

APPENDIX 2**Management Structure of Seoul Metro Line 9****1. Background of Construction of Line 9****1.1 Subway Construction Plan Phase 3**

Lines 1 to 4 of the Seoul Subway were constructed in Phase 1 between 1971 and 1985. The total length of the four lines is 123.5 km with 107 stations. In Phase 2, Lines 5 to 8 were constructed between 1990 and 1999. Their total length of these lines is 152 km.

Line 9 is now planned for implementation in Phase 3. The Third Subway Promotion Basic Plan itself was authorized in 1993. In it, four new subway lines with a total length of 120 km and the extension of one existing line were planned. In 1997 the third “Subway Construction Propulsion Program” was authorized and Line 9 and the extension of Line 3 were chosen to be first because they had high validity as projects.

Also, in this year, thought was given to bring rapid train service and a direct connection to the Gimpo International Airport Station. Rapid train service was one of the features of Line 9, along with its direct connection to Incheon International Airport Railroad. However the direct connection was not realized.

1.1 Decision to Utilize Private Company Operation Business Model

In July 1999, the Seoul Metropolitan Government Office of Subway Construction announced the “Line 9 Construction Basic Plan”. The Council for Urban Transport Policy of the Ministry of Construction and Transportation deliberated on the plan and before delivering the implementation program, instruction was given to conduct a detailed study into strategies for inviting private. In August 1999, the Seoul Metropolitan Government Office of Subway Construction reported the following key principles to the mayor. These included provisions for:

- Proactively inviting private capital investment in order to introduce ingenuity and private-section participation.
- Allowing deep-level construction and taking steps to minimize the distance between the transfer stations; designing facilities to enhance passenger flow and convenience.
- Introducing equipment that can provide a comfortable passenger environment, such as platform screen doors and a cross-seat style layout.
- Shifting the operation and maintenance management style to a centralized control system and further striving to reduce the number of employees in each operation.

In response, the “Preliminary Seoul City Railroad (Line 9 -- Phase 1) Construction Project” was

authorized and finalized by the Surface Transportation Bureau of Ministry of Construction and Transportation in November 1999.

1.3 Background to Proactively Promoting Private Sector Involvement

There are several possible reasons why Line 9 was proposed as a private project. The prime reason was that the Seoul subway system had been losing money and increasing its debt. In Seoul, Line 1 to Line 4 were run by Seoul Metro and Line 5 to Line 8 were run by Seoul Metropolitan Rapid Transit Corporation. In 1999, Seoul Metro's debt was 338.4B-Won and Seoul Metropolitan Rapid Transit Corporation's debt was 252.5B-Won and they were showing every sign of continuing to increase their debt. At that time, both were public enterprises, which meant that their fares were regulated to an unrealistically low level because of political reasons. Currently, the basic fare is 900-Won (65-JPY based on the exchange rate at the end of July, 2011; 100-Won = JPY 7.2). Because of this background, it was felt that private company would face fewer restrictions and could establish a realistic fare scheme.

2. Outline of Line 9

2.1 Overview of the Line

A vertical separation system was applied to Line 9. As a private investment project, the PPP operator constructed the facilities needed for operations first (except for the infrastructure and the operator would then be given the rights to manage and operate the facilities for 30 years after opening, which is called a Build-Transfer-Operate (BTO) system. In other words, upon completion of construction, the facilities were donated to the City of Seoul and in return the PPP Operator received the rights of administrative operation of the facilities for 30 years. The City of Seoul was to execute the civil engineering work and build the infrastructure within 42 months. The following are the items authorized in the execution plan. Table A2.1 shows the detailed contents. Table A2.2 lists the amount of money. Figure A2.1 shows the Seoul subway map, including Line 9.

Table A2.1 Authorized Items for Operation Section for Line 9 (Step 1)

Project Title	Private Investment Business of Seoul Urban Railroad No.9(Step 1, Business operation)	
Project Owner	Seoul Metro Line 9 Corporation	
Project Description	Section	Gangseo-gu, Gaehwa-dong ~ Gangnam-gu, Nonhyeon-dong (Gimpo Airport~Bonpo)
	Line Length	25.5km
	Project Scope	Buildings (including those necessary for civil engineering), tracks,

		power supply, catenaries, station power supply, rolling stock, rolling stock maintenance and mechanical equipment, communication/AFC, signals
	Station & Rail Yard	<ul style="list-style-type: none"> • Stations: 25 • Stabling yards: 1
Project Goal	<ul style="list-style-type: none"> • Solving city traffic problems, promoting development and contributing to balanced urban growth • Executing the construction in a functional, comfortable and efficient way • Executing construction according to the schedule by properly providing materials and systems 	
Project Outline	<ul style="list-style-type: none"> • Total length of Seoul Metro Line 9 is 39.7km with 37 stations • Seoul Metro Line 9 Corporation was appointed as the business body for the first section of Line 9 and they created the project plan for construction • The total length of the first section of Line 9 was 25.5km with 25 stations and one stabling yard. 	
Construction Period	<ul style="list-style-type: none"> • 39 months after breaking ground 	
Depot	Location	No 400, Gaehwa-dong, Gangseo-Gu, Seoul /Haya Area, Gaeyang-Gu, Incheon
	Structure	Steel frame or steel reinforced concrete structure
	Use	Passenger transport facilities
	Site Area	379,683.00m ²
	Building Space	Depot: 41,149.90 m ² Gaehwa Terminal Station :3,435.65 m ²
	Floor Space	Depot: 52,243.48 m ² Gaehwa Terminal Station : 4,200.40 m ²
	Floor Space Ratio	14.26% (Stabling yard and Gaehwa Terminal Station)
	Number of buildings	17 (main workshop and others)
	Stabling Capacity	Designated by Law: 290(200 m ² /car), Planed: 306

Table A2.2 Total Operating Cost of Private Project in the First Section of Line 9

Classification		2003 Constant Price (Won in Millions)
Design Cost	Design Cost	183
	Total	183
Construction Cost	Track	585
	Building	1,620
	Mechanical Equipment	2,409
	Power	1,195
	Signaling	511
	Telecomm/ATC	745
	Stabling yard	219
	Rolling Stock	948
	Total	8,232
Collateral Cost	Construction Work Management	125
	Design Work Management	15
	Rolling Stock Inspection Management	11
	Project Management	100
	Project Validity Analysis	10
	Construction Work Insurance	31
	Project Execution Warranty	6
	Total	298
Operation and Facility Cost	Commissioning	25
	Total	25
Operation Reserve	Operation Reserve	257
	Total	257
Grand Total		8,995

※ Financial support from the City of Seoul 420B-Won (2003 constant price); Private operation cost 479.5B-Won (2003 constant price)



From <http://www.metro9.co.kr/eng/index.jsp>

Figure A2.1; Seoul Subway Line Map including Opened Section of Line 9

2.2 Outline of the Agreement Between the City of Seoul and the PPP Operator

2.2.1 Period of Free Charge

The operator can operate and manage the line for 30 years after opening free of charge.

2.2.2 The PPP Operator and the capital investment structure

The PPP Operator was Seoul Metro Line 9 Corporation and its capital investors were as listed in Table 3.

Table A2.3; Capital Investors for Seoul Metro Line 9

Capital Investors		Capital Owned (%)	Remarks
Investors from Construction Industry (51%)	Hyundai-Rotem Co., Ltd	25.000	Largest Investor
	Hyundai Engineering & Construction Co., Ltd.,	7.640	
	POSDATA CO., Ltd	5.095	
	Poscon Co., Ltd	5.095	
	Deawoo Engineering Co., Ltd	2.050	
	SAMPYO E&C Co., Ltd	2.040	
	Ultra Construction & Engineering Co., Ltd	2.040	
	Sanyong Engineering & Construction CO., LTD	2.040	
Investors from Financial Industry (49%)	The Korean Road Infrastructure Fund	24.525	
	Shinhan Bank	14.900	
	LIG Fire & Marine Insurance Co., Ltd.,	2.992	
	Shinhan Life Insurance Co., Ltd.,	2.992	
	Industrial Bank of Korea	2.394	
	Dongbu Insurance Co., Ltd.,	1,197	
Total		100	

2.2.3 Total operation cost

The total operation cost was 899.5B-Won. It was broken down into contributions for construction from public sectors (420.0B-Won) and private sector investment (479.5B-Won). (Constant price base: January 2, 2003)

2.2.4 Operation and maintenance

Operation and maintenance cost was 2,842.7B-Won. (Constant price base: January 1, 2003)

2.2.5 Operation revenue rate and fare

Post-tax rate of return was fixed at 8.9%, which is unchangeable until termination of agreement. The fare should be determined independently within the contracted fare standard.

[Adjustment of Fare]

(1) Calculation of basic fare in the first year

Basic fare in the first year=1000 Won (Constant price base: January 2, 2003)

$$\times (1 + it)^n \times (1 \times 3.41\%)^n$$

Where,

it: inflation rate in relevant fiscal year (t) during construction period

n: number of relevant fiscal year for construction

(2) Adjusted fare in the following fiscal years calculated based on the fare in the first year.

- Year-on-year adjusted fare = the fare in previous fiscal year x (1+rate of increase in consumer price index in the previous fiscal year) x (1+actual fare appreciation rate in relevant fiscal year).

Table A2.4; Yearly Fare Table at Constant Price

Fiscal year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Standard fare (Won)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Actual fare appreciation rate (%)	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41	3.41
Basic fare (Won)	1,264	1,307	1,352	1,398	1,446	1,495	1,546	1,599	1,653	1,710
Operation Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Standard fare (Won)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Actual fare appreciation rate (%)	1.49	1.49	1.49	1.49	1.49	—	—	—	—	—
Basic fare (Won)	1,735	1,761	1,787	1,814	1,840	1,840	1,840	1,840	1,840	1,840
Operation Year	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Standard fare (Won)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Actual fare appreciation rate (%)	—	—	—	—	—	—	—	—	—	—
Basic fare (Won)	1,814	1,840	1,840	1,840	1,840	1,814	1,840	1,840	1,840	1,840

Note: "Standard fare" and "Basic fare" are at the constant price based of Jan.2, 2003

2.2.6 Payment on business termination

If this business would be terminated, the amount which the City of Seoul has to pay to the PPP Operator would be calculated by a specialized agent, who was chosen by agreement of both parties and comply with the agreement shown in Appendix 16 (Calculation of Payment on Business Termination).

2.2.7 Estimation of Fare Income

Estimated fare income applied for a PPP Operator when it is appointed is as in following.

TableA2.5; Estimation of Fare Income

Fiscal Year	Basic Fare (Won)	Fare Receipt Forecast (100M-Won)			Basic Compensation Amount and Basic Redemption Amount (100M-Won)	
		Basic	Phase 2	Total	Basic Compensation Amount	Basic Redemption Amount
2009	1,264	476		476	428	523
2010	1,307	729		729	656	802
2011	1,352	864		864	778	950
2012	1,398	942		942	848	1,036
2013	1,446	1,013		1,013	912	1,114
2014	1,495	1,080		1,080	864	1,295
2015	1,546	1,140	24	1,164	931	1,396
2016	1,599	1,207	62	1,269	1,015	1,523
2017	1,653	1,289	66	1,355	1,084	1,626
2018	1,710	1,365	70	1,435	1,148	1,722
2019	1,735	1,417	71	1,488	1,041	1,934
2020	1,761	1,460	72	1,533	1,073	1,992
2021	1,787	1,505	73	1,578	1,105	2,052
2022	1,814	1,551	75	1,625	1,138	2,113
2023	1,840	1,597	76	1,673	1,171	2,175
2024	1,840	1,619	77	1,696		
2025	1,840	1,632	77	1,710		
2026	1,840	1,646	78	1,723		
2027	1,840	1,659	79	1,737		
2028	1,840	1,672	79	1,751		
2029	1,840	1,682	80	1,762		
2030	1,840	1,691	80	1,771		
2031	1,840	1,700	80	1,780		
2032	1,840	1,709	81	1,789		
2033	1,840	1,717	81	1,799		
2034	1,840	1,723	81	1,804		
2035	1,840	1,728	82	1,809		
2036	1,840	1,732	82	1,814		
2037	1,840	1,736	82	1,818		
2038	1,840	1,741	82	1,823		
2039	1,840	430	20	450		

Note; At constant price base of Jan. 2, 2003

3. Consignment of operation and maintenance

3.1 Background of consignment of operation and maintenance

The following is a quote from the Line 9 construction history.

“Previously, all subway businesses in Korea have been run by public corporations.

This kind of management style was derived from the Japanese business model which had been established several decades ago. It was also the model when the citizens had totally depended on public transportation, and current economic circumstances are thoroughly different from the ones at that time. Now Koreans are pursuing technological progress, and cleanliness and punctuality to make level of their systems among the highest in world. However, technical improvements in last decades have not been fully reflected and utilized yet. Also, existing systems have some points to be improved, such as redundant personnel distribution and unnecessary expense for maintenance. The Korean government and the local governments are seeking solutions for these kinds of extravagance in the public subway companies. That is why the City of Seoul decided to establish the Line 9 operation company utilizing private capital, which is the first-ever in Korean railway management history.”

3.2 Veolia Transport

“Veolia Transport and Seoul Metro Line 9 Corporation had their first initial contact in 2003. The series of serious discussion regarding Line 9 operation and maintenance started in the beginning of 2005 and Veolia signed Memorandum of Understanding with Hyundai-Rotem in June, 2006.

Veolia Transport had been formed as a solely owned subsidiary of Veolia Environment Group, the world’s largest environment and local government service company, which was established in 1853. The total sales of the Veolia Environment Group in 2004 were 29.2 B dollars. Currently, the group has more than 250,000 employees in over 65 countries. Its major business areas are energy, water, waste management, and carriage service.

Veolia Transport, known as Connex until recently, achieved a sales of 4B dollar in 2004 on a stand-alone basis. It has 60,000 employees in over 25 countries providing public transportation management services. Veolia Transport has a 130-year history and manages the transportation for 2.1 billion passengers on some 25,000 buses (including those for tourism) and 3,500 rail vehicles annually. Nearly half of its total sales come from its railway transportation management business, and the other half from its land transportation related businesses.

