



MONGOLIAN RAILWAY



New Railway Project



Mongolian Railway State Owned Shareholding Company

Mongolian Railway State Owned Shareholding Company (“MTZ”) was founded on March 20th, 2008 according to the Order No.189 of State Property Committee and the Resolution No.82 of March 8th, 2008 of the Mongolian Government. MTZ has the following main roles:

- Construction and operation of railway infrastructure;
- Railway transportation services;
- Manufacture, assembly and maintenance of railway infrastructure and rolling stock;
- Own and manage railway sector property created by the state and foreign investment;
- Acquisition of locomotives, wagons and other rolling stock;
- Renting service of railway machineries and properties.

As of now, MTZ is carrying out the following projects and business activities:

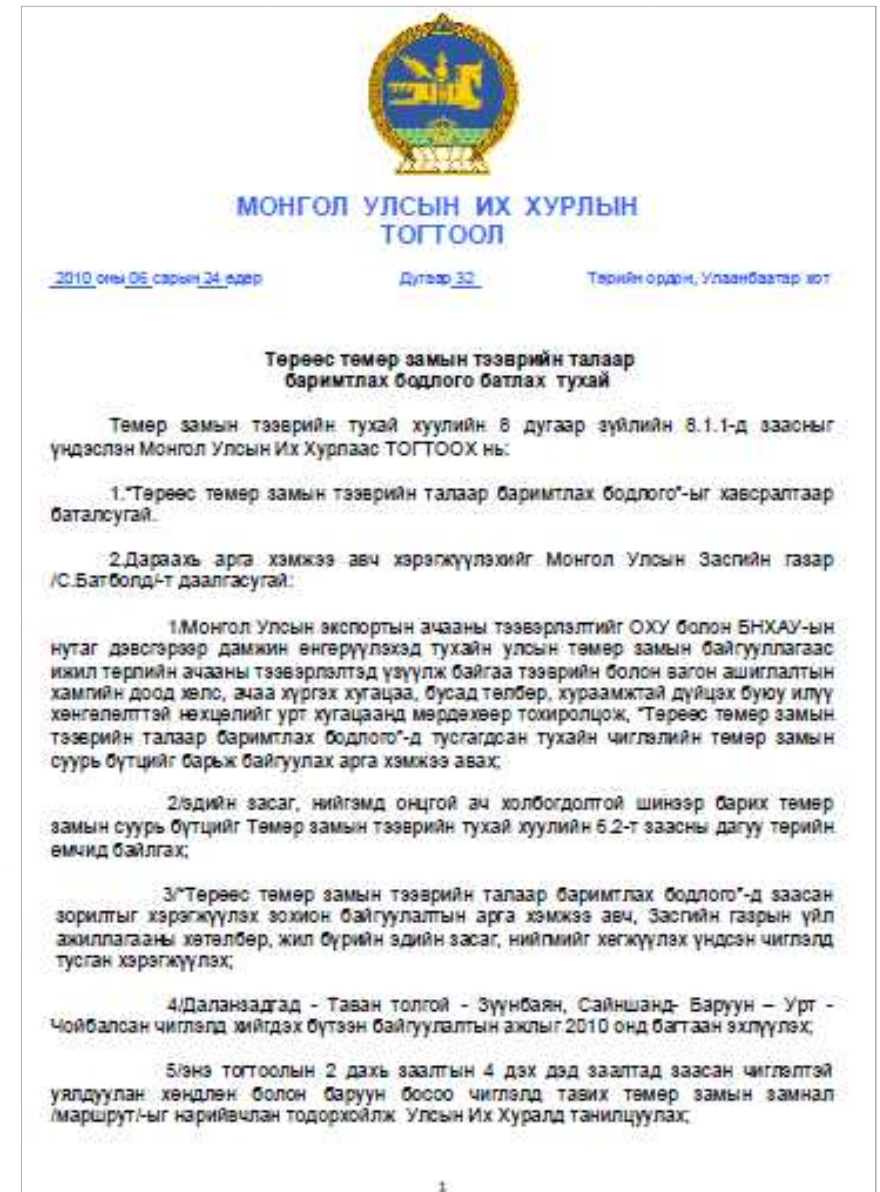
- New Railway Project;
- Renting service of rolling stocks;
- Logistics management;
- Tianjin Transport and Logistics Center Project;
- Freight Wagon Manufacturing Project.



The Policy On The Railway Transportation

- The Parliament of Mongolia ratified the State Policy on Railway Transportation (“Railway Policy”) in June 2010, concluding to construct approximately 5,600 km of railway infrastructure in several phases in an effort to extend the unified railway network, utilize large mines, and export commodities from those mines
- The purpose of the Railway Policy is to support in a cost efficient and environmentally friendly manner the intensive development of the mining sector in Mongolia, while coordinating actions for the development of infrastructure

1. Railway Transportation and Mining Deposits,
2. Domestic Integrated Railway Network,
3. Railway Gauge,
4. Legislation of Railway Industry,
5. Implementation of the Railway Policy and Source of Finance,
6. Outcome of the Railway Policy Implementation.



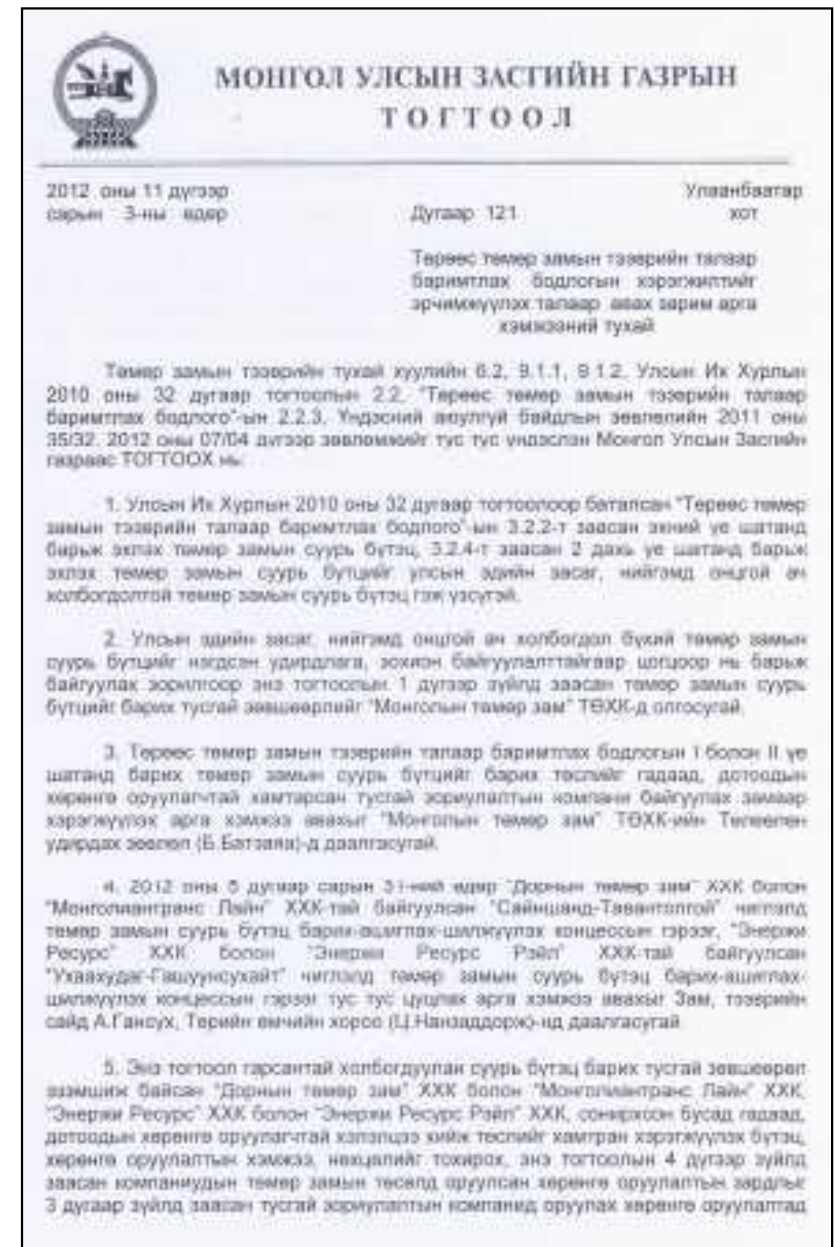
An Approximately 5600 km New Railway Infrastructures To Be Built Pursuant the Railway Policy In 3 Phases



