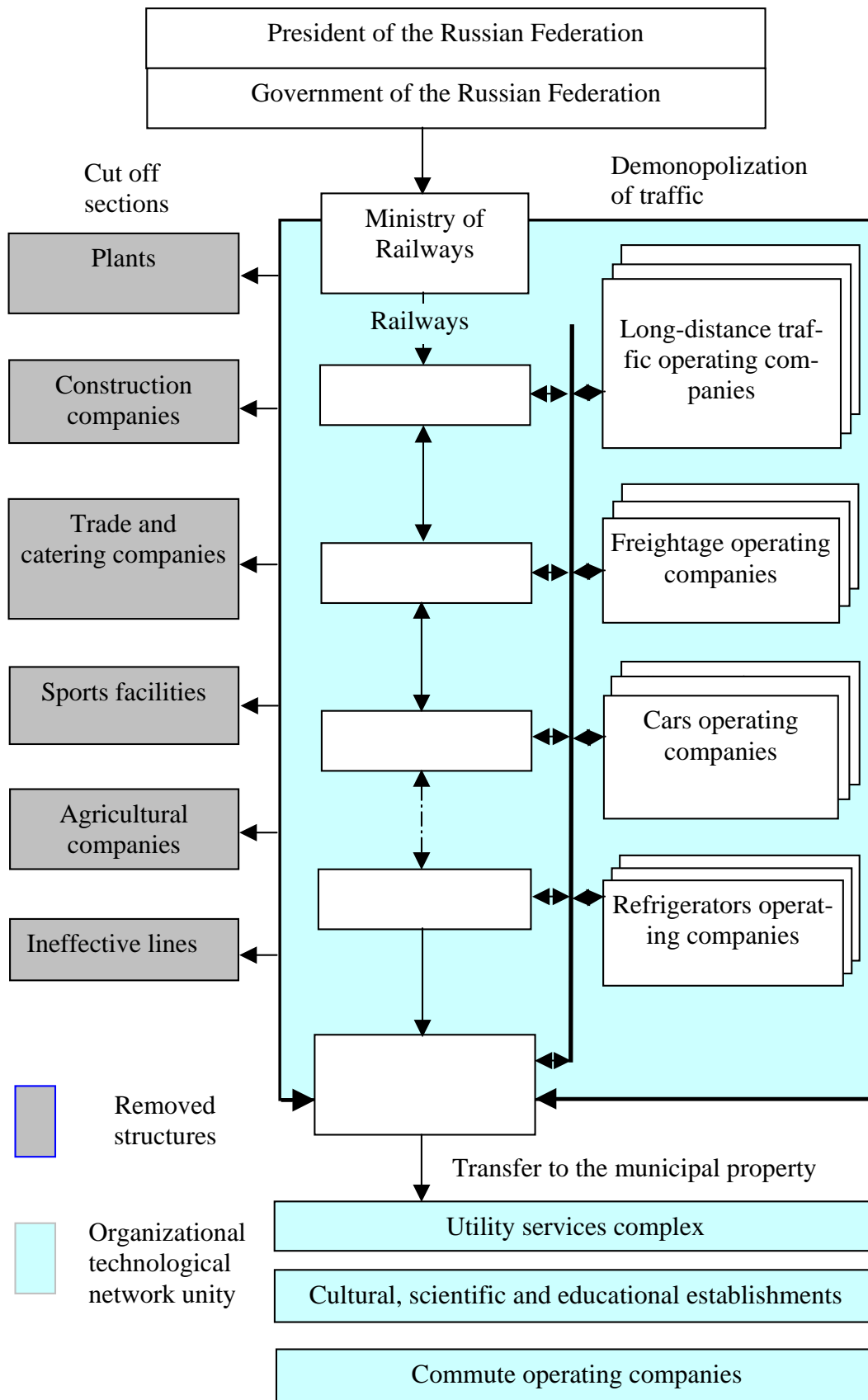


Fig.6. The concept of reforming of the Federal Railway transport of the Russian Federation (Ref. Russian Federation, 1998, № 20 (66), c.2)

3. the Alaska model – the acquisition or long-term lease of Chukotka and perhaps some other Russian eastern territories.

The Russian Federation Government must carry out strong regional policy to oppose these potentially destructive for Russia intentions of our neighbours-competitors shown clearly in recent 10 years of reforms. The outlines of such policy have appeared and the described scheme of realization of transport strategy in Siberia can be the basic element of national safety in the East of our country.

We offer the following organizational measures to realize the strategy:

- in short period to work out the alternative concepts of transport development of Siberia and the Far East and assess the results of these concepts under different conditions of steady Russia's development in global economic system;
- when the best concept is accepted the first thing to do is to work out a strategy of the basic "railway grid" development and to fix the order of priority and time of the projects realization;
- to work out the policy and mechanisms of large-scale investments attraction (domestic and foreign) into railway construction on the basis of the compensatory dealings;
- to co-ordinate the approaches to reformation of the organizational and economical mechanism of Siberia and the Far East railway network moving from prospective goals and objectives towards the current reform of the Ministry of Railways. These reforms shouldn't influence negatively on steady railway operation in the Asian part of Russia and on its national interests;
- to allocate the necessary budget funds for research and development of this Programme and to charge the Siberian Branch of Russian Academy of Sciences including the research Institutes and Universities under the supervision of the Ministry of Railways, Governmental experts at federal and regional levels with accomplishing this work in the shortest term and presenting the materials for governmental approval.

### **Scientific base for the strategy**

Currently the separate components of the strategy have not been equally examined. Some of the above mentioned projects are still under consideration (the Polar main line). Some projects are in the process of investigation (Transcontinental main line across the Bering Strait), some are at the stage of feasibility study (a direct railway "Continent – Sakhalin Island " project and connecting lines from Trans-Sib to Trans-

Korean main line), or are in the process of construction (Amur-Jakutia main line). All these facts reflect the real situation when the research, design and investigation work in this field is being carried out not at full capacity and ineffectively and inconsistently not only by different Russian institutions and companies but by the corporations and scientific centers in the USA and Japan. There is a vital necessity to co-ordinate the efforts in research, design and investigation work. The corresponding decisions should be adopted at the international level because the Ministry of Railways and Russia cannot solve this problem without international assistance. Taking into account a high degree of uncertainty concerning the expenses and results of the network development projects in the Asian part of Russia in XXI century, we propose a large-scale international research project "The Programme for Creation of the Railway Network in the Asian Part of Russia: the Estimation of Consequences for the Global Economy". Interested countries could become the investors and customers attracting international financial intermediaries.

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<sup>1</sup> There is every indication that this threat really exists as any person can refer to the interview with V.Ishaev, the governor of Khabarovskij Krai (Literaturnaja Gazeta №52, December 26-31, 2001, p.4)