Veolia Transport holds the position of world leader in the area of light and heavy electric railroads, where it has 13 systems, including those under development. Veolia Transportation runs many taxi companies globally, and has 50 ferries for a broad range marine transportation. Most of Veolia Transport’s businesses are run in the form of exclusive contracts and consignment contracts; the total number of contracts is over 5,000.

Veolia Transport has extensive experience in various fields of the railway business, from heavy railroad to subways and new traffic systems. Its heavy railroad business is deployed mainly in

Germany, Sweden and France, with a total length reaching several hundred kilometers. In the subway business, Veolia Transport manages the entire subway network in Stockholm, Sweden as well as the VAL Metro in Toulouse, France. In the commuter train business, it manages railroad networks in Boston and Los Angeles in the United States, as well as in Melbourne, Australia and Auckland, New Zealand. In light railway business, it manages systems in Saint-Etienne, Rouen and Bordeaux in France, one system each in Dublin, Ireland and Berlin, Germany, two systems in Barcelona, Spain, several systems in Sweden (Lidingöbanan • Saltsjöbanan • Tvärbanan/Nockebybanan • Norrköpings Spårvägar), and systems in Sydney, Australia and Jerusalem, Israel, whose system is now under construction.

3.3 Structure of Operating and Maintenance Agreement

The operating and maintenance contract is effective until the end of the tenth year from the start of business opening. The agreement is also effective during the preparation period, which started with the execution of the agreement.

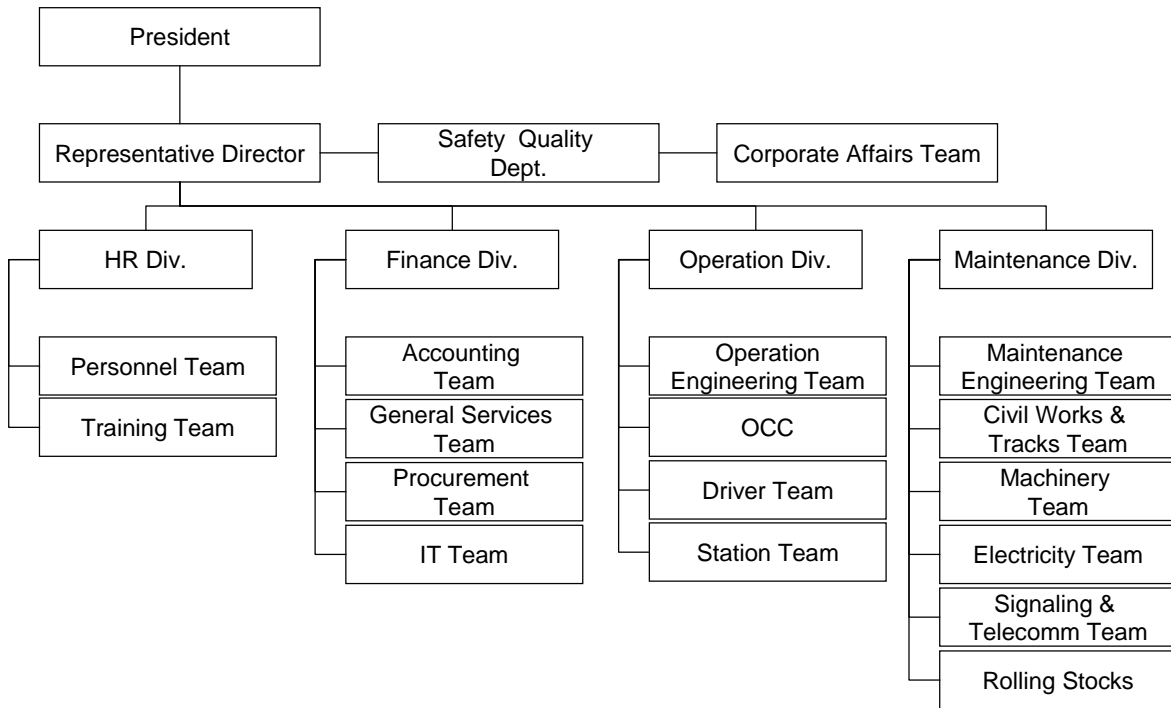
Veolia Transport established Veolia Transport Korea for business administration in Korea. Veolia Transport Korea established the O&M organization and signed the operation and maintenance agreement with the Seoul Metro Line 9 Corporation.

3.4 Scope and functions of consignment

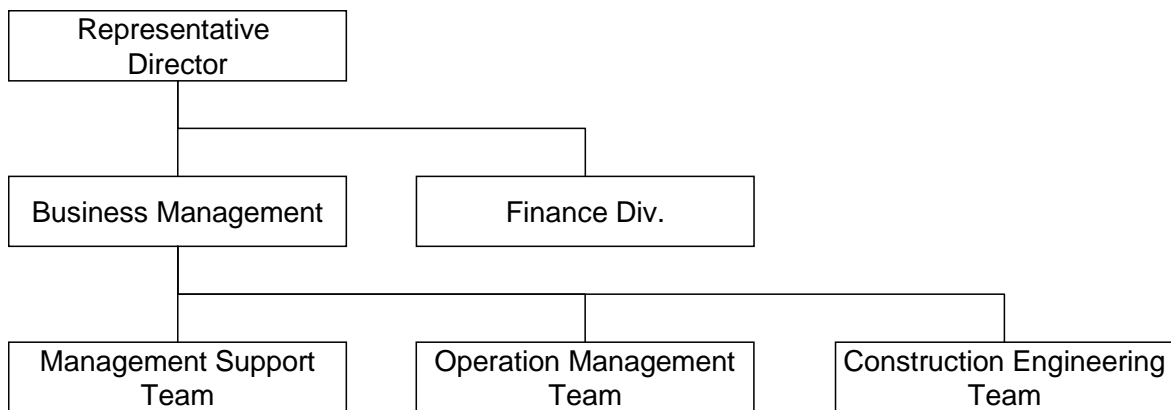
Category	Scope of O&M consignment
Training	-Delivering training to the train drivers, OCC and station staff. -Delivering training to maintenance staff (supporting rolling stock & equipment suppliers).
Commissioning	-Assigning test train driver, and management and maintenance staff needed for trial run of rolling stock and equipment
Commercial run test	-Assigning operation and maintenance staff. -Supplying spare parts and consumer goods.
Safety and operation manuals	-Preparing manuals regarding safety, operation, and others.
Operating permission	-Providing support to determine conditions for operation.
Railway operation	-O&M organization to have responsibility.
OCC management	-O&M organization to have responsibility.
Ticket machines and gates	-Assigning specialist to select ticket machine. -Managing ticket machines and gates, ticket machine service and maintenance, and cash collection.
Ticket management	-Ticketing for staffs, such as drivers, maintenance staff, and children, and refilling ticket paper.
Maintenance of station building	-Leading and instructing on ancillary business from safe and environmental aspects to O&M organization.
Cleaning of station and railroad	-Executed by O&M organization. Private shops are excluded.
Customer information	-The City of Seoul to have responsibility. The same practice as in the other lines.
Cleaning of rolling stock	-O&M organization to have responsibility.

Preventive maintenance of Rolling stock	-O&M organization to have responsibility. The drivers in stabling tracks to be included.
Corrective maintenance of rolling stock	-O&M organization to have responsibility.
Heavy maintenance of rolling stock	-O&M organization to have responsibility.
Equipment and tools for rolling stock maintenance	-Supplying maintenance work for maintenance equipment, spare parts, and regular equipment.
Spare parts for rolling stock maintenance	- Supplying repair parts and spare parts.
Depot	-O&M organization to execute preventative and corrective maintenance.
Tracks	-O&M organization to execute preventative and corrective maintenance.
Signaling & Telecom	-O&M organization to execute preventative and corrective maintenance.
Ticketing	-Administering jobs regarding ticket machines and gates, ticket machine maintenance, and cash collection.
Power	-O&M organization to execute preventative and corrective maintenance.
-Lighting and mechanical equipment in station buildings	-O&M organization to execute preventative and corrective maintenance -Maintaining elevator and escalator.
-Locking of station building	-O&M organization to execute preventative and corrective maintenance.
-Lighting and mechanical equipment in tunnels	-O&M organization to execute preventative and corrective maintenance.
-Tunnels	-Inspecting and reporting on deficit by daily basis. -Executing detailed examination including regular inspection in accordance with the law and preventative and corrective maintenance.
-Station building	-Inspecting and reporting on deficit by daily basis. -Executing detailed examination including regular inspection in accordance with the law and preventative and corrective maintenance.
-Maintenance equipment and tools for civil engineering	-Supplying maintenance work for maintenance equipment, spare parts, and regular equipment.
Maintenance parts and work equipment	-Only applying for regular inspection and safety inspection.

Reference 1 The O&M organization - Organization Chart



Reference 2 Seoul Metro Line 9 Corporation - Organization Chart



Referene3 Recent news release regarding Line 9

(1)*The AJU Business*, “Line 9, 110M-Won in the Red” (May 11, 2011)

Seoul Metro Line 9, the private railroad company received 470M-Won funding from the City of Seoul. The Seoul Metro Line 9 had been creating a budget deficit of 110M-Won or more since its opening of business in 2009.

The biggest shareholder of Seoul Metro Line 9 is Hyundai-Rotem who provided 25% of the capital. The remaining capital (75%) is provided by other private companies.

On May 10, the Financial Supervisory Service said that the City of Seoul had funded 477.5M-Won to Seoul Metro Line 9 for 7 years from 2004.

Accumulative net deficit in the same period recorded 141.4M-Won. The net deficit after opening in 2009 was accumulated to 116.8M-Won, which was 82.63% of total accumulative net deficit. Also, the capital fund has been undermined for 8 consecutive years.

The City of Seoul and Seoul Metro Line 9 Corporation closed the BTO contract in May, 2005. If actual the fare receipts were below the estimation throughout the 15 years following the opening, the City of Seoul would compensate for the shortfall according to the contract.

The criteria for compensation are less than 90% for the first five years, less than 80% for the second five years, and less than 70% for the third five years. The City of Seoul compensated 14,200M-Won according to this scheme.

The total amount of assistant grant funding throughout the 7 years until last year was 491,700M-Won, including the above.

There are 13 capital investors for Line 9, including Hyundai-Rotem (25%), Macquarie Korea Infrastructure Fund (24.53%), Shinhan Bank (14.90%), and Posco ICT (10.19%)

Veolia Transport Korea, and Hyundai-Rotem established the Line 9 operation and maintenance company in 2007. Veolia Transport Korea took 80% stake and Hyundai-Rotem took 20% stake.

The operation and maintenance company posted 7,200M-Won of accumulative net income from 2009 to 2010, while Seoul Metro Line 9 reported a net deficit.

The operating and management company paid out 2,130M-Won and 2,270M-Won of cash dividends in 2009 and 2010 respectively. Veolia Transport Korea received 3,520M-Won and Hyundai-Rotem received 880M-Won.

Seoul Metro Line 9 started legal action against the City of Seoul in last April for obtaining tax exemption for the 2,380M-Won. Line 9 claimed that the City of Seoul had not included the acquisition tax in the assets at the time of contract.

An official of Line 9 said that “the acquisition tax related lawsuit has not been concluded yet” means that “the City of Seoul can answer the question in regards to the amount of subsidy funding last year”.

An official of the City of Seoul said that they had only received last year's auditing report, and the amount of funding has not been fixed yet.

This official added that Line 9 was just one of the private capital invitation models and that fare receipt has been gradually getting closer to the estimation.

(2) *Construction Economy Press*, "32,200M-Won Funded to Seoul Metro Line 9 for Balancing its Deficit" (July 11, 2011)

Last year, Seoul Metro Line 9 was funded 32,200M-Won to compensate its deficit balance.

On July 11, the City of Seoul announced that they had reached an agreement with Seoul Metro Line 9 Corporation, in which the city would provide it with 29,200M-Won as the minimum fare income compensate payment, and 3,000M-Won as the free-ride assistance grant, or 32,200M-Won in total.

This was based on the agreement that the city had signed with Seoul Metro Line 9 in 2005, in which the city would collect financing of more than 1,000M-Won from private investors for establishment of Line 9 and its construction. In return, if the fare income did not meet the estimation, the city would provide partial compensation.

Criteria for compensation are less than 90% for the first five years, less than 80% for the second five years, and less than 70% for the third five years.

Seoul Metro Line 9 had expected to receive 83,800M-Won in fare income, but the actual fare income was only 46,100M-Won, which was 53% of estimation.