Pursuant to the Resolution No. 121 of the Government of Mongolia:

■ Phase I and Phase II of the railway base infrastructure to be built in accordance with the Railway Policy shall be considered as the vital important railway base infrastructure for the economy, society and MTZ was granted the special license to build the these railway base infrastructures with the view of developing these railway base infrastructures in an integrated manner.



■ MTZ was charged to implement the New Railway Project via special purpose vehicle in collaboration with the foreign and domestic investors.



The Concession Right of the New Railway Project Was Granted to the MTZ

Pursuant to the Resolution **No. 28** of the **Government of Mongolia**:

The build-operate-transfer concession right of the Phase I and Phase II of the railway base infrastructure to be build in accordance with the Railway Policy was granted to the MTZ.

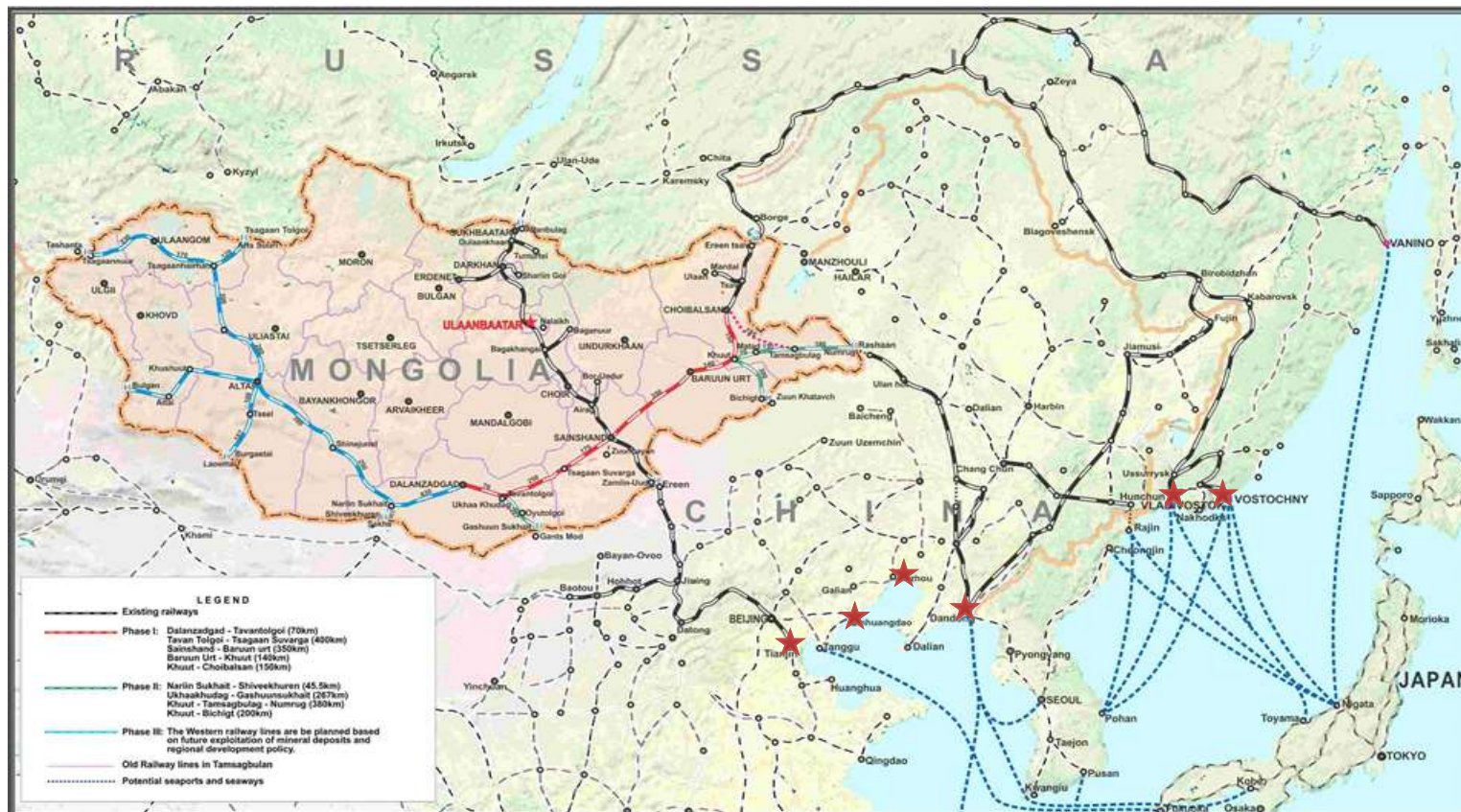
		
МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗРЫН ТОГТООЛ		
2013 оны 1 дүгээр сарын 26-ны өдөр	Дугаар 28	Улаанбаатар хот
Шинэ төмөр зам төслийн талаар авах зарим арга хэмжээний тухай		
<p>Концессын тухай хуулийн 6.1.2, Улсын Их Хурлын 2011 оны 15 дугаар тогтоол, Монгол Улсын Үндэсний аюулгүй байдлын зөвлөлийн 2011 оны 35/32 дугаар зөвлөмжийг тус тус үндэслэн Монгол Улсын Засгийн газраас ТОГТООХ нь:</p> <ol style="list-style-type: none">1. "Төрөөс төмөр замын тээврийн талаар баримтлах бодлого"-д заасан I, II үе шатанд барих төмөр замын суурь бүтцийн "барих-ашиглах-шилжүүлэх" концессыг "Монголын төмөр зам" ТӨХК-д олгосугай.2. Энэхүү тогтоолын 1 дүгээр хавсралтад заасан ажлын гүйцэтгэлийг хянан баталгаажуулж санхүүжүүлэх, 2013 онд гүйцэтгэх 2 дугаар хавсралтад заасан ажлыг холбогдох журмын дагуу хянан баталгаажуулж санхүүжүүлэх арга хэмжээ авахыг Хөгжлийн банкны Төлөөлөн удирдах зөвлөл (Б.Шинэбаатар)-д даалгасугай.3. Энэ тогтоолын 1, 2 дугаар хавсралтад заасан ажлыг санхүүжүүлэхэд шаардагдах хөрөнгийг Засгийн газрын 2011 оны 266 дугаар тогтоолын дагуу олгохыг Хөгжлийн банкны Төлөөлөн удирдах зөвлөл (Б.Шинэбаатар)-д зөвшөөрсүгэй.4. Хөгжлийн банкны зээлийг эргэн төлөх хөрөнгийг тухайн жилийн улсын төсөвт тусгаж байхыг Эдийн засгийн хөгжлийн сайд Н.Батбаяр, Сангийн сайд Ч.Улаан нарт даалгасугай.5. Шинэ төмөр зам төслийн ажлын явцын талаар Засгийн газарт сар бүр танилцуулж байхыг Зам, тээврийн сайд А.Гансүхэд үүрэг болгосугай.		
		