APPENDIX 3**The Systems of Subsidies for Improvement and Operation of Railway in Europe,US and Japan**

http://www.jrtt.go.jp/business/train_support.htm

Metropolitan Area	Roles of National and Local Government and Subsidies for Railway Development	Roles of National and Local Governments in Railway Passenger Operations
Ile-de-France	<p>-National government makes an urban development basic plan. Under the plan, Contract of Plan (Contrat de plan) is concluded between National government and region.</p> <p>Costs are shared among national government, Region and Operators (RFF or RATP). There are low-interest loans in the region available for the Operators</p>	<p>-National government administrates and coordinates public transport through le Syndicat des Transports d'Ile-de-France (STIF).</p> <p>-Under the contract with operators, STIF commits management to operators providing social compensation for fares, inclusive subsidy, sales incentives, bonuses or penalties for services, etc.</p>
Berlin and Stuttgart	<p>- Provincial Government is responsible for making infrastructure development plans regarding public local passenger services, and bears the cost.</p> <p>- National Government provides a part of the funds from mineral oil tax.</p>	<p>- National and provincial governments and municipalities establish Transport Association (Verkehrsbund) for promotion of local passenger services, and introduce common fare system, allocate subsidies and so on.</p> <p>- Province and municipalities fill up a deficiency in operating costs for public local passenger services.</p> <p>- National government grants a package subsidy to province as a part of the funds.</p>
London	<p>- London Regional Transport (LRT) makes a plan after consultation with national government, municipalities, TOCs (Train Operating Companies) and so on. National government and municipalities grant subsidies and loans to LRT. (National government establishes External Financing Limits (EFL) for LRT every year)</p>	<p>- A part of subsidy provided by national government is used to cover operation deficit of LRT.</p>
London	<p>- As for Docklands Light Rail, national government makes a tender for design, construction, fund raising and maintenance collectively. National government and autonomies bear a part of construction costs. (PFI system).</p> <p>- See Appendix 4 for facilities of Network Rail (former Railtrack) used by TOCs.</p>	<p>- See Appendix 4 for major railways of TOCs</p>
Greater Manchester	<p>- Passenger Transport Executives (PTE) applies to national government for investment plan of highways and public transport together every year. National government grants subsidy or loan to PTE upon application.</p>	<p>- National Government provides Metropolitan Railway Passenger Support Grant (MRPS) to PTE.</p>

	- As for Metrolink, Passenger Transport Executive (PTE) makes a tender under supervision of national government for design, construction, operation and maintenance altogether (DBOM system). National government, PTE and European Regional Development Fund subsidize design and construction.	- As for Metrolink, PTE decides operator based on DBOM system, and provides subsidy for operation and maintenance.
	- See Appendix 4 for facilities of Network Rail (former Railtrack's) used by TOCs.	- See Appendix 4 for TOCs
Rome	- As for FS (Ferrovie dello Stato), FS makes a plan, and implements it with an approval of National government. National government grants subsidy.	- National government grants subsidy for public transport services.
	- Lazio Region and the city of Rome make a plan and do the construction as far as Metro and Trambus are concerned.	- Deficit incurred from restraint of fare level is compensated by Region through national subsidy (Authorization on urban transport was transferred from national government to Region from Jan. 1, 2000, and a tender system is to be introduced in 2003)
Milan	- FS makes a plan about FS and FNM, and implements the plan with an approval of national government. National government grants subsidy.	- National government grants subsidy for public transport services.
Milan	- Lombardia Region and Milan City make a plan and do the construction as far as ATM (Azienda Trasporti Milanesi) is concerned.	- Deficit incurred from restraint of fare level is compensated by Region through national subsidy (Authorization on urban transport was transferred from national government to Region from Jan.1, 2000, and a tender system is to be introduced in 2003)
Madrid	- The development plan is solely done by the Madrid consortium, Consorcio Regional de Transportes de Madrid (CRTM). - Investment is made basically by the province of Madrid, and partially by the Government and cities.	- Urban Railway systems of RENFE (Red Nacional de los Ferrocarriles Españoles) are subsidized by the national government. For other railway companies, CRTM distributes the subsidies granted by autonomies, the government and municipalities.
Barcelona	- Investment had been made by the government and municipal province equally until Barcelona Urban Transport Public Corporation, ATM (Autoritat del Transport Metropolita) was established in 1997. . (based on Intermodal Transport Plan, 1993)	- The urban railway system of RENFE is subsidized by the national government. - National government and ATM compensate for the deficit of Barcelona subway of FGC (Ferrocarrils de la Generalitat de Catalunya) by 45% and 55% respectively.
	- After ATM was established, ATM is to make development plan, and the municipal province is mainly to bear the development costs of the Catalunian railway and subway. National government subsidizes RENFE 100%.	

	<ul style="list-style-type: none"> - ATM has a contract with the government regarding the plan, and an agreement with the municipal province regarding investment and standard of subsidy. 	
Stockholm	<ul style="list-style-type: none"> - Investment plans for Stockholm transport company, SL, require an approval by the County Council. The county of Stockholm bear investment costs in SL, partly funded by national government. 	<ul style="list-style-type: none"> - The County of Stockholm grants SL subsidies required for its operation. - SL sets a standard of services of operation and selects the operating companies through public tenders.
New York	<ul style="list-style-type: none"> - State and local governments are basically responsible for the development and its funding of urban railways. Federal government also provides funds from Highway Trust Fund (sources: gasoline taxes, etc) and General Revenues. - New York Metropolitan Transportation Authority (NYMTA) draws up a development program. Its funding comes from Federal government and New York City. 	<ul style="list-style-type: none"> - State and City of New York cover operation deficits of NYMTA.
San Francisco	<ul style="list-style-type: none"> - Federal government provides funding from Highway Trust Fund (sources: gasoline taxes, etc) and General Revenues. - As for BART (San Francisco Bay Area Rapid Transit District), BART draws up a development program and it is financed by capital of federal and state governments, the local authority and BART. - As for MUNI (San Francisco Municipal Railway), MUNI and San Francisco County Transportation Authority (SFCTA) jointly draw up a development program. The funds mainly come from local government, partly provided by state and local governments. 	<ul style="list-style-type: none"> - As for BART, local governments cover operation deficits. - As for MUNI, federal and state governments and local authority cover operation deficits.
Tokyo	<ul style="list-style-type: none"> - National government makes plans for urban railway based on report of Transport Policy Council. - National and local governments grant subsidy for constructions of subways and railways in new towns. 	<ul style="list-style-type: none"> - There is no subsidy for operation.
	<ul style="list-style-type: none"> - National government (Corporation for Advanced Transport & Technology) provides no-interest loans to cover a part of construction costs of urban railways. Local governments also provide subsidy as much or more than that. 	

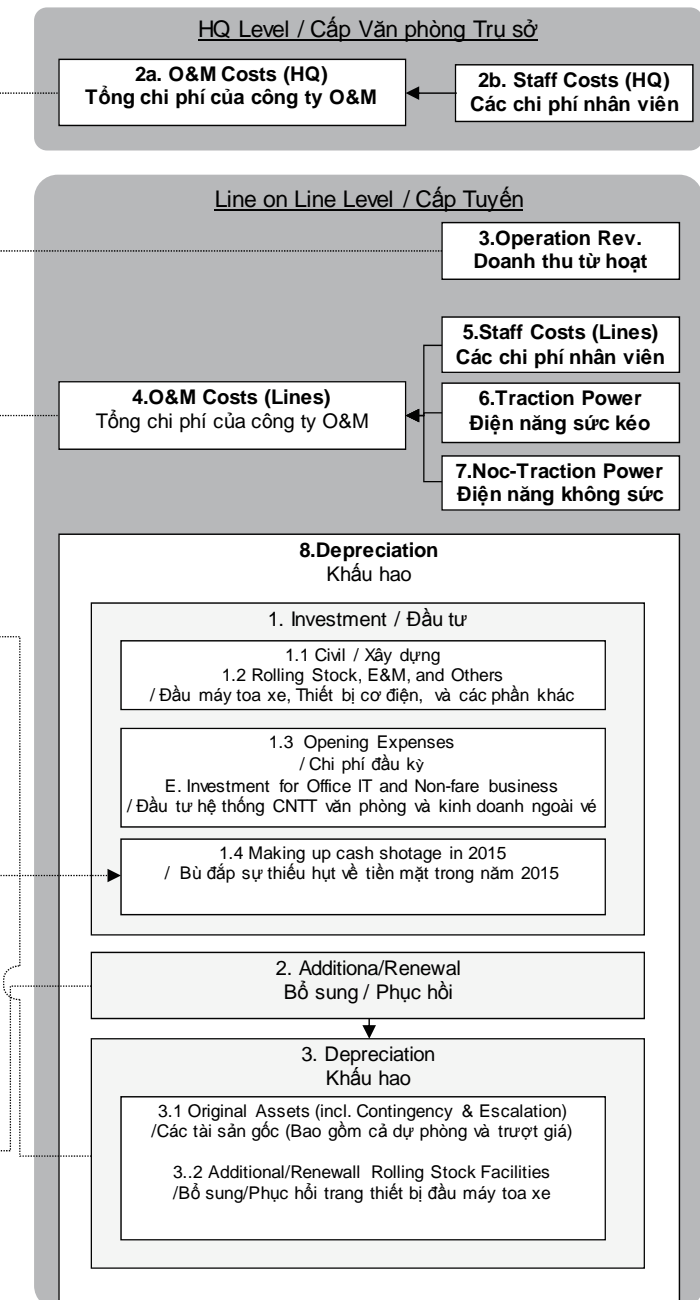
APPENDIX 4

Financial Plan

Mô tả BẢNG KÊ LỖ VÀ LÃI & BẢNG KÊ DÒNG NGÂN LƯU

Description of PROFIT AND LOSS STATEMENT & CASH FLOW STATEMENT

BÁO CÁO LỜI VÀ LỖ	Mô tả	PROFIT AND LOSS STATEMENT	Description
1. Doanh thu	Công thức a+b	1. Revenue	Formula a+b
a. Doanh thu từ hoạt động kinh doanh	Xem "Yêu cầu dòng X"	a. Operating Revenue	See "Demands Line X"
b. Doanh thu khác	Doanh thu từ việc vận hành X 1/9	b. Other Revenue	Operation Revenue X 1/9
2. Chi phí bảo dưỡng và vận hành	Công thức a+b+d+e+f+g	2. Operation & Maintenance Costs	Formula a+b+c+d+e+f+g
a. Các chi phí nhân viên	Xem "Tổng các chi phí của Công ty O&M"	a. Staff costs	See "Total O&M Costs"
b. Chi phí điện năng	như trên	b. Power costs	ditto
c. Các chi phí phụ tùng	như trên	c. Spares cost	ditto
d. Chi phí KD ngoài bán vé	như trên	d. Cost of non-fare business	ditto
e. Các chi phí khác	như trên	e. Other Costs	ditto
3). Khấu hao	Công thức a+b+d+e+f	3. Depreciation	Formula a+b+c+d+e+f
a. Xây dựng đoạn đi ngầm	Xem "Đầu tư và Khấu hao"	a. Civil Work UG	See "Investment & Depreciation"
b. Xây dựng đoạn đi cao	như trên	b. Civil Work EL	ditto
c. Mua sắm và lắp đặt các thiết bị cơ điện	như trên	c. E&M	ditto
d. Đầu máy toa xe	như trên	d. Rolling Stock	ditto
e. Phần bổ sung/Phục hồi (Đầu máy toa xe/mua sắm và lắp đặt các thiết bị cơ điện)	như trên	e. Addition/Renewal (Rolling Stock/E&M)	ditto
4. Thu nhập thuần chưa thuế	Công thức 1-2-3	4. Net Income before Tax	Formula 1-2-3
5. Thuế thu nhập	Công thức 4 x tỉ lệ thuế	5. Income Tax	Formula 4 x tax rate
6. Thu nhập thuần sau khi tính thuế	Công thức 4-5	6. Net Income after Tax	Formula 4-5
BÁO CÁO BẢNG KÊ DÒNG NGÂN LƯU	Mô tả	CASH FLOW STATEMENT	Description
1. Dòng ngân lưu trong hoạt động kinh doanh	Công thức a+b	1. Operating Cash Flow	Formula a+b
a. Thu nhập thuần sau thuế	P/L 6.Thu nhập thuần sau thuế	a. Net Income after Tax	P/L 6. Net Income after tax
b. Khấu hao	P/L 3.Khấu hao	b. Depreciation	P/L 3. Depreciaton
2. Dòng ngân lưu trong đầu tư	Công thức a+b+c	2. Investment Cash Flow	Formula a+b+c
a. Đầu tư ban đầu	Không áp dụng	a. Initial Investment	Not applicable
b. Đầu tư vào việc phục hồi/bổ sung (đầu máy toa xe)	Xem "Đầu tư và Khấu hao"	b. Addition/Renewal (Rolling Stock)	See "Investment & Depreciation"
c. Phục hồi (Mua sắm& lắp đặt các thiết bị cơ điện bao gồm Depot)	Xem "Đầu tư và Khấu hao"	c. Renewal (E&M including Depot)	See "Investment & Depreciation"
3. Dòng ngân lưu trong Tài chính	Trợ cấp từ Hà Nội	3. Financial Cash Flow	Subsidy from Hanoi City
4. Dòng ngân lưu thuần	Công thức 1-2+3	4. Net Cash Flow	Formula 1 - 2 + 3



<Assumption>

<Dự tính>

[1] Staff costs	[1] Các chi phí nhân viên
(a) Monthly Directory Salary in 2011 [US \$]	(a) Lương trực tiếp hàng tháng năm 2008 bằng USD
(b) Annual bonus rate to monthly salary	(b) Mức thưởng năm theo lương
(c) Social & Benefits cost markup rate	(c) Tỷ lệ chi phí phúc lợi & xã hội
(d) Monthly Staff cost (Direct Salary + Social benefits cost) + (Annual bonus/month) in 2011 price [US\$] = (a) * (1+(c)) + ((a)x(b)/12)	(d) Chi phí nhân viên hàng tháng (Lương trực tiếp + Chi phí phúc lợi & xã hội) + (Thưởng theo năm/tháng) theo giá năm 2011 (US\$) = (a) * (1+(c)) + ((a)x(b)/12)
[2] Power costs	[2] Chi phí điện năng
Tariff in 2011 (05/2011/TT-BCT)	Bảng giá năm 2011 (05/2011/TT-BCT)
[3] Spares cost	[3] Chi phí phụ tùng
- Spares cost ratio against to Construction cost	- Tỷ lệ chi phí phụ tùng dựa vào chi phí Xây dựng
- Asset total (E&M only) - Line 2 [MUSD]	- Tổng chi phí xây dựng (Chỉ cho phần Cơ điện)
- Asset total (E&M only) - Line 2a [MUSD]	- Tổng chi phí xây dựng (Chỉ cho phần Cơ điện)
- Asset total (E&M only) - Line 3 [MUSD]	- Tổng chi phí xây dựng (Chỉ cho phần Cơ điện)
[4] Cost of non-fare business	[4] Chi phí KD ngoài bán vé
* Costs of non-fare business include staff cost and cost of goods purchased. / Chi phí kinh doanh ngoài vé bao gồm chi phí nhân viên và chi phí mua hàng hóa	
[5] Other Costs Ratio	[5] Tỷ lệ các chi phí khác
* "Other costs" includes insurance cost, utility cost (such as electric power and water for office), outsourcing fee (such as security, cleaning and secretary services). / "Các chi phí khác" bao gồm chi phí bảo hiểm, chi phí công trình tiện ích (ví dụ nh	
[6] Additional/Renewal Investments	[6] Đầu tư bổ sung / thay mới
- Intermediate overhaul of rolling stock	- Trung tu đầu máy toa xe
- Intermediate overhaul of E&M	- Trung tu các thiết bị điện cơ
[7] Dividend	[7] Cổ tức
[8] Foreign Currency Rate	[8] Tỷ lệ ngoại hối
[9] Economic Growth Rates	[9] Tỷ lệ tăng trưởng kinh tế
- Economic growth rate per year - Vietnam	- Tỷ lệ tăng trưởng kinh tế mỗi năm
- Escalation rate - staff cost	- Tỷ lệ trượt - Các chi phí nhân viên
- Economic growth rate per year - Japan	- Tỷ lệ tăng trưởng kinh tế mỗi năm, Nhật Bản
- Economic growth rate per year - China	- Tỷ lệ tăng trưởng kinh tế mỗi năm, Trung Quốc
- Economic growth rate per year - EU	- Tỷ lệ tăng trưởng kinh tế mỗi năm - EURO
[10] Base Year	[10] Năm cơ sở

Chairman, General Manager, Dupty General Manager and Supervisors / Chủ tịch, Lương Tổng ĐĐ, Phó Tổng ĐĐ và các Giám sát	Manager / Quản lý	Engineer / Skilled Worker / Công nhân lành nghề/ Kỹ sư	Deputy Manager / Phó TP	Semi-skilled worker/ Công nhân bậc 4/7	Unskilled worker/ clerical Nhân viên văn phòng/ Công nhân phổ thông	Office Worker / Nhân viên văn phòng
2,533	1,013	650	650	170	120	350
1.5						
20%						
3,356	1,342	861	861	225	159	464

Source: Jeteo Study 2010 * Salary for Chairman etc is assumed 2.5 times of on 10,335 2,703

Tariff / Bảng giá	VND/110kw	Period/ Thời gian dự tính
(a) Normal hour	1,043	4:00-9:30, 11:30-17:00, 20:00-22:00 (Mon-Sat) / 4:00-22:00 (Sun)
(b) Low hour	646	22:00-4:00 (Mon-Sun)
(c) Peak hour	1,862	9:30-11:30, 17:00-20:00 (Mon-Sat)
Weighted Average	VND/kw	
For Traction (5:00-22:00)	1,284	(a) x 12 + (c) x 5 / 17
For 20Hrs (4:00 - 24:00)	1,208	(a) x 13 + (b) x 2 + (c) x 5 / 20
For 24Hrs	1,114	(a) x 13 + (b) x 6 + (c) x 5 / 24

2015	2018	2022	2029
1.0%	1.0%	1.0%	1.0%
470.37	-	-	-
91.74			
283.48			

60% of revenue / của Doanh thu

30%

30% of original cost inflated in overhaul year / Chi phí gốc bị lạm phát trong năm duy tu
50% of original cost inflated in overhaul year / Chi phí gốc bị lạm phát trong năm duy tu

10%

76.80	Yen/USD	1 USD = 76.8150 JPY (as of 2011/10/03)
0.0036	Yen/VND	1 VND = 0.003645 JPY (as of 2011/10/03)
21,081	VND/USD	1 USD = 21,081.08 VND (as of 2011/10/03)
1.3184	Eur/USD	1 USD = 1.32EUR (2011/10/03)
6.3800	RMB/USD	1 USD = 6.38 (2011/10/18)

2015 - 2020	2021 - 2030	2031 - 2040	2041 - 2050
5.0%	3.7%	3.2%	2.5%
2.0%	2.0%	2.0%	2.0%
2.4%	1.1%	0.6%	0.0%
14.5%	5.6%	3.6%	2.6%
3.1%	2.2%	2.2%	2.4%

- Economic growth rates: Japan Center for Economic Research, Changing Demographics in Asia (January 2007) / Tỷ lệ tăng trưởng kinh tế: Trung tâm nghiên cứu kinh tế Nhật Bản, Thay đổi nhân khẩu học tại châu Á (tháng 1 năm 2007)
- Fluctuation of exchange r

2011

* For long term estimation, the economic growth is considered as a major factor affecting costs. The rate of the economic growth in Japan is applied to renewal and additional purchasing of E&M and rolling stocks, because they will be imported from Japan. The rate in Vietnam is applied for other items. To consider the fluctuation of exchange rate between Vietnam and Japan, the average annual change in exchange rate, in last 5 years, 1%, is added to Japanese economic growth rates. / Theo đánh giá dài hạn, sự tăng trưởng kinh tế được xem là yếu tố chính ảnh hưởng chi phí. Tỷ lệ tăng trưởng kinh tế ở Nhật Bản được tính cho các chi phí thay thế và mua thêm các thiết bị cơ điện và các đầu máy toa xe, vì những thiết bị này được nhập khẩu từ Nhật. Tỷ lệ tăng trưởng kinh tế ở Việt Nam sẽ được áp dụng cho những khoản chi phí khác. Do sự dao động giữa đồng Việt Nam và đồng yên Nhật, sự thay đổi trong tỉ giá hối đoái trung bình (1%) trong 5 năm vừa qua được thêm vào tỷ lệ tăng trưởng kinh tế Nhật Bản

Annual Allocation without Escalation (in year 2015)		Phân bổ hàng năm không tính trượt giá (năm 2015)																																				
(Unit:USD)	Đơn vị: USD	Ratio in 2017 / Tỷ lệ năm 2017	O&M																																			
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049		
Staff costs	Các chi phí nhân viên	76.9%																																				
Management	Quản lý		677,392	1,890,196	1,890,196	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541		
Sub-Total	Cộng	76.9%	677,392	1,890,196	1,890,196	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541	2,064,541		
Other Costs (30%)	Các chi phí khác (30%)	23.1%	173,218	567,059	567,059	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362	619,362		
TOTAL	TỔNG CỘNG	100.0%	750,610	2,457,255	2,457,255	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903	2,683,903			
Annual Allocation with Escalation		Phân bổ hàng năm có tính trượt giá																																				
(Unit:MUSD)	Đơn vị: MUSD		Escalation / Trượt giá																																			
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	
Staff costs	Các chi phí nhân viên																																					
Management	Quản lý		0.6	1.9	2.0	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.0	
Sub-Total	Cộng		0.6	1.9	2.0	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.0	
Other Costs (30%)	Các chi phí khác (30%)		->	0.0%							3.7%										3.2%																	
			0.2	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	

O&M Company Organization - Head Office / Tổ chức công ty O&M - Tại trụ sở

Department / Bộ phận	Unit / Đơn vị	Title / Chức danh	Staff Allocation Plan / Kế hoạch phân bổ nhân viên			Salary Calculation / Tính toán lương								
			MM			2015		2016		2018				
			1/2015	1/2016	1/2018	MM	USD	MM	USD	MM	USD			
Chairman / Chủ tịch	NA	NA	1	1	1	12	3,356	12	40,267	12	40,267	12	40,267	
	NA	General Director / Tổng Giám đốc	1	1	1	12	3,356	12	40,267	12	40,267	12	40,267	
	NA	Deputy General Director / P Tổng Giám Đốc	-	2	3	12	3,356	0	0	24	80,534	36	120,800	
Board of Supervisors / Ban kiểm soát	NA	Supervisor / Giám sát	1	1	2	12	3,356	12	40,267	12	40,267	24	80,534	
	Subtotal / Cộng		3	5	7	36	120,800	60	201,334	84	281,867			
Administration / Hành chính	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Human resources Nhân sự	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	General Services Tổng vụ	Staff / Nhân viên	4	4	4	48	464	48	22,260	48	22,260	48	22,260	
	IT management Quản lý CNTT	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Legal works Pháp chế	Staff / Nhân viên	-	1	1	12	464	12	5,565	12	5,565	12	5,565	
	Public relations Quan hệ công chúng	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Staff	Staff / Nhân viên	-	1	1	12	464	12	5,565	12	5,565	12	5,565	
	Subtotal / Cộng			11	14	14	132	81,297	168	112,302	168	112,302	168	112,302
	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Revenue & Expense Doanh thu & Chi phí	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
Finance / Tài chính	Staff / Nhân viên	1	1	1	12	225	12	2,703	12	2,703	12	2,703		
Finance / Tài chính	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335		
Procurement Hợp đồng & Mua sắm	Staff / Nhân viên	1	1	1	12	225	12	2,703	12	2,703	12	2,703		
Subtotal / Cộng			6	7	7	72	44,886	84	55,221	84	55,221	84	55,221	
Planning / Kế hoạch	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Business planning Kế hoạch kinh doanh	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Environment management Quản lý môi trường	Staff / Nhân viên	1	1	1	12	225	12	2,703	12	2,703	12	2,703	
	Commercial Thương mại	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Staff / Nhân viên	Staff / Nhân viên	-	1	1	12	225	12	2,703	12	2,703	12	2,703	
	Subtotal / Cộng			5	7	7	60	34,551	84	55,221	84	55,221	84	55,221
	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Safety plan / Kế hoạch	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Staff / Nhân viên	Staff / Nhân viên	1	2	2	12	225	12	2,703	24	5,406	24	5,406	
	Subtotal / Cộng			3	4	4	36	29,145	168	31,848	168	31,848	168	31,848
Training center / Trung tâm đào tạo	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Training center Trung tâm đào tạo	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Staff / Nhân viên	Staff / Nhân viên	2	4	4	24	225	24	5,406	48	10,812	48	10,812	
Subtotal / Cộng			4	6	6	48	31,848	288	37,254	288	37,254	288	37,254	
Operation / Vận hành	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Traffic planning Kế hoạch vận chuyển	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Train operation Điều vận tàu	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Deputy Manager / Phó TP	Deputy Manager / Phó TP	-	2	2	12	861	0	0	24	20,670	24	20,670	
	Staff / Nhân viên	Staff / Nhân viên	-	2	2	12	225	0	0	24	5,406	24	5,406	
	Station business Kinh doanh tại ga	Manager / Trưởng phòng	1	2	2	12	861	12	10,335	24	20,670	24	20,670	
	Staff / Nhân viên	Staff / Nhân viên	-	4	4	12	464	0	0	48	22,260	48	22,260	
	IC Card Center IC Trung tâm thẻ	Manager / Trưởng phòng	1	2	2	12	861	0	0	24	20,670	24	20,670	
	Staff / Nhân viên	Staff / Nhân viên	1	4	4	12	225	12	2,703	48	10,812	48	10,812	
	Subtotal / Cộng			5	19	19	60	49,815	228	137,265	228	137,265	228	137,265
Facilities/ Rolling Stocks Trang thiết bị / Đầu máy toa xe	Managing Director / Giám đốc Điều hành	Giám đốc Điều hành	1	1	1	12	1,342	12	16,107	12	16,107	12	16,107	
	Manager / Trưởng phòng	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Deputy Manager / Phó TP	Deputy Manager / Phó TP	2	3	3	12	861	24	20,670	36	31,005	36	31,005	
	Staff	Staff	2	3	3	12	225	24	5,406	36	8,109	36	8,109	
	Subtotal / Cộng			5	7	7	60	36,411	84	49,449	84	49,449	84	49,449
	Track / Structure / Architecture	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
	Deputy Manager / Phó TP	Deputy Manager / Phó TP	3	3	3	12	861	36	31,005	36	31,005	36	31,005	
	Staff	Staff	4	4	4	12	225	48	10,812	48	10,812	48	10,812	
	Subtotal / Cộng			8	8	8	96	52,152	96	52,152	96	52,152	96	52,152
	Manager / Trưởng phòng	Manager / Trưởng phòng	1	1	1	12	861	12	10,335	12	10,335	12	10,335	
Deputy Manager / Phó TP	Deputy Manager / Phó TP	2	3	3	12	861	24	20,670	36	31,005	36	31,005		
Staff / Nhân viên	Staff / Nhân viên	2	3	3	12	225	24	5,406	36	8,109	36	8,109		
Subtotal / Cộng			5	7	7	60	36,411	84	49,449	84	49,449	84	49,449	
Total / Tổng	Subtotal / Cộng		19	23	23	228	141,081	276	167,157	276	167,157	276	167,157	
			56	85	87	672	533,421	1,356	1,746,249	1,380	1,907,316	1,380	1,907,316	
<Source> / <Nguồn>			Monthly Salary: JETRO homepage / trang chủ JETRO											
			Total in Y2015											

Option 2-1

CASH FLOW STATEMENT

BẢNG KÊ DÒNG NGÂN LƯU

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
(in US\$ Million)	(Bảng Triệu USD)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
1. Cumulative Cash Flow		1	0	0	0	0	6	13	20	29	38	11	25	30	17	14	24	23	20	29	58	37	25	21	38	43	56	64	72	64	58
Cash Flow of HPC	Dòng ngân lưu - UBND HN																														
(in US\$ Million)	(Bảng Triệu USD)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
1. Cash out		-0.4	-0.6	-0.8	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-0.7	-0.5	-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L1		-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L2-3		-0.4	-0.6	-0.6	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-0.5	-0.4	-0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2. Cah-in	2. Dòng ngân lưu trong đầu tư	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	3.7	3.6	3.1	2.7	2.4	2.5
L2-3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	3.7	3.6	3.1	2.7	2.4	2.5
3. Net Cash Flow (1 + 2 + 3)	4. Dòng ngân lưu thuần	-0.43	-0.6	-0.8	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-0.7	-0.5	-0.3	-	-	-	-	-	-	-	-	-	-	4.4	3.7	3.6	3.1	2.7	2.4	2.5
4. Cumulative Cash Flow	5. Dòng ngân lưu lũy tích	-0.43	-1.0	-1.8	-2.9	-4.0	-5.1	-6.2	-7.3	-8.4	-9.5	-10.2	-10.6	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0	-6.6	-3.0	0.7	3.7	6.4	8.8	11.4

Operation Revenue Calculation with demands in SAPI / Tính doanh thu từ hoạt động kinh doanh theo yêu cầu trong /SAPI

<Assumption> / <Dự tính> [] =< If you change this yellow cell, you can simulate / Nếu thay đổi ô màu vàng này thì có thể mô phỏng được

- (a) 5.0%, 3.7%, 3.2%, 2.5% Economic Growth Rate (2006-2020) / Tỷ lệ tăng trưởng kinh tế (2006-2020)
(b) 21,081 VND/USD Foreign Currency rate / Tỷ lệ ngoại hối
(c) 4.5% percentage of ticket price exemption and reduction for social-policy beneficiaries...
(f) 1 Ridership factor for sensitivity Analysis / Hệ số về lượng hành khách để phân tích được tốt hơn

Table with 25 columns: [1] Year, [2] Year, [7] Number of passengers, Pax(1-4), P(1-4), [11] Operation Revenue, [3] Rate in 2012 Base, [4] Economic Growth, [5] Ave. Fare after Escalation, [6] Ave. Fare after Escalation. Rows 1-30 represent years from 2015 to 2044.