Монгол Улсын Ерөнхий сайд		Н.АЛТАНХУЯГ
Зам, тээврийн сайд		А.ГАНСҮХ

The New Railway Project

❖ Location: as shown in the picture below, the Project consists of about 1,800 km of new railway base infrastructure running from

- Tavantolgoi to Sainshand to Khuut to Choibalsan (about 1100 km)
- Tavan Tolgoi to Gashuun Sukhait (“South Line”) (~ 267 km),
- Nariinsukhait to Shiveekhuren (~ 45 km),
- Khuut to Numrug (~ 380 km),
- Khuut to Bichigt (~ 234 km)

Total Project Costs: estimated at c. US\$ 8 - 9 billion



The Government action plan for 2016-2020 and the National program "Development Route"

The Parliament of Mongolia ratified the Government action plan for 2016-2020 in September 2016.


Include following areas of "New railway" project:

1. Tavantolgoi-Gashuunsukhait (~267 km) – to complete construction and start operation;
2. Khuut-Bichigt (234km) – to complete construction and start operation;
3. Nariinsukhait-Shiveekhuren (45 km) – to complete construction;

The Mongolian Government ratified the National program "Development Route" in May 2017

Include following areas of "New railway" project:

1. Tavantolgoi-Gashuunsukhait (~267 km) - to complete;
2. Nariinsukhait-Shiveekhuren (45.3 km) - to complete;
3. Tavantolgoi-Sainshand-Khuut (892 km) - to Implement;
4. Khuut-Sumber (380 km) - to start construction;
5. Khuut-Bichigt (234 km) - to complete.



МОНГОЛ УЛСЫН ИХ ХУРЛЫН ТОГТООЛ

2016 оны 9 дүгээр сарын 09-ний өдөр

Улаанбаатар хот

Дугаар 45

МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗРЫН 2016-2020 ОНЫ ҮЙЛ АЖИЛЛАГААНЫ ХӨТӨЛБӨР БАТЛАХ ТУХАЙ

Монгол Улсын Үндсэн хуулийн Хорин тавдугаар зүйлийн 1 дэх хэсгийн 7 дахь заалт, Монгол Улсын Засгийн газрын тухай хуулийн 26 дугаар зүйлийн 7 дахь хэсгийг үндэслэн Монгол Улсын Их Хурлаас ТОГТООХ нь:


1. "Монгол Улсын Засгийн газрын 2016-2020 оны үйл ажиллагааны хөтөлбөр"-ийг хавсралтаар хавсралтаар

2. М холбогдуул /Ж.Эрдэнэ

хэрэгжүүлс бүрийн 1 д

дэвшүүлс үндсэн чиг

3. М чиглэлээр Ерөнхийлө дарга нарт



МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗРЫН ТОГТООЛ

2017 оны 5 дугаар сарын 10-ны өдөр

Улаанбаатар хот

Дугаар 142

ҮНДЭСНИЙ ХӨТӨЛБӨР БАТЛАХ ТУХАЙ

Засгийн газрын 2016-2020 оны үйл ажиллагааны хөтөлбөрийг хэрэгжүүлэх зорилгоор Хөгжлийн бодлого төлөвлөлтийн тухай хуулийн 10.3-т заасныг үндэслэн Монгол Улсын Засгийн газраас ТОГТООХ нь:

1. "Хөгжлийн зам" үндэсний хөтөлбөрийг хавсралт ёсоор баталсугай.

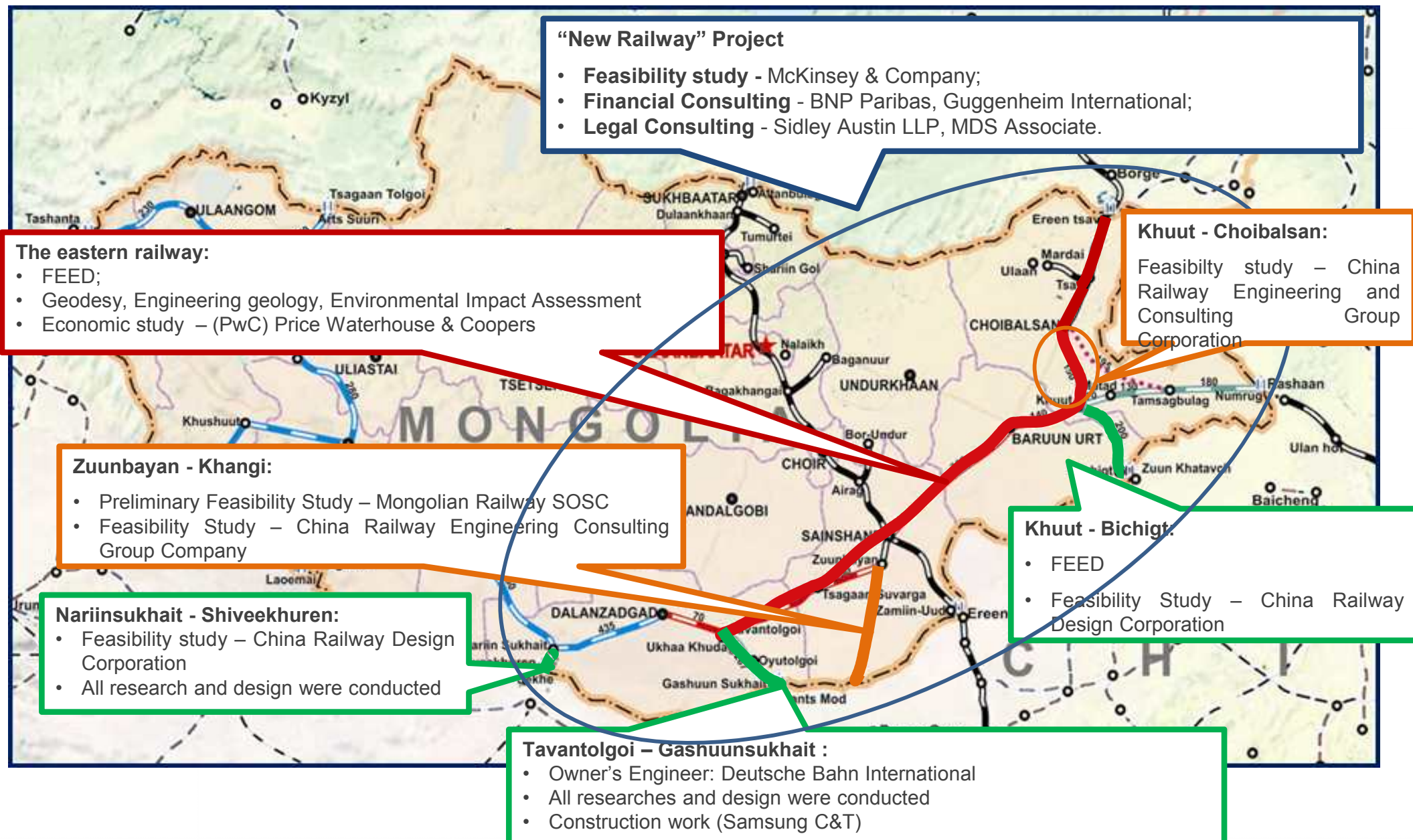
2. Хөтөлбөрийг хэрэгжүүлэх үйл ажиллагааны төлөвлөгөөг баталж, мэргэж арга зүйн удирдлага, зохицуулалтаар ханган ажиллахыг Сангийн сайд Б.Чойжилсү даалгасугай.

3. Хөтөлбөрийн зорилт, үйл ажиллагааг эрхэлсэн салбартаа хэрэгжүүлэхэд шаардагдах хөрөнгийг жил бүр эдийн засаг, нийгмийг хөгжүүлэх үндсэн чиглэл, ү төсөвт тусгаж, гадаад улс, олон улсын байгууллагын зээл, тусламжид хамруулан т хувийн хэвшлийн түншлэлийн хүрээнд шийдвэрлэх замаар санхүүжүүлэх арга хэм авч ажиллахыг Сангийн сайд Б.Чойжилсүрэн, Засгийн газрын гишүүдэд үүрэг болгосугай.

4. Хөтөлбөрийн хэрэгжилтийн явц, үр дүнг жил бүрийн I улиралд багтаан Засгийн газарт танилцуулж байхыг Сангийн сайд Б.Чойжилсүрэнд даалгасугай.

5. "Засгийн газрын үйл ажиллагааны хөтөлбөрийг хэрэгжүүлэх арга хэмжээ төлөвлөгөө батлах тухай" Засгийн газрын 2016 оны 10 дугаар сарын 26-ны өдрийн

Progress of the New Railway Project



Brief Information of the Tavantolgoi-Gashuunsukhait Railway Project



The Tavantolgoi-Gashuunsukhait railway will be approximately 240 km long with 2 stations, 5 passing junction and will pass through Tsogttsetsii, Bayan-Ovoo, Khanbodg soum of Umnugovi aimag. The starting point of the railway line is 570 kilometers from Ulaanbaatar and 100 kilometers from Dalanzadgad town of Umnugovi province, and connects to Gantsmod railway port (People's Republic of China) through Gashuunsukhait port (Mongolia). With this railway built, our country can increase export capacity by 30 million tons of coking and energy coal annually. It is also possible that Mongolia's mining companies will be able to compete in the global market for cheaper exports, which will support coal exports and China's ports (Huanghua, Tianjin, Qingdao, and Jinzhou) and third-country markets.

Tavantolgoi-Gashuunsukhait Railway Project



Project indicators:

Project work	Main road	Borders	ETT
Length of main line	208.5 km	30km	10km
Construction start date	2019.04	2019.06	2019.04
Construction start date	2021.12	2021.06	2021.08
Construction of duration	30 month	24 month	26 month
Axle load	25 tone	25 tone	25 tone
Main structure	<ul style="list-style-type: none"> 5 passing junction 16 bridge /1356 m/ 126 culvert 8 animal underpass 	<ul style="list-style-type: none"> 1 station 1 bridge, 5.9km 	<ul style="list-style-type: none"> 1 station 2 bridge
Transportation volume	30 million tone//year	30 million tone/year	30 million tone/year
Gauge	<ul style="list-style-type: none"> 1435 mm 	<ul style="list-style-type: none"> 1435 mm 	<ul style="list-style-type: none"> 1435 mm
Signaling communication	<ul style="list-style-type: none"> Semi automatic blocking system 	<ul style="list-style-type: none"> Semi automatic blocking system 	<ul style="list-style-type: none"> Semi automatic blocking system
Border point		<ul style="list-style-type: none"> Port of 703-704 	
Previous expenses	<ul style="list-style-type: none"> 279 million us dollar 		
Main work (rolling stock not included)	<ul style="list-style-type: none"> 375.3 million us dollar 	<ul style="list-style-type: none"> 116.8 million us dollar 	<ul style="list-style-type: none"> 24.3 million us dollar
Remaining investment (rolling stock not included)	<ul style="list-style-type: none"> 531.3 million us dollar 		
The budget cost (rolling stock not included)	<ul style="list-style-type: none"> 826.8 million us dollar 		
Rolling stock	<ul style="list-style-type: none"> 220 million us dollar (16 locomotives, 810 Wagons) 		
Total budget	<ul style="list-style-type: none"> 1.03 billion us dollar (Infrastructure + rolling stock) 		

PROJECT PROCESS

2008

- “Energy Resource” LLC was granted to build the base structure

2009

- Feasibility studies implemented by DBI, 1435mm. gauge

2010

- State Policy on Railway Transportation" was ratified.
- The license to construct the iron base structure of the first stage of railway policy is granted to the "Mongolian Railway" SOSC

2012

- “Mongolian Railway” SOSC was granted permit to build the railway structures of Phase 1 and Phase 2

2013

- Construction of the civil and track works contract was signed with Samsung C & T

2014

- The TT-GS railway gauge was set to be 1435mm.

2015

- Due to financial issues, construction has been suspended.

2016

- terminated the EPC contract with the general contractor.

RESEARCH STUDIES :

- **Feasibility Studies and research works:**

2008- General Feasibility study, Parsons Brinckerhoff Australia Pty Limited;

2009- Feasibility Study (narrow gauge) DBI

2011- Research for electrization, AECOM

2012- Engineering research for trans-load freight, Hua Tie

2012- Railway operations plan, Transportation simulation, Technical requirements of locomotives and wagons, Calibre

2012- Pre-Feasibility study (board gauge), AECOM

2012- DBI's Detailed Feasibility study monitoring, ZAZA, CANARAIL

2012- Plan for free up land, ERR

2013- Feasibility study (board gauge), AECOM

2013- Financial Modeling, BNP Paribas

- **Field study:**

2007- Aerograph, Monmet Engineering Group

2009- Geotechnical study, Soil trade;

2009- Water and environment study, Aquaterra;

2009- Engineering-geology investigation, Tavan-Undes;