<Source> / <Nguồn>

(a) from "Japan Center for Economic Research (JCER), Changing Demographics in Asia (January 2007)". / từ Trung tâm nghiên cứu kinh tế Nhật Bản, Thay đổi nhân khẩu học tại châu Á (tháng 1 năm 2007)

Note

*1: After applying ticket price exemption / Sau khi áp dụng miễn vé

Annual Allocation without Escalation (in year 2015)		Phân bổ hàng năm không tính trượt giá (năm 2015)																																			
(Unit:USD)	Đơn vị: USD	Ratio in 2019 / Tỷ lệ năm 2019	O&M 0	O&M 1	O&M 2	O&M 3	O&M 4	O&M 5	O&M 6	O&M 7	O&M 8	O&M 9	O&M 10	O&M 11	O&M 12	O&M 13	O&M 14	O&M 15	O&M 16	O&M 17	O&M 18	O&M 19	O&M 20	O&M 21	O&M 22	O&M 23	O&M 24	O&M 25	O&M 26	O&M 27	O&M 28	O&M 29	O&M 30	O&M 31	O&M 32	O&M 33	O&M 34
			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Staff costs	Các chi phí nhân viên																																				
Management	Quản lý	76.9%	268,862	1,264,765	1,264,765	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134
	Sub-Total	76.9%	268,862	1,264,765	1,264,765	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	1,853,134	
Other Costs (30%)	Các chi phí khác (30%)	23.1%	80,659	379,429	379,429	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	555,940	
TOTAL	TỔNG CỘNG	100.0%	349,520	1,644,194	1,644,194	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	2,409,074	
Annual Allocation with Escalation		Phân bổ hàng năm có tính trượt giá																																			
(Unit:USD)	Đơn vị: USD	Escalation / Trượt giá	O&M 0	O&M 1	O&M 2	O&M 3	O&M 4	O&M 5	O&M 6	O&M 7	O&M 8	O&M 9	O&M 10	O&M 11	O&M 12	O&M 13	O&M 14	O&M 15	O&M 16	O&M 17	O&M 18	O&M 19	O&M 20	O&M 21	O&M 22	O&M 23	O&M 24	O&M 25	O&M 26	O&M 27	O&M 28	O&M 29	O&M 30	O&M 31	O&M 32	O&M 33	O&M 34
			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Staff costs	Các chi phí nhân viên																																				
Management	Quản lý	2.0%	0.3	1.3	1.3	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.4	3.4	3.5	3.6	
	Sub-Total	2.0%	0.3	1.3	1.3	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.4	3.4	3.5	3.6	
Other Costs (30%)	Các chi phí khác (30%)	->	0.1	0.4	0.4	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7		

O&M Company Organization - Head Office / Tổ chức công ty O&M - Tại trụ sở

Department / Bộ phận	Unit / Đơn vị	Title	Staff Allocation Plan / Kế hoạch phân bổ nhân viên						Salary Calculation / Tính toán lương											
			7/2014		1/2015		1/2016		1/2014		1/2015		1/2016		1/2018					
			6	12	12	12	12	12	6	12	12	12	MM	USD	MM	USD	MM	USD	MM	USD
Chairman / Chủ tịch	NA	NA																		
Board of General Directors / Ban Tổng Giám Đốc	NA	General Director / Tổng Giám Đốc																		
Board of Supervisors / Ban kiểm soát	NA	Deputy General Director / Phó Tổng Giám Đốc																		
		Supervisor / Giám sát																		
		Subtotal / Cộng	3	3	5	7														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Human resources / Nhân sự	1	1	1	1														
		Staff / Nhân viên	3	4	4	4														
		Manager / Trưởng phòng	-	-	1	1														
		Staff / Nhân viên	1	1	1	1														
Administration / Hành chính		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Manager / Trưởng phòng	-	-	1	1														
		Staff / Nhân viên	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	-	-	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Subtotal / Cộng	10	11	14	14														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Revenue & Expense / Doanh thu & Chi phí	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Manager / Trưởng phòng	-	1	1	1														
		Staff / Nhân viên	1	1	1	1														
Finance / Tài chính		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Procurement / Hợp đồng & Mua sắm	-	-	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Subtotal / Cộng	5	6	7	7														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Business planning / Kế hoạch kinh doanh	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Environment management / Quản lý môi trường	-	-	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	-	-	1	1														
		Commercial / Thương mại	-	-	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Subtotal / Cộng	5	5	7	7														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Safety plan / Kế hoạch an toàn	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	2	2														
		Subtotal / Cộng	3	4	4	4														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	2	4	4														
		Subtotal / Cộng	3	4	6	6														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Traffic planning / Kế hoạch vận chuyển	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Staff / Nhân viên	1	1	1	1														
		Train operation / Điều vận tàu	-	-	2	2														
		Deputy Manager / Phó TP	-	-	2	2														
		Staff / Nhân viên	-	-	2	2														
		Station business / Kinh doanh tại ga	1	1	2	2														
		Manager / Trưởng phòng	1	1	2	2														
		Staff / Nhân viên	-	-	4	4														
		IC Card Center / IC Trung tâm thẻ	-	-	2	2														
		Manager / Trưởng phòng	1	1	4	4														
		Staff / Nhân viên	1	1	4	4														
		Subtotal / Cộng	5	5	19	19														
		Managing Director / Giám đốc Điều hành	1	1	1	1														
		Manager / Trưởng phòng	1	1	1	1														
		Deputy Manager / Phó TP	2	2	3	3														
		Staff	1	2	3	3														
		Subtotal / Cộng	4	5	7	7														
		Manager / Trưởng phòng	1	1	1	1														
		Deputy Manager / Phó TP	3	3	3	3														
		Staff	3	4	4	4														
		Subtotal / Cộng	7	8	8	8														
		Manager / Trưởng phòng	1	1	1	1														
		Deputy Manager / Phó TP	2	2	3	3														
		Staff / Nhân viên	1	2	3	3														
		Subtotal / Cộng	4	5	7	7														
		Managing Director / Giám đốc Điều hành	16	19	23	23														
		Subtotal / Cộng	50	56	85	87														
Total / Tổng																				

<Source> / <Nguồn>

<Assumption>

<Dự tính>

[1] Staff costs	[1] Các chi phí nhân viên	Chairman, General Manager, Dupty General Manager and Supervisors / Chủ tịch, Lương Tổng GD, Phó Tổng GD và các Giám sát	Manager / Quản lý	Engineer / Skilled Worker / Công nhân lành nghề/ Kỹ sư	Deputy Manager / Phó TP	Semi-skilled worker / Công nhân bậc 4/7	Unskilled worker/ clerical / Nhân viên văn phòng/ Công nhân phổ thông	Office Worker / Nhân viên văn phòng
(a) Monthly Directory Salary in 2011 [US \$]	(a) Lương trực tiếp hàng tháng năm 2008 bằng USD	2,533	1,013	650	650	170	120	350
(b) Annual bonus rate to monthly salary	(b) Mức thưởng năm theo lương	1.5						
(c) Social & Benefits cost markup rate	(c) Tỷ lệ chi phí phúc lợi & xã hội	20%						
(d) Monthly Staff cost (Direct Salary + Social benefits cost) + (Annual bonus/month) in 2011 price [US\$] = (a) * (1+(c)) + ((a)x(b)/12)	(d) Chi phí nhân viên hàng tháng (Lương trực tiếp + Chi phí phúc lợi & xã hội) + (Thưởng theo năm/tháng) theo giá năm 2011 (US\$) = (a) * (1+(c)) + ((a)x(b)/12)	3,356	1,342	861	861	225	159	464
		Source: Jeteo Study 2010		* Salary for Chairman etc is assumed 2.5 times of on		10,335	2,703	
[2] Power costs	[2] Chi phí điện năng	Tariff / Bảng giá						
Tariff in 2011 (05/2011/TT-BCT)	Bảng giá năm 2011	VND/110kw		Period/ Thời gian dự tính				
		(a) Normal hour	1,043	4:00-9:30, 11:30-17:00, 20:00-22:00 (Mon-Sat) / 4:00-22:00 (Sun)				
		(b) Low hour	646	22:00-4:00 (Mon-Sun)				
		(c) Peak hour	1,862	9:30-11:30, 17:00-20:00 (Mon-Sat)				
		Weighted Average		VND/kw				
		For Traction (5:00-22:00)		1,284	((a) x 12 + (c) x 5) / 17			
		For 20Hrs (4:00 - 24:00)		1,208	((a) x 13 + (b) x 2 + (c) x 5) / 20			
		For 24Hrs		1,114	((a) x 13 + (b) x 6 + (c) x 5) / 24			
[3] Spares cost	[3] Chi phí phụ tùng	2015 2018 2022 2029						
- Spares cost ratio against to Construction cost	- Tỷ lệ chi phí phụ tùng dựa vào chi phí Xây dựng	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
[4] Cost of non-fare business	[4] Chi phí KD ngoài bán vé	60% of revenue / của Doanh thu						
		* Costs of non-fare business include staff cost and cost of goods purchased. / Chi phí kinh doanh ngoài vé bao gồm chi phí nhân viên và chi phí mua hàng hóa						
[5] Other Costs Ratio	[5] Tỷ lệ các chi phí khác	30%						
		* "Other costs" includes insurance cost, utility cost (such as electric power and water for office), outsourcing fee (such as security, cleaning and secretary services). / "Các chi phí khác" bao gồm chi phí bảo hiểm, chi phí công trình tiện ích (ví dụ nh						
[6] Additional/Renewal Investments	[6] Đầu tư bổ sung / thay mới	30% of original cost inflated in overhaul year / Chi phí gốc bị lạm phát trong năm duy tu						
- Intermediate overhaul of rolling stock	- Trung tu đầu máy toa xe	50% of original cost inflated in overhaul year / Chi phí gốc bị lạm phát trong năm duy tu						
- Intermediate overhaul of E&M	- Trung tu các thiết bị điện cơ							
[7] Dividend	[7] Cổ tức	10%						
[8] Foreign Currency Rate	[8] Tỷ lệ ngoại hối	76.80 Yen/USD	1 USD = 76.8150 JPY (as of 2011/10/03)					
		0.0036 Yen/VND	1 VND = 0.003645 JPY (as of 2011/10/03)					
		21.081 VND/USD	1 USD = 21,081.08 VND (as of 2011/10/03)					
		1.3184 Eur/USD	1 USD = 1.32EUR (2011/10/03)					
		6.3800 RMB/USD	1 USD = 6.38 (2011/10/18)					
[9] Economic Growth Rates	[9] Tỷ lệ tăng trưởng kinh tế	2015 - 2020	2021 - 2030	2031 - 2040	2041 - 2050			
- Economic growth rate per year - Vietnam	- Tỷ lệ tăng trưởng kinh tế mỗi năm	5.0%	3.7%	3.2%	2.5%			
- Escalation rate - staff cost	- Tỷ lệ trượt - Các chi phí nhân viên	2.0%	2.0%	2.0%	2.0%			
- Economic growth rate per year - Japan	- Tỷ lệ tăng trưởng kinh tế mỗi năm	2.4%	1.1%	0.6%	0.0%			
- Economic growth rate per year - China	- Tỷ lệ tăng trưởng kinh tế mỗi năm	14.5%	5.6%	3.6%	2.6%			
- Economic growth rate per year - EU	- Tỷ lệ tăng trưởng kinh tế mỗi năm	3.1%	2.2%	2.2%	2.4%			
		- Economic growth rates: Japan Center for Economic Research, Changing Demographics in Asia (January 2007) / Tỷ lệ tăng trưởng kinh tế: Trung tâm nghiên cứu kinh tế Nhật Bản, Thay đổi nhân khẩu học tại châu Á (tháng 1 năm 2007)						
		* Fluctuation of exchange r						
[10] Base Year	[10] Năm cơ sở	2011						

* For long term estimation, the economic growth is considered as a major factor affecting costs. The rate of the economic growth in Japan is applied to renewal and additional purchasing of E&M and rolling stocks, because they will be imported from Japan. The rate in Vietnam is applied for other items. To consider the fluctuation of exchange rate between Vietnam and Japan, the average annual change in exchange rate, in last 5 years, 1%, is added to Japanese economic growth rates. / Theo đánh giá dài hạn, sự tăng trưởng kinh tế được xem là yếu tố chính ảnh hưởng chi phí. Tỷ lệ tăng trưởng kinh tế ở Nhật Bản được tính cho các chi phí thay thế và mua thêm các thiết bị cơ điện và các đầu máy toa xe, vì những thiết bị này được nhập khẩu từ Nhật. Tỷ lệ tăng trưởng kinh tế ở Việt Nam sẽ được áp dụng cho những khoản chi phí khác. Do sự dao động giữa đồng Việt Nam và đồng yên Nhật, sự thay đổi trong tỉ giá hối đoái trung bình (1%) trong 5 năm vừa qua được thêm vào tỷ lệ tăng trưởng kinh tế Nhật Bản

PROFIT AND LOSS STATEMENT BẢNG KẾ CẢO LỖ VÀ LÃI

Table with 30 columns (years 2015-2044) and 15 rows (Revenue, Operating Revenue, Operation & Maintenance Costs, Depreciation, Net Income before Tax, Income Tax, Net Income after Tax).