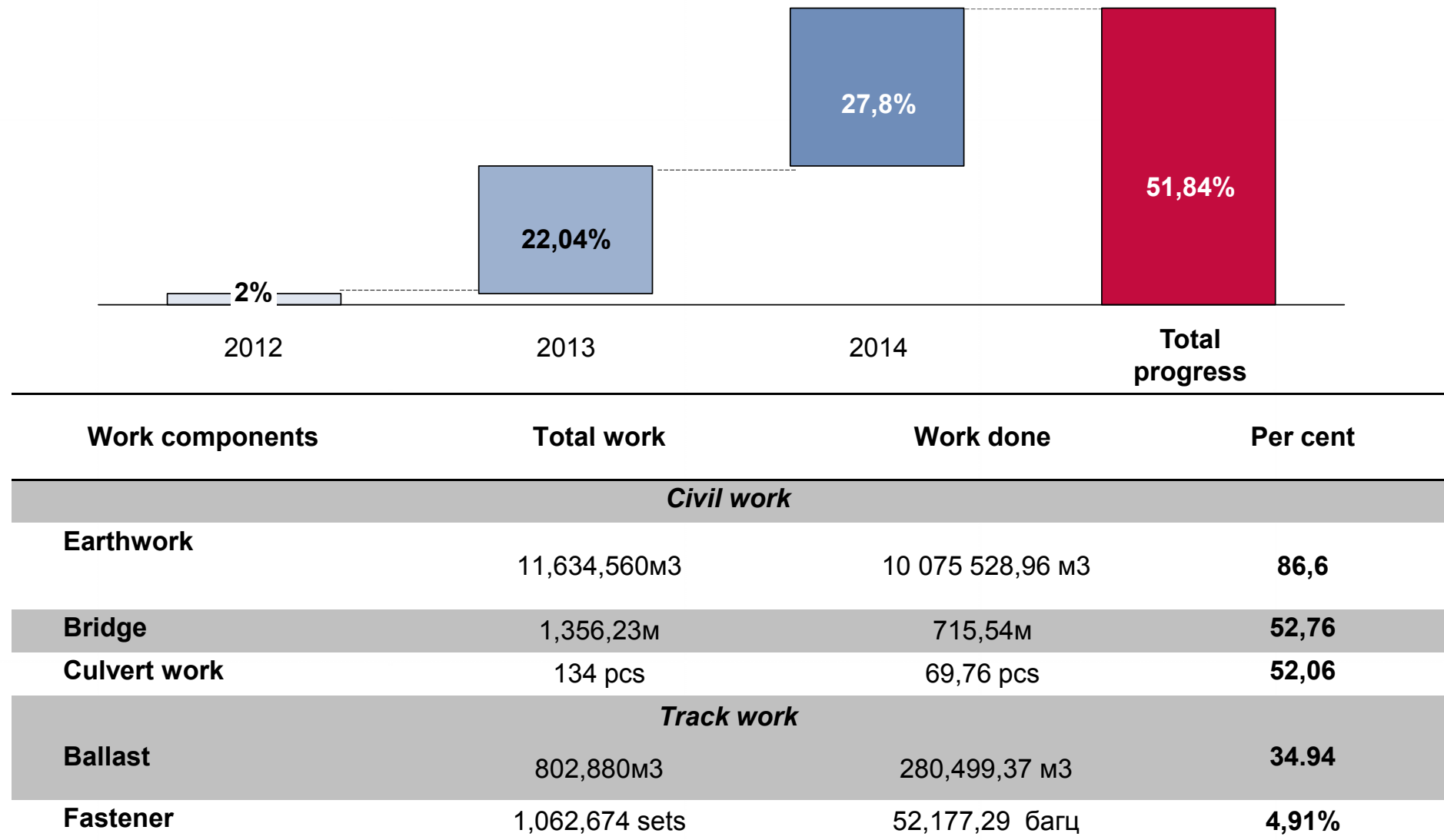
2012- Geodesy investigation, HBS, Air Survey;

2013- Archeology and paleontology research, Science Academy

- **Drawing:**

2013- Drawing of high and base infrastructure of board gauge /0-208+500/, Samsung C&T;

Step Progress of the Tavantolgoi-Gashuunsukhait railway construction work



Current construction work process of base infrastructures is done about 51.84% (86.6% of earthwork, 52.76% of bridge, 52.06% of pipe culverts)

Railway Transit Agreement between Mongolia and China (PRC) 2014.08.21

- The parties shall build railway ports from Gashuunsukhait-Gantsmod, Shiveehuren-Sekhe, Bichigt-Zuunhatavch, Sumber-Rashaan

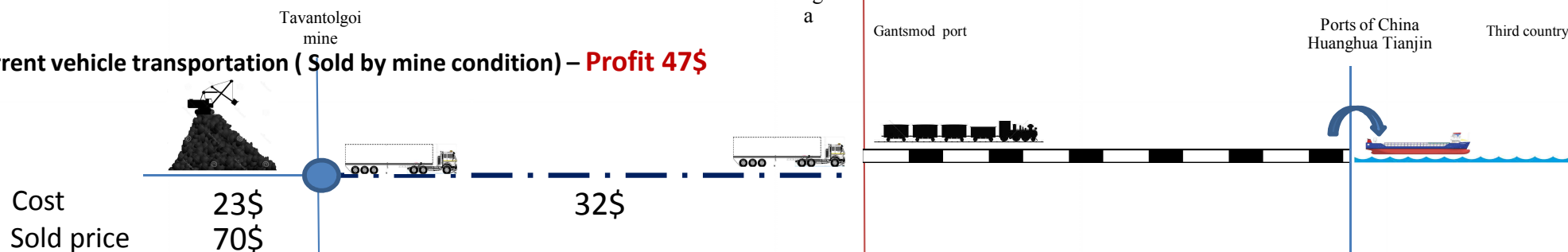
- By opening of these railway ports Party of China has agreed to provide 40 % discount rate on one third of the total freight exported to third countries through the territory of the People's Republic of China.

- The agreement was ratified by Mongolia, but China have not ratified it yet.

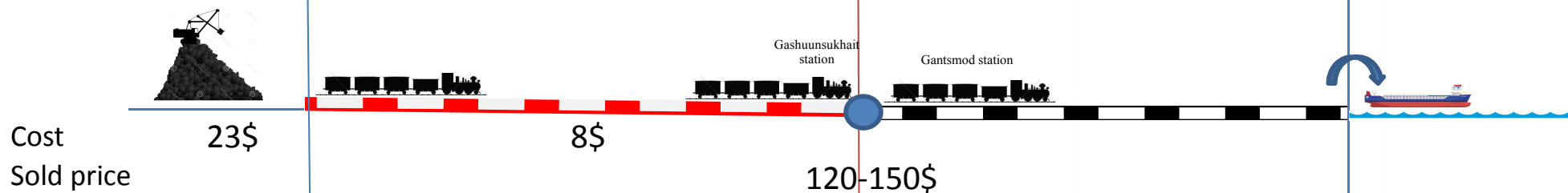


PROJECT BENEFITS: (COST STRUCTURE)

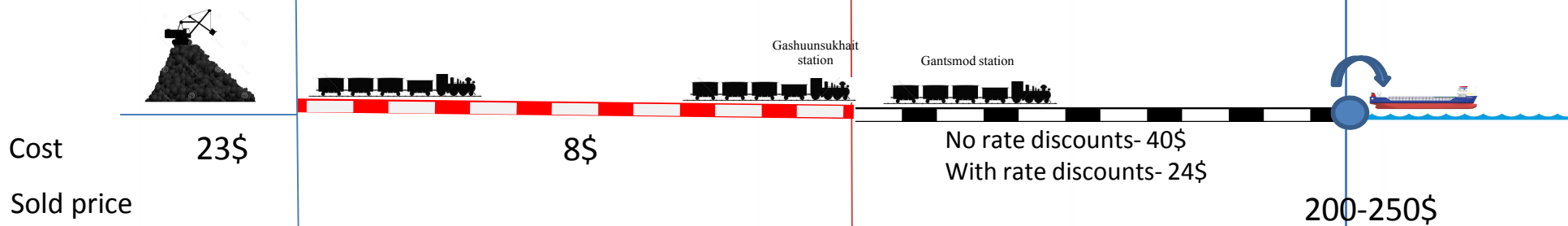
1. Current vehicle transportation (Sold by mine condition) – Profit 47\$



2. Railway transportation (Sold by border condition) – Profit 89\$



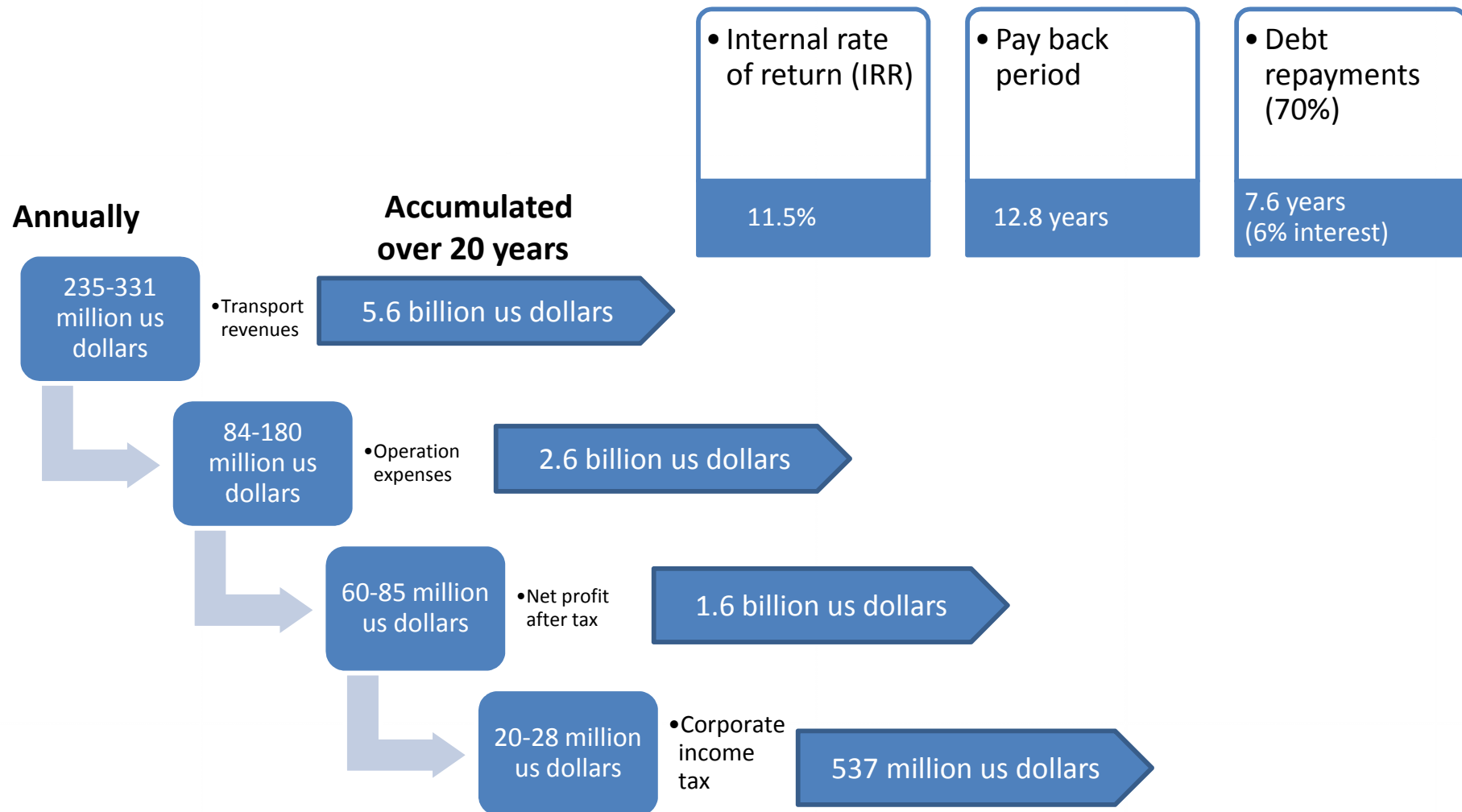
3. Railway transportation (Sold by sea port condition) - Profit 145\$



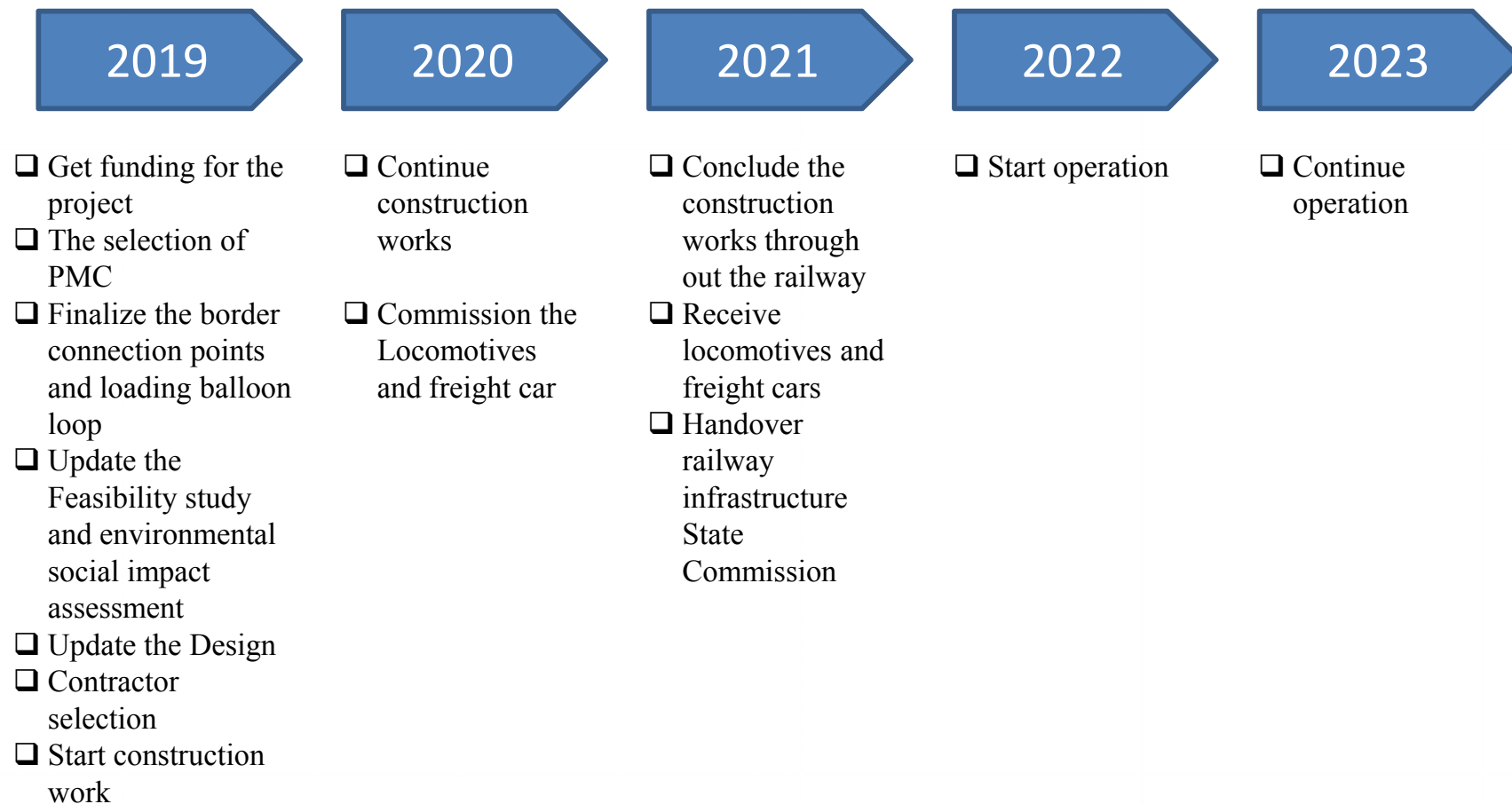
PROJECT BENEFITS: (IMPACT ON SOCIAL AND ECONOMIC):