CASH FLOW STATEMENT BẢNG KẾ DÒNG NGÂN L U

Table with 30 columns (years 2015-2044) and 15 rows (Operating Cash Flow, Investment Cash Flow, Free Cash Flow, Financial Cash Flow, Net Cash Flow, Cumulative Cash Flow).

Dividend

Table with 30 columns (years 2015-2044) and 1 row (Dividend distribution details).

Deferred Tax Calculation (Loss carryforward)

Table with 30 columns (years 2015-2044) and 10 rows (Net Income before Tax, Tax Amount, Income Tax rate, Subject Year, Income for Taxation).

Cash Flow of HPC

Table with 30 columns (years 2015-2044) and 4 rows (Cash out, Cash-in, Dividend, Net Cash Flow).

Operation Revenue Calculation with demands in SAPI/ Tính doanh thu từ hoạt động kinh doanh theo yêu cầu trong /SAPI

<Assumption> / <Dự tính> <= If you change this yellow cell, you can simulate / Nếu thay đổi ô màu vàng này thì có thể mô phỏng được

(a)	5.0%	Economic Growth Rate (2006-2020) / Tỷ lệ tăng trưởng kinh tế (2006-2020)
	3.7%	Economic Growth Rate (2021-2030) / Tỷ lệ tăng trưởng kinh tế (2021-2030)
	3.2%	Economic Growth Rate (2031-2040) / Tỷ lệ tăng trưởng kinh tế (2031-2040)
	2.5%	Economic Growth Rate (2041-) / Tỷ lệ tăng trưởng kinh tế (2041-)
(b)	21,081	VND/USD Foreign Currency rate / Tỷ lệ ngoại hối
(c)	4.5%	percentage of ticket price exemption and reduction for social-policy beneficiaries (here it is assumed as Free charge.) "Article 21.- 109/2006/ND-CP" / Phần trăm giá vé miễn giảm dành cho những người được hưởng chính sách phúc lợi xã hội (giả định Miễn phí.) "Điều 21 - 109/2006/ND-CP"
(f)	1	Ridership factor for sensitivity Analysis / Hệ số về lượng hành khách để phân tích được tốt hơn

[1]	[2]	[7]												Pax(1)	Pax(2)	Pax(3)	Pax(4)	P(1)	P(2)	P(3)	P(4)	[11]		[3]	[4]	[5]	[6]
#	year / Năm	Number of passengers -FS Base / Số hành khách												Fare Setting				Operation Revenue / Doanh thu vận hành		Reference For Fare Setting							
		Used in Feasibility Study				Assumed number by Study team				in Ticke Type								Rate in 2012 Base / Tỷ lệ năm 2012		Economic Growth / Tỷ lệ tăng trưởng kinh tế	Ave.Fare after Escalation (*1) / Giá vé trung bình sau khi tính toán trượt giá(*1)						
		000persons / year / 000người / năm				000persons / year / 000người / năm				000persons / year / 000người / năm				VND				MVND	MUSD	VND	VND	(%)	VND				
		L1			Total	L1			Total	After applying factor [7] / Sau khi áp dụng hệ số [7]	Pass (Single)	Pass (Multi)	One-Time (Single) *1	One-Time (Multi) *1	Pass (Single)	Pass (Multi)	One-Time (Single)	One-Time (Multi)	Σ Pax(i) x P(i)	[8]*[10]	Base Rate / Tỷ lệ cơ bản	Km Rate / Tỷ lệ km	{1+(a)}{1}-1	[3]*{1+[5]}			
1	2015				0			0	0	0	0	0	0	130,000	220,000	10,500	10,500	0	0.00	6000	600	0.16	10,627				
2	2016				0			0	0	0	0	0	0	130,000	220,000	10,500	10,500	0	0.00	6000	600	0.22	11,158				
3	2017				0			0	0	0	0	0	0	130,000	220,000	10,500	10,500	0	0.00	6000	600	0.28	11,716				
4	2018	131,210			131,210	76,833		76,833	76,833	32,270	12,101	20,545	7,704	150,000	250,000	12,000	12,000	597,592	28.35	6000	600	0.34	12,302				
5	2019	136,817			136,817	82,472		82,472	82,472	34,638	12,989	22,053	8,270	150,000	250,000	12,000	12,000	641,453	30.43	6000	600	0.41	12,917				
6	2020	142,423			142,423	88,111		88,111	88,111	37,007	13,877	23,561	8,835	150,000	250,000	12,000	12,000	685,314	32.51	6000	600	0.48	13,563				
7	2021	148,029			148,029	93,750		93,750	93,750	39,375	14,766	25,069	9,401	150,000	250,000	12,000	12,000	729,176	34.59	6000	600	0.53	14,065				
8	2022	153,636			153,636	99,390		99,390	99,390	41,744	15,654	26,577	9,966	150,000	250,000	12,000	12,000	773,037	36.67	6000	600	0.59	14,585				
9	2023	159,242			159,242	105,029		105,029	105,029	44,112	16,542	28,085	10,532	150,000	250,000	12,000	12,000	816,898	38.75	6000	600	0.65	15,125				
10	2024	164,849			164,849	110,668		110,668	110,668	46,481	17,430	29,593	11,097	150,000	250,000	12,000	12,000	860,759	40.83	6000	600	0.71	15,685				
11	2025	170,455			170,455	116,307		116,307	116,307	48,849	18,318	31,101	11,663	150,000	250,000	12,000	12,000	904,621	42.91	6000	600	0.77	16,265				
12	2026	176,061			176,061	121,947		121,947	121,947	51,218	19,207	32,608	12,228	200,000	330,000	16,000	16,000	1,262,538	59.89	6000	600	0.84	16,867				
13	2027	181,668			181,668	127,586		127,586	127,586	53,586	20,095	34,116	12,794	200,000	330,000	16,000	16,000	1,320,922	62.66	6000	600	0.91	17,491				
14	2028	187,274			187,274	133,225		133,225	133,225	55,955	20,983	35,624	13,359	200,000	330,000	16,000	16,000	1,379,307	65.43	6000	600	0.98	18,138				
15	2029	192,881			192,881	138,864		138,864	138,864	58,323	21,871	37,132	13,925	200,000	330,000	16,000	16,000	1,437,691	68.20	6000	600	1.05	18,809				
16	2030	198,487			198,487	144,504		144,504	144,504	60,691	22,759	38,640	14,490	200,000	330,000	16,000	16,000	1,496,075	70.97	6000	600	1.12	19,505				
17	2031	204,093			204,093	150,143		150,143	150,143	63,060	23,647	40,148	15,056	200,000	330,000	16,000	16,000	1,554,460	73.74	6000	600	1.19	20,129				
18	2032	209,700			209,700	155,782		155,782	155,782	65,428	24,536	41,656	15,621	200,000	330,000	16,000	16,000	1,612,844	76.51	6000	600	1.26	20,773				
19	2033	215,306			215,306	161,421		161,421	161,421	67,797	25,424	43,164	16,187	200,000	330,000	16,000	16,000	1,671,228	79.28	6000	600	1.34	21,438				
20	2034	220,913			220,913	167,061		167,061	167,061	70,165	26,312	44,672	16,752	200,000	330,000	16,000	16,000	1,729,613	82.05	6000	600	1.41	22,124				
21	2035	226,519			226,519	172,700		172,700	172,700	72,534	27,200	46,180	17,317	200,000	330,000	16,000	16,000	1,787,997	84.82	6000	600	1.49	22,832				
22	2036	232,125			232,125	178,339		178,339	178,339	74,902	28,088	47,688	17,883	200,000	330,000	16,000	16,000	1,846,381	87.59	6000	600	1.57	23,563				
23	2037	237,732			237,732	183,978		183,978	183,978	77,271	28,977	49,196	18,448	200,000	330,000	16,000	16,000	1,904,766	90.35	6000	600	1.65	24,317				
24	2038	243,338			243,338	189,618		189,618	189,618	79,639	29,865	50,704	19,014	270,000	450,000	21,500	21,500	2,647,699	125.60	6000	600	1.73	25,095				
25	2039	248,945			248,945	195,257		195,257	195,257	82,008	30,753	52,212	19,579	270,000	450,000	21,500	21,500	2,726,442	129.33	6000	600	1.82	25,898				
26	2040	254,551			254,551	200,896		200,896	200,896	84,376	31,641	53,720	20,145	270,000	450,000	21,500	21,500	2,805,185	133.07	6000	600	1.91	26,726				
27	2041	260,157			260,157	206,535		206,535	206,535	86,745	32,529	55,228	20,710	270,000	450,000	21,500	21,500	2,883,928	136.80	6000	600	1.98	27,395				
28	2042	265,764			265,764	212,175		212,175	212,175	89,113	33,417	56,735	21,276	270,000	450,000	21,500	21,500	2,962,671	140.54	6000	600	2.06	28,079				
29	2043	271,370			271,370	217,814		217,814	217,814	91,482	34,306	58,243	21,841	270,000	450,000	21,500	21,500	3,041,414	144.27	6000	600	2.14	28,781				
30	2044	276,977			276,977	223,453		223,453	223,453	93,850	35,194	59,751	22,407	270,000	450,000	21,500	21,500	3,120,157	148.01	6000	600	2.21	29,501				

<Source> / <Nguồn>

- (a) from "Japan Center for Economic Research (JCER), Changing Demographics in Asia (January 2007)". / từ Trung tâm nghiên cứu kinh tế Nhật Bản, Thay đổi nhân khẩu học tại châu Á (tháng 1 năm 2007)

Note

*1: After applying ticket price exemption / Sau khi áp dụng miễn vé

< Line 1 Total O&M costs > MUSD < Tuyến 1 : Tổng các chi phí của Công ty O&M >

Annual Allocation without Escalation (in year 2016)		Phân bổ hàng năm không tính trượt giá (năm 2016)																																				
(Unit:US\$)		Đơn vị: USD																																				
Ratio in 2018 / Tỷ lệ năm 2018		O&M -3	O&M -2	O&M -1	O&M 0	O&M 1	O&M 2	O&M 3	O&M 4	O&M 5	O&M 6	O&M 7	O&M 8	O&M 9	O&M 10	O&M 11	O&M 12	O&M 13	O&M 14	O&M 15	O&M 16	O&M 17	O&M 18	O&M 19	O&M 20	O&M 21	O&M 22	O&M 23	O&M 24	O&M 25	O&M 26	O&M 27	O&M 28	O&M 29	O&M 30	O&M 31		
Đơn vị: USD		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049		
Staff costs		Các chi phí nhân viên																																				
VP chính		1			1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	1,139,886	
Operations		7.9%			698,718	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437	1,397,437
Maintenance		2.4%			208,363	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726	416,726
Sub-Total		Cộng			2,046,967	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	2,954,048	
Power costs		Các chi phí điện năng																																				
Traction		12.8%			2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	2,256,475	
Non-traction		10.4%			1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	1,828,277	
Sub-Total		Cộng			4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	4,084,752	
Refer to * 7. Traction Power *		Xem phần 7. Điện năng sức kéo																																				
Refer to * 8. Non-Traction Power *		Xem phần 8. Điện năng không sức kéo																																				
Spares cost		Chi phí phụ tùng																																				
For Maintenance		37.0%			6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	
Sub-Total		Cộng			6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	6,510,417	
* : Contractor will take care of maintenance for first 5 years. / Nhà thầu sẽ phụ trách công tác bảo dưỡng trong 5 năm đầu																																						
Other Costs (30%)		Các chi phí khác (30%)																																				
		23.1%	23.1%		614,090	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765	4,064,765		
TOTAL		TỔNG CỘNG			2,661,057	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	17,613,982	
Annual Allocation with Escalation		Phân bổ hàng năm có tính trượt giá																																				
(Unit:US\$)		Đơn vị: USD																																				
Escalation / Trượt giá		O&M -3	O&M -2	O&M -1	O&M 0	O&M 1	O&M 2	O&M 3	O&M 4	O&M 5	O&M 6	O&M 7	O&M 8	O&M 9	O&M 10	O&M 11	O&M 12	O&M 13	O&M 14	O&M 15	O&M 16	O&M 17	O&M 18	O&M 19	O&M 20	O&M 21	O&M 22	O&M 23	O&M 24	O&M 25	O&M 26	O&M 27	O&M 28	O&M 29	O&M 30	O&M 31		
Đơn vị: USD		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049		
Staff costs		Các chi phí nhân viên																																				
VP chính					1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.2	2.2		
Operations					2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.9		
Maintenance					2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.8	2.8	2.9	2.9	
Sub-Total					2.1	3.1	3.1	3.2	3.3	3.3	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.1	5.2	5.4	5.5	5.6		
Power costs		Các chi phí điện năng																																				
Traction									5.0%										3.7%																			
Non-traction																																						
Sub-Total																																						
Refer to * 7. Traction Power *		-																																				
Refer to * 8. Non-Traction Power *		-																																				
Spares cost		Chi phí phụ tùng																																				
For Maintenance																																						
Sub-Total																																						
Other Costs (30%)		Các chi phí khác (30%)																																				
TOTAL																																						