- Supporting coal and copper exports will reduce transport costs within the territory of Mongolia and enhances the competitiveness of coal exports.
- Pasture degradation, dust, noise, soil and air pollution problems will be significantly reduced.
- Auto traffic accidents will decrease and traffic safety will increase.
- Tavantolgoi mines production capacity will be increased 2-3 times.
- Regularly, about 1200 job opportunities will be created. (about 1000 jobs in the construction phase, about 1200 jobs in operational phase)
- By making railway transport costs in the territory of Mongolia 8\$ per tone, the current road transport price will be reduced 4 times from 32US dollars.
- Freight will be increased to 30 million tone annually.
- Annual corporate tax of 20-28 million USD will be paid to the state, During the 25 years of operation accumulated amount of dividend will be about 1 billion USD to the investors.

PROJECT FINANCIAL PERFORMANCES:



IMPLEMENTATION PLAN OF TAVANTOLGOI-GASHUUNSUKHAIT PROJECT :



Brief Information of the Tavantolgoi-Zuunbayan Railway Project



Tavantolgoi-Zuunbayan project civil and track works construction started in May, 2019

Tavantolgoi-Zuunbayan (414.6 km)

Required investment ~1 billion USD

Construction duration – 2019 - 2020

Civil Work:

Earthwork - 36,481,586 m³

Bridge – 32 (2,580 m)

Box culverts - 65

Pipe culverts- 461

Track work:

Main line- 414.6 km

Axle load- 25 ton

Railway gauge: 1520 mm

Major Connection Points:

- Tavantolgoi coal mining
- Tsagaan Suvarga copper mining
- Kharmagtai copper mining etc.
- Sainshand Industrial Park

Capacity – 15 Mtpa

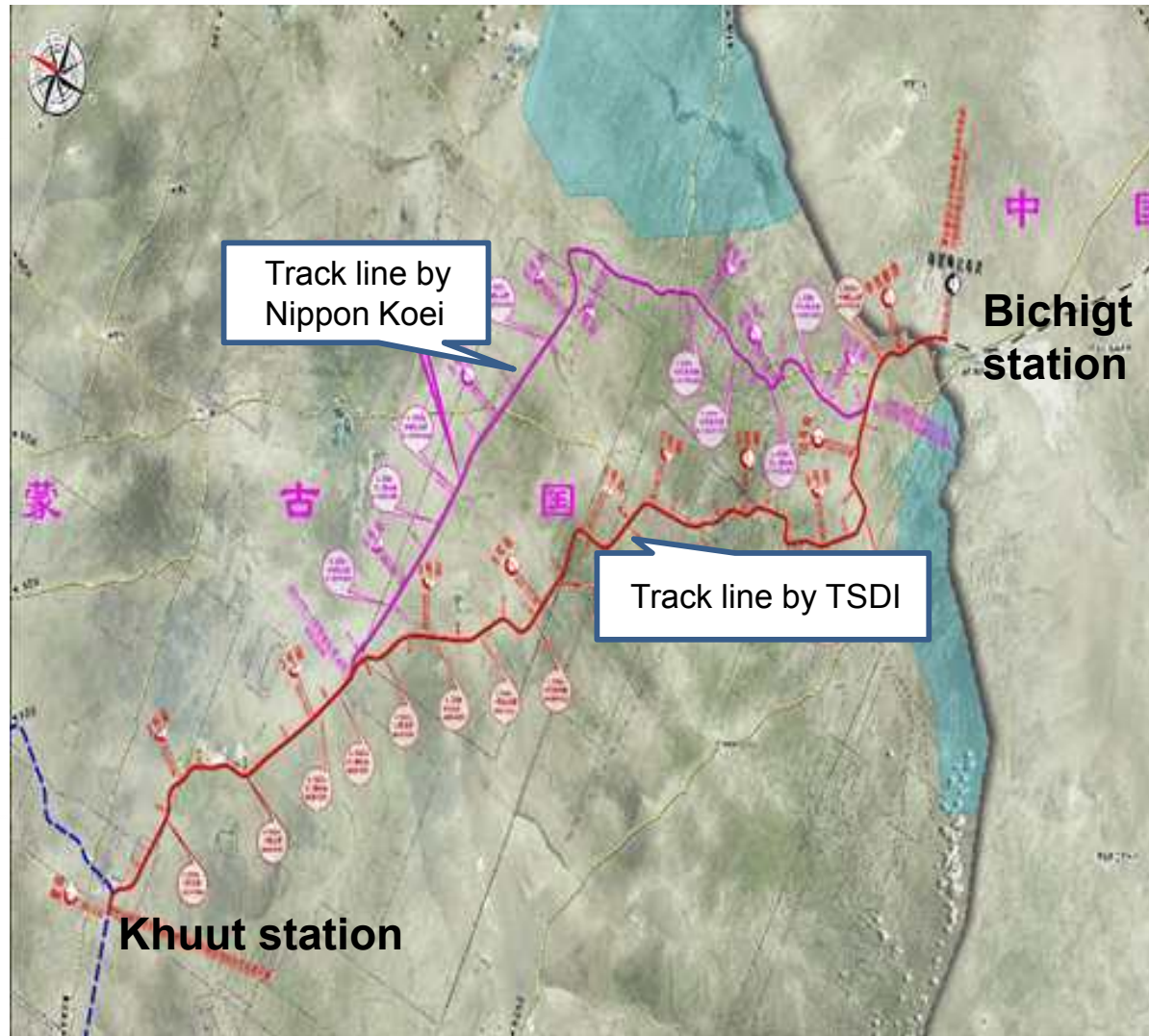
All researches and design were conducted: 100% “Mongolian Railways” SOSC developed the Feasibility study and Design of the Tavantolgoi –Zuunbayan Project in May, 2019.

Ereentsav-Choibalsan-Khuut-Bichigt: Eastern vertical corridor

- ❖ Within the 16th meeting of Heads of State Council of the Shanghai Cooperation Organization was held in Tashkent, capital of Uzbekistan, the third trilateral meeting of the heads of state of Mongolia, the People's Republic of China and Russian Federation is held on June 23, 2016 and leaders negotiated that establishing eastern economic corridor will be implemented when there is an economic feasibility.
- ❖ Ereentsav-Khuut, Khuut-Bichigt railway projects implementing Mongolian railway SOSC are included in this eastern corridor of the Mongolian territory.
- ❖ Firstly, we are working on to implement Khuut-Bichigt railway project and feasibility study will be finished on 2017.
- ❖ Construction work of Khuut-Bichigt is included in the Action Plan of the Government of Mongolia for 2016-2020.

1	Railway length	Khuut-Bichigt: 216 km Ereentsav-Khuut: 414 km
2	The amount of investment	Khuut-Bichigt: ~1.05 billion dollar Ereentsav-Khuut: ~1.98 billion dollar
3	The amount of cargo to transport	Khuut-Bichigt: 15 million tons
4	Main facility	<ul style="list-style-type: none"> • 4 stations • Transloading facility
5	Payback period	To be defined
6	Internal rate of return (IRR)	To be defined
7	Main cargo	Coal, zinc, petroleum, plumbum, tungsten, iron ore and rare-earth elements
8	Current situation	<ul style="list-style-type: none"> • In the amount of Railway tracks on Ereentsav-Choibalsan-Khuut-Bichigt had its technical drawing made by Nippon-Koei, Japan company. • Pre-feasibility study of Khuut-Choibalsan is being done by China Railway Engineering Corporation of PRC. • Having pre-feasibility study of Khuut-Bichigt done by Third Railway Survey and Design Institute Group, China.

Brief Information of Khuut-Bichigt Railway Project



Length of main line	234 km
Railway category	I
Total investment required	~US\$ 1.25 billion (preliminary)
Construction Duration	2020– 2022
Main structures	<ul style="list-style-type: none"> • 2 terminal station (Khuut and Bichigt) • 9 passing junctions • 13 bridges (10117 m)
Axle load	25 ton
Connection point	<ul style="list-style-type: none"> • Khuut mine of Mongolia • Zuunkhatavch port PRC
Transportation volume	<ul style="list-style-type: none"> • 12-15 Mtpa⁽¹⁾
IRR	To be determined.

1 – Preliminary calculation and can be varied due to market condition

Nariinsuhait-Shiveekhuren railway

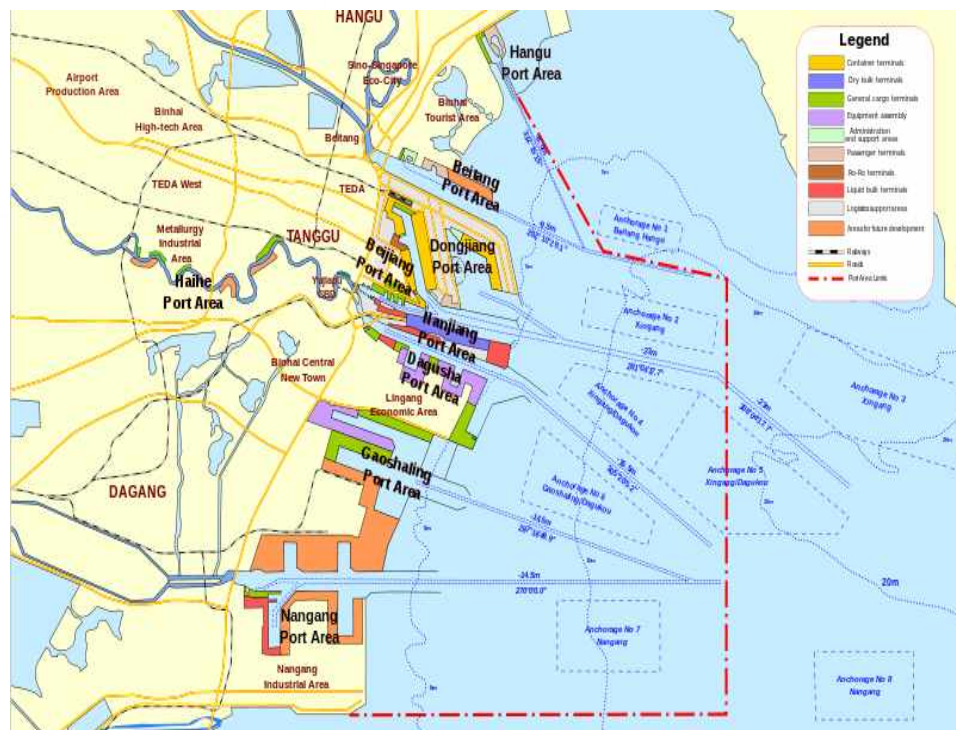


By building this railway, it is possible to transport coal and coal enriched commodities through railway and would connect to Linxe-Sekhe railway of Chinese railway networks at the port of Sekhe.

1	Railway length	45.5 km*
2	The amount of investment	148.3 million dollar*
2	The amount of cargo to transport	21 million tons*
3	The main capacity of railway	25 tons*
4	Main facility	<ul style="list-style-type: none"> • 2 station • 1 passing siding*
5	Payback period	6 years*
6	Internal rate of return (IRR)	14%*
7	Main freight	Coal
8	Current situation	<ul style="list-style-type: none"> • Pre-feasibility study of MTZ was done. • Two countries negotiated the point to cross border into Sekhe Port, China. • This railway included to construct and use in the Action plan of the Government of Mongolia for 2016-2020.

* Pre-feasibility study done by MTZ

Tianjin Transport and Logistics center



Project legal acts

1. A Memorandum of Understanding between Ministry of Road, Transportation, Construction and Urban Development of Mongolia (former title) and People's Government of Tianjin city of China, dated 15th of April, 2009.
2. The Government Resolution No.152, dated 27th of April, 2013, to lease and use 10-hectare land in the area of Dongjiang Free Trade Port Zone of Tianjin city of China for a period of 50 years.

1	Shareholding and financing structure:	Tianjin Port (Group) CO., LTD will own 51%, Mongolian side will own 49% of the logistics centers' share. "MTZ" SOEC will own 51% of Mongolian side.
2	Total estimated project cost	~ USD 34 million
3	The development of the Tianjin Transport and Logistics Center infrastructure consists of the following main packages	<ul style="list-style-type: none"> - Industry (7236 m²); - Warehouse (11538 m²); - Temperature-controlled warehouse (6684 m²); - Container yard (13679 m²); - Mining products yard (5140 m²); - Inspection yard (7135 m²);
4	Payback period	11 years
5	Internal rate of return (IRR)	7%
6	<u>Current status of the project</u>	<p>The feasibility study was finished on December, 2019.</p> <p>Tianjin-Mongolian Joint-Stock Company established in June, 2019</p> <p>Various research work related to project is done.</p>



Thank you!

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