O&M Company Organization - Head Office / Tổ chức công ty O&M - Tại trụ sở

Department / Bộ phận	Unit / Đơn vị	Title	Staff Allocation Plan / Kế hoạch phân bổ nhân viên		Salary Calculation / Tính toán lương					
			1/ 2017	6/ 2017	2017		2017			
					MM	USD	MM	USD		
Chairman / Chủ tịch	NA	NA	1	1	12	12	12	12	40,267	40,267
Board of General Directors / Ban Tổng Giám Đốc	NA	General Director / Tổng Giám đốc	1	1			12	12	40,267	40,267
Board of Supervisors / Ban kiểm soát	NA	Deputy General Director / P Tổng Giám Đốc	1	1			12	12	40,267	40,267
		Supervisor / Giám sát	1	1			12	12	40,267	40,267
		Subtotal / Cộng	4	4			48	48	161,067	161,067
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Human resources / Nhân sự	1	1			12	12	10,335	10,335
		General Services / Tổng vụ	1	2			12	12	5,565	11,130
		IT management / Quản lý CNTT	1	1			12	12	10,335	10,335
		Legal works / Pháp chế	-	-			0	0	0	0
		Public relations / Quan hệ công chúng	1	2			12	12	5,565	11,130
		Subtotal / Cộng	8	11			96	96	64,602	81,297
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Revenue & Expense / Doanh thu & Chi phí	1	1			12	12	10,335	10,335
		Finance / Tài chính	1	2			12	12	2,703	5,406
		Procurement / Hợp đồng & Mua sắm	-	-			0	0	0	0
		Subtotal / Cộng	5	9			60	60	34,551	60,627
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Business planning / Kế hoạch kinh doanh	1	1			12	12	10,335	10,335
		Environment management / Quản lý môi trường	-	-			0	0	0	0
		Commercial / Thương mại	1	1			12	12	2,703	2,703
		Subtotal / Cộng	5	5			60	60	34,551	60,627
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Safety plan / Kế hoạch	1	1			12	12	10,335	10,335
		Subtotal / Cộng	3	4			36	36	29,145	31,848
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Training center / Trung tâm đào tạo	1	1			12	12	10,335	10,335
		Subtotal / Cộng	3	4			36	36	29,145	31,848
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Traffic planning / Kế hoạch vận chuyển	1	1			12	12	10,335	10,335
		Train operation / Điều vận tàu	1	2			12	12	2,703	5,406
		Station business / Kinh doanh tại ga	1	2			12	12	10,335	20,670
		IC Card Center / Trung tâm thẻ	2	2			24	24	11,130	22,260
		Subtotal / Cộng	11	15			132	132	87,021	120,729
		Managing Director / Giám đốc Điều hành	1	1			12	12	16,107	16,107
		Rolling stocks / Đầu máy toa xe	1	1			12	12	10,335	10,335
		Track / Structure / Architecture / Đường ray / Công trình / Kiến trúc	3	5			36	60	23,373	36,411
		Electrical / Cơ & Điện	1	2			12	24	10,335	20,670
		Subtotal / Cộng	10	16			120	192	86,226	125,340
		Managing Director / Giám đốc Điều hành	-	1			0	12	0	16,107
		Advertisement / Quảng cáo	-	1			0	12	0	10,335
		Shops / Các cửa hiệu tại ga	-	1			0	12	0	0
		Rental Space / Khu vực cho thuê	-	1			0	12	0	10,335
		Subtotal / Cộng	-	4			0	48	0	47,112
		Total / Tổng	49	72			588	588	526,306	1,128,066

<Source> / <Nguồn>

Monthly Salary: JETRO homepage / trang chủ JETRO

MODEL O&M Company Organization / Tổ chức công ty O&M

Department / Bộ phận	Unit / Đơn vị	Responsibility/ Trách nhiệm	Title Chức danh	Staff Allocation Plan / Kế hoạch phân bổ nhân viên			Salary Calculation / Tính toán lương					
				6/ 2017	01/ 2018	01/ 2030	2017		2018			
							MM	USD	MM	USD		
Operation / Vận hành	Managing Director / Giám đốc Điều hành				6	12	12	1,342	6	8,053	12	16,107
	Traffic planning Kế hoạch vận chuyển	-Developing train time table. / Lập kế hoạch tạo -Developing train-set operation plan / Lập kế hoạch vận hành tàu		Manager / Trưởng phòng	1	1	1	861	6	5,168	12	10,335
		Train operation Điều vận tàu	-Developing drivers operation plan / Lập kế hoạch điều hành các lái tàu -Managing and training drivers. / Quản lý và huấn luyện lái tàu -Operating trains. / Vận hành tàu		Manager / Trưởng phòng	1	1	1	861	6	5,168	12
			Deputy Manager / Phó TP	3	3	3	861	18	15,503	36	31,005	
			Staff / Nhân viên	6	6	6	225	36	8,109	72	16,218	
			Driver / Tài xế	45	45	45	159	270	42,930	540	85,860	
			Manager / Trưởng phòng	1	1	1	861	6	5,168	12	10,335	
			Station master / Quản lý ga	15	15	15	225	90	20,273	180	40,545	
			Staff / Nhân viên	180	180	180	464	1,080	500,850	2,160	1,001,700	
			Manager / Trưởng phòng	1	1	1	861	6	5,168	12	10,335	
		Dispatcher / Điều vận	3	3	3	225	18	4,055	36	8,109		
Subtotal / Cộng				257	257	257	1,542	620,442	3,084	1,240,884		
Facilities/ Rolling Stocks Trang thiết bị /Đầu máy toa xe	Managing Director / Giám đốc Điều hành				1	1	1	1,342	6	8,053	12	16,107
	Rolling stocks /Đầu máy toa xe	Rolling Stock		Manager / Trưởng phòng	1	1	1	861	6	5,168	12	10,335
		Đầu máy toa xe		Deputy Manager / Phó TP	3	3	2	861	18	15,503	36	31,005
				Staff / Nhân viên	10	10	10	225	60	13,515	120	27,030
				Worker / Công nhân	50	50	64	159	300	47,700	600	95,400
	Subtotal / Cộng				64	64	77	384	81,885	768	163,770	
	Track Đường ray		Manager / Trưởng phòng	-	-	1	861	0	0	0	0	0
			Deputy Manager / Phó TP	-	-	1	861	0	0	0	0	0
			Staff / Nhân viên	-	-	4	225	0	0	0	0	0
			Worker / Công nhân	-	-	8	159	0	0	0	0	0
Subtotal / Cộng				-	-	14	0	0	0	0	0	
Signal/ Telecomm. Power/AFC		Manager / Trưởng phòng	1	1	1	861	6	5,168	12	10,335		
		Deputy Manager / Phó TP	3	3	1	861	18	15,503	36	31,005		
Tin hiệu /Điện năng viễn thông /TT thu phí tự đ ộng		Staff / Nhân viên	12	12	4	225	72	16,218	144	32,436		
		Worker / Công nhân	61	61	15	159	366	58,194	732	116,388		
Subtotal / Cộng				77	77	21	462	95,082	924	190,164		
Subtotal / Cộng				141	141	112	852	185,020	1,704	370,041		
Total / Tổng				398	398	369	2,394	805,462	4,788	1,610,924		
<Source> / <Nguồn>												
Operation / Vận hành								698,718				1,397,437
Maintenance / Bảo dưỡng								208,363				416,726
Total in Y2017								907,081				1,814,163

Monthly Salary: JETRO homepage / trang chủ JETRO

Traction Power cost / Chi phí Điện năng sức kéo			
	2018	2030	2037
in VND in year 2011 / VND năm 2011	33,806,222,070	42,792,260,336	89,463,701,445
in USD in year 2011 / USD năm 2011	1,603,635	2,029,897	4,243,807
in USD in year 2018 / USD năm 2018	2,256,475	2,856,269	5,971,463

Items / Hạng mục	Unit / Đơn vị	Formula / Công thức	2018	2030	2037
Number of km of trains/day (Số km đoàn tàu chạy/ngày)	km	Number of cars/train-Số lượng toa tàu trên một đoàn tàu	4	4	4
Number of km of cars/day (Số km toa tàu chạy/ngày)	km	(a)	3,420	4,813	6,270
Average passenger volume/train (Số lượng hành khách trung bình / chuyến tàu)	person-person	(b)	13,680.0	19,253.3	25,080.0
Average weight /passenger (Khối lượng trung bình/khách)	t / tấn	(c)	1,329.5	1,152.6	2,109.0
Average deadweight/car (Khối lượng tịnh trung bình của toa)	t / tấn	(d)	0.06	0.06	0.06
Average weight /car (Khối lượng trung bình toa có khách)	t / tấn	(e) = (b) x (c) + (d)	25.7	25.7	25.7
Average power consumption (kWh/1000t.km)/day Điện năng tiêu thụ trung bình (kWh/1000 tấn.km)/ngày	(kWh/1000t.km)	(f)	105.5	94.9	152.2
Average power consumption /day (Điện năng tiêu thụ trung bình / ngày)	(kWh/Day)	(g) = (a) x (e) x (f)/1000	72,140.4	50.0	50.0
Weighted average power unit price (Normal and Peak) (Giá trị đơn vị điện năng trung bình (Giá trị bình thường và cao điểm))	(VND/kWh)	(h)	1,283.9	91,316.1	1,283.9
Total power cost/year- Tổng chi phí điện năng theo năm	VND	(i) = (g) x (h) x 365	33,806,222,070.4	42,792,260,336.4	89,463,701,444.7

Stations & CC / Ga & Trung tâm điều độ	1,208.05	22,593,254,376.7
Depots / Đè-pô	1,208.05	4,797,760,910.6
Tunnel / Hầm	1,114.38	0.0
Total/Tổng [VND] in year 2011	-	27,391,015,287.3
Total/Tổng [USD] in year 2011	-	1,299,322.4
Total/Tổng [USD] in year 2018	-	1,828,277.1

Station & CC / Ga & Trung tâm điều độ

Class (Nhóm) (Station/Ga số #)	Floor/Fầng	Area (Diện tích) (m ²)	Effective Area (Diện tích d ^{hiệu}) (m ²)	Elevator (Thang máy)		Escalator (Thang cuốn)		Platform Door (Cửa ke ga)		Signal (tín hiệu)	Water Works (Hệ thống nước)		Light, Office, AC, AFC etc. (HT chiếu sáng, văn phòng, ng. điều hòa, AFC, v.v...)		Total/Tổng (kVA)	Load Fact. Hệ số tải	Annual Power Consumption (Điện tiêu thụ hàng năm) (kWh)	No. of Facilities (Số thiết bị)	Annual Consump. (Tiêu thụ hàng năm) (m ³)	
				No (a) (SL)	(f) = (a) x (f) (kWh)	No (SL)	kVA/NO	Door (Cửa)	kVA	(kVA)	(kVA)	(kVA/m ²)	(kVA)	(kVA)						(b) x 0.7 x 7200hr (kWh)
S-Type (C-5, 11)	Entrance (Cửa vào)	20*100	2,000	400	1		1	5	15	20	0.05	20								
	Concourse & Office	20*100	2,000	600	2		2			20	0.10	60								
	Platform (Ke ga)	20*100	2,000	1,000	3	5,887	3	5	15	24	0.05	60								
M-Type (C3,10,12 to 15)	Entrance (Cửa vào)	30*100	3,000	1,000	1		2	5	25	30	0.10	200								
	Concourse & Office	30*100	3,000	2,000	2		3	5	25	24	0.05	50								
	Platform (Ke ga)	20*100	2,000	1,000	3	5,887	5	5	25	30	0.05	300								
L-Type (C1,2,4,6,8 to 9,16)	Entrance (Cửa vào)	30*100	3,000	2,000	1		2	5	30	40	0.10	200								
	Concourse & Office	30*100	3,000	2,000	2		4	5	30	40	0.10	180								
	Platform (Ke ga)	20*100	2,000	1,000	3	5,887	6	5	30	24	0.10	180								
CC (Control Center) Trung tâm điều độ	1F	30*60	1,800	1,800	3	5,887														
	2F	30*60	1,800	1,800	3															
	3F	30*60	1,800	1,800	3															
Total (Tổng)			5,400	5,400	3	5,887						20			540	0.60	336	1,716,960.0	1	1,722,846.6

Elevator - Thang máy

(e) Weight (kg)/ Khối lượng (kg)	750
(f) Speed (m/min.) / Tốc độ (m/phút)	45
(g) Annual Operation Hour/ Số giờ vận hành hàng năm	2,000
(h) Factor / Hệ số	0.025
(i) Power Consumption (kWh) : (a) x (b) x (c) x (d) / 860 / Tiêu thụ điện năng	1,962

Ministry of International Trade and Industry/Ministry of Construction.
Announcement #1 issued July 29, 1993
Bộ Ngoại thương và Công nghiệp / Bộ Xây dựng.
Thông báo số 1 ngày 29 tháng 7 năm 1993

Power consumption for underground light Tiêu thụ điện năng cho chiếu sáng khu vực ngầm

(j) Length of Underground (km) Chiều dài đường ngầm (km)	0.0
(k) Number of light (length of tunnel) Số lượng đèn chiếu sáng của đường ngầm (m) / 20m x both side (cả 2 bên)	0.36
(l) kW/unit kw/đơn vị	0
Annual Power Consumption Điện năng tiêu thụ hàng năm (kWh) : (n) x (o) x 24 x	0

Depot

Class (Phân)	Section (Phần)	Area (Diện tích) (m ²)	Installed Capa. Công suất lắp đặt (kVA/m ²)	Demand Capa. Công suất yêu cầu (kVA)
Đè-pô	Train Inspection (Kiểm tra tàu)	14*26	364	109
	Tire Exchange (Đổi bánh xe)			
	Guide Wheel Inspection (Kiểm tra bánh dẫn hướng)	40*24	960	288
	Body Inspection (Kiểm tra thân tàu)			
	Track Inspection (Kiểm tra đường ray)	20*36	720	216
	Air Control Inspection (Kiểm tra hệ thống nén khí)	20*12	240	72
	Electronics Inspection (Kiểm tra điện tử)	20*12	240	72
	Rotating Machine Inspection (Kiểm tra máy quay)	28*50	1,400	420
	Workshop (Xưởng sửa chữa)	40*12	480	144
	Power Distribution (Phân phối điện)	20*12	240	72
	Warehouse (Kho)	20*36	720	216
	Work Car Depot (Đè-pô toa xe)	20*10	200	60
	Feed Water & Drainage (Nước và thoát nước)			
Subtotal (Tổng)		5,564	1,414	
Yearlighting, Signalization etc (Ánh sáng, tín hiệu, v.v...)		70*200	14,000	140
Total Demand Capacity (m) Tổng công suất yêu cầu				777.2
Annual Power Consumption (kWh): (m) x 0.7 x 20 x 365 (Điện năng tiêu thụ hàng năm)				3,971,492.0

< Line 2a Total O&M costs > MUSD < Tuyến 2a : Tổng các chi phí của Công ty O&M >

Annual Allocation without Escalation (in year 2015)		Phân bổ hàng năm không tính trượt giá (năm 2015)			O&M 0	O&M 1	O&M 2	O&M 3	O&M 4	O&M 5	O&M 6	O&M 7	O&M 8	O&M 9	O&M 10	O&M 11	O&M 12	O&M 13	O&M 14	O&M 15	O&M 16	O&M 17	O&M 18	O&M 19	O&M 20	O&M 21	O&M 22	O&M 23	O&M 24	O&M 25	O&M 26	O&M 27	O&M 28	O&M 29	O&M 30		
		Ratio in 2015		Đơn vị: USD	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044			
Staff costs	Các chi phí nhân viên																																				
	Sub-Total	Cộng	42.9%		4,092,604	4,092,604	4,092,604	4,092,604	4,092,604	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	4,057,737	
Power costs	Các chi phí điện năng																																				
	Traction	Có sức kéo	8.4%		797,423	855,752	914,080	972,409	1,030,737	1,089,066	1,147,394	1,205,723	1,229,653	1,253,584	1,277,514	1,301,445	1,325,375	1,349,306	1,373,236	1,397,166	1,421,097	1,445,027	1,468,958	1,492,888	1,516,819	1,540,749	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	1,564,680	
	Non-traction	Không sức kéo	13.3%		1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	1,270,362	
	Sub-Total	Cộng	21.7%		2,067,785	2,126,114	2,184,442	2,242,771	2,301,099	2,359,428	2,417,756	2,476,085	2,500,015	2,523,946	2,547,876	2,571,807	2,595,737	2,619,668	2,643,598	2,667,529	2,691,459	2,715,390	2,739,320	2,763,251	2,787,181	2,811,112	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	2,835,042	
	Refer to " 7. Traction Power "	Xem phần "7. Điện năng sức kéo"																																			
	Refer to " 8. Non-Traction Power "	Xem phần "8. Điện năng không sức kéo"																																			
Spares cost	Chi phí phụ tùng																																				
	For Maintenance (Price in 2011)	Để bảo dưỡng (năm 2011)			1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	
	Sub-Total	Cộng	12.3%		1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	1,176,100	
Other Costs (30%)	Các chi phí khác (30%)		23.1%		2,200,947	2,218,445	2,235,944	2,253,442	2,270,941	2,277,979	2,295,478	2,312,977	2,320,156	2,327,335	2,334,514	2,341,693	2,348,872	2,356,051	2,363,231	2,370,410	2,377,589	2,384,768	2,391,947	2,399,126	2,406,305	2,413,485	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	2,396,261	
TOTAL	TỔNG CỘNG		100.0%		9,537,436	9,613,263	9,689,090	9,764,917	9,840,745	9,871,244	9,947,071	10,022,898	10,054,008	10,085,117	10,116,227	10,147,337	10,178,446	10,209,556	10,240,666	10,271,775	10,302,885	10,333,994	10,365,104	10,396,214	10,427,323	10,458,433	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	10,383,796	
Annual Allocation with Escalation				Phân bổ hàng năm có tính trượt giá																																	
					O&M 2015	O&M 2016	O&M 2017	O&M 2018	O&M 2019	O&M 2020	O&M 2021	O&M 2022	O&M 2023	O&M 2024	O&M 2025	O&M 2026	O&M 2027	O&M 2028	O&M 2029	O&M 2030	O&M 2031	O&M 2032	O&M 2033	O&M 2034	O&M 2035	O&M 2036	O&M 2037	O&M 2038	O&M 2039	O&M 2040	O&M 2041	O&M 2042	O&M 2043	O&M 2044			
Staff costs	Các chi phí nhân viên		Đơn vị: MUSD	Escalation / Trượt giá																																	
	Sub-Total	Cộng		2.0%	4.1	4.2	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.1	5.2	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.2	6.1	6.3	6.4	6.5	6.7	6.8	6.9	7.1			
Power costs	Các chi phí điện năng			->			5.0%					3.7%										3.2%											2.5%				
	Traction	Có sức kéo			0.8	0.9	1.0	1.1	1.3	1.4	1.5	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.6	2.7	2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3			
	Non-traction	Không sức kéo			1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.4	3.5			
	Sub-Total	Cộng			2.1	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.8	6.0	6.2	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9			
Spares cost	Chi phí phụ tùng																																				
	For Maintenance	Để bảo dưỡng			1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0			
	Sub-Total	Cộng			1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0			
Other Costs (30%)	Các chi phí khác (30%)				2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.0	4.1	4.3	4.4	4.5	4.7	4.8	4.9	5.0	5.2	5.3	5.4	5.5	5.7			

< Line 3 : Total O&M costs > MUSD < Tuyến 3 : Tổng các chi phí của Công ty O&M >

Annual Allocation without Escalation (in year 2016)			Phân bổ hàng năm không tính trượt giá (năm 2016)																																			
		Đơn vị: USD	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	
	(Unit:US\$)	Đơn vị: USD	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
		Đơn vị: USD	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	
Staff costs	Các chi phí nhân viên																																					
Operations	Vận hành	12.7%	-	173.854	937.659	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028	1.182.028
Maintenance	Bảo dưỡng	5.7%	-	75.839	483.690	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	529.892	
Sub-Total	Cộng	18.4%	-	249.693	1.421.349	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919	1.711.919		
Power costs	Các chi phí điện năng																																					
Traction	Có sức kéo	7.2%	-	-	-	666.260	666.260	666.260	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	969.522	
Non-traction	Không sức kéo	15.4%	-	-	-	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	1.437.030	
Sub-Total	Cộng	22.6%	-	-	-	2.103.290	2.103.290	2.103.290	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552	2.406.552		
Refer to " 7. Traction Power "	Xem phần " 7. Điện năng sức kéo																																					
Refer to " 8. Non-Traction Power "	Xem phần " 8. Điện năng không sức kéo"																																					
Spares cost	Chi phí phụ tùng																																					
For Maintenance	Để bảo dưỡng	35.9%	-	-	-	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	3.344.841	-	
Sub-Total	Cộng	35.9%	-	-	-	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	3,344,841	-	
Other Costs (30%)	Các chi phí khác (30%)	23.1%	-	74.908	426.405	2.148.015	2.148.015	2.148.015	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	2.238.994	1,235,542	
TOTAL	TỔNG CỘNG	100.0%	-	324.600	1,847,753	9,308,065	9,308,065	9,308,065	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	9,702,306	5,354,013			

Annual Allocation with Escalation			Phân bổ hàng năm có tính trượt giá																																		
	(Unit:US\$)	Đơn vị: USD	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M	O&M
		Đơn vị: USD	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
		Đơn vị: USD	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Staff costs	Các chi phí nhân viên																																				
Operations	Vận hành	Escalation / Trượt giá	-	0.2	1.0	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.2	2.3	
Maintenance	Bảo dưỡng	Trượt giá	-	0.1	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	
Sub-Total	Cộng		-	0.2	1.4	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.2	3.2	3.3		
Power costs	Các chi phí điện năng																																				
Traction	Có sức kéo	->	-	-	-	5.0%	0.7	0.8	0.8	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.6	2.7	2.8	2.8	2.9	
Non-traction	Không sức kéo		-	-	-	3.7%	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3
Sub-Total	Cộng		-	-	-	2.3%	2.3	2.4	2.6	3.0	3.1	3.3	3.4	3.5	3.6	3.8	3.9	4.1	4.2	4.3	4.5	4.6	4.8	4.9	5.1	5.2	5.4	5.6	5.8	5.9	6.1	6.2	6.4	6.5	6.7	6.9	7.0
Spares cost	Chi phí phụ tùng																																				
For Maintenance	Để bảo dưỡng		-	-	-	2.5%	4.7	4.9	5.2	5.4	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.2	7.5	7.7	7.9	8.2	8.5	8.7	9.0	9.3	9.6	9.9	10.2	10.5	10.7	11.0	11.3	11.6	11.9	12.2	-
Sub-Total	Cộng		-	-	-	4.7%	4.7	4.9	5.2	5.4	5.6	5.8	6.0	6.2	6.5	6.7	6.9	7.2	7.5	7.7	7.9	8.2	8.5	8.7	9.0	9.3	9.6	9.9	10.2	10.5	10.7	11.0	11.3	11.6	11.9	12.2	-
Other Costs (30%)	Các chi phí khác (30%)		-	0.1	0.4	2.6	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.8	5.0	5.1	5.3	5.5	5.6	5.8	5.9	6.0	6.2	6.3	6.5	6.7	3.1</	

MODEL O&M Company Organization / Tổ chức công ty O&M

Department / Bộ phận	Unit / Đơn vị	Responsibility/ Trách nhiệm	Title Chức danh	Staff Allocation Plan / Kế hoạch phân bố nhân viên		Salary Calculation / Tính toán lương					
				6/ 2016	01/ 2017	Monthly Salary (incl. Social&Benefit) [USD]		Lương hàng tháng(Bao gồm phúc lợi xã hội) [Bằng USD]			
						2016	2017	2016	2017		
MM				6	12						
Operation / Vận hành	Managing Director / Giám đốc Điều hành			1	1	1,342	6	8,053	12	16,107	
	Traffic planning Kế hoạch vận chuyển	-Developing train time table. / Lập kế hoạch đào tạo -Developing train-set operation plan / Lập kế hoạch vận hành tàu	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
	Train operation Điều vận tàu	-Developing drivers operation plan / Lập kế hoạch điều hành các lái tàu -Managing and training drivers. / Quản lý và huấn luyện lái tàu -Operating trains. / Vận hành tàu	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
			Deputy Manager / Phó TP	3	3	861	18	15,503	36	31,005	
			Staff / Nhân viên	-	6	225	0	0	72	16,218	
			Driver / Tài xế	-	47	159	0	0	564	89,676	
	Station business Kinh doanh tại ga	Handling day-to-day station business./Quản lý kinh doanh tại ga mỗi ngày	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
			Station master / Quản lý ga	10	10	225	60	13,515	120	27,030	
			Staff / Nhân viên	36	120	464	216	100,170	1,440	667,800	
	OCC Trung tâm điều độ	Managing Operation Control Center./ Quản lý trung tâm điều độ	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
Dispatcher / Điều vận			-	3	225	0	0	36	8,109		
Subtotal / Cộng				54	194		324	157,911	2,328	897,285	
Facilities/ Rolling Stocks Trang thiết bị / Đầu máy toa xe	Managing Director / Giám đốc Điều hành			1	1	1,342	6	8,053	12	16,107	
	Rolling stocks / Đầu máy toa xe	Rolling Stock Đầu máy toa xe	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
			Deputy Manager / Phó TP	3	3	861	18	15,503	36	31,005	
			Staff / Nhân viên	-	10	225	0	0	120	27,030	
			Worker / Công nhân	-	34	159	0	0	408	64,872	
	Subtotal / Cộng				4	48		24	20,670	576	133,242
	Track /Structure /Architecture / Đường ray / Công trình / Kiến trúc	Track Đường ray	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335	
			Deputy Manager / Phó TP	3	3	861	18	15,503	36	31,005	
			Staff / Nhân viên	-	12	225	0	0	144	32,436	
			Worker / Công nhân	-	36	159	0	0	432	68,688	
Subtotal / Cộng				4	52		24	20,670	624	142,464	
Electrical&Mechanical /CƠ & Điện	Signal/ Telecomm. Power/ AFC Tín hiệu / Điện năng viễn thông /TT thu phí tự động	Manager / Trưởng phòng	1	1	861	6	5,168	12	10,335		
		Deputy Manager / Phó TP	3	3	861	18	15,503	36	31,005		
		Staff / Nhân viên	-	12	225	0	0	144	32,436		
		Worker / Công nhân	-	48	159	0	0	576	91,584		
Subtotal / Cộng				4	64		24	20,670	768	165,360	
Subtotal / Cộng				12	164		78	70,063	1,980	457,173	
Total / Tổng				66	358		402	227,974	4,308	1,354,457	
<Source> / <Nguồn>						Operation / Vận hành		174,346	990,675		
Monthly Salary; JETRO homepage / trang chủ JETRO						Maintenance / Bảo dưỡng		77,356	504,756		
						Total in Y2016		251,702	1,495,430		

Traction Power cost / Chi phí Điện năng sức kéo	2018	2021	2044
in VND in year 2011 / VND năm 2011	18,871,280,343	26,423,748,892	40,819,430,326
in USD in year 2011 / USD năm 2011	895,180	1,253,439	1,936,314
in USD in year 2018 / USD năm 2018	1,259,608	1,763,715	2,724,588

Items / Hạng mục	Unit / Đơn vị	Formula / Công thức	2018	2021	2044
Number of cars/train-Số lượng toa tàu trên một đoàn tàu			4	4	4
Number of km of trains/day (Số km đoàn tàu chạy/ngày)	km		3,600	3,600	3,600
Number of km of cars/day (Số km toa tàu chạy/ngày)	km	(a)	14,400.0	14,400.0	14,400.0
Average passenger volume/train (Số lượng hành khách trung bình / chuyến tàu)	person-người	(b)	503.8	876.9	1,588.0
Average weight /passenger (Khối lượng trung bình/khách)	t / tấn	(c)	0.06	0.06	0.06
Average deadweight/car(Khối lượng tịnh trung bình của toa)	t / tấn	(d)	25.7	25.7	25.7
Average weight /car(Khối lượng trung bình toa có khách)	t / tấn	(e) =(b) x (c) +(d)	55.9	78.3	121.0
Average power consumption(kWh/1000t.km)/day Điện năng tiêu thụ trung bình (kWh/1000 tấn.km)/ngày	(kWh/1000t.km)	(f)	50.0	50.0	50.0
Average power consumption /day (Điện năng tiêu thụ trung bình / ngày)	(kWh/Day)	(g) =(a) x (e) x (f)/1000	40,270.2	56,386.7	87,106.2
Waighed average power unit price (Normal and Peak) (Giá trị đơn vị điện năng trung bình(Giờ bình thường và cao điểm))	(VND/kWh)	(h)	1,283.9	1,283.9	1,283.9
Total power cost/year-Tổng chi phí điện năng theo năm	VND	(i) =(g) x (h) x 365	18,871,280,342.7	26,423,748,891.6	40,819,430,325.6

<Source> / <Nguồn>

FS report 2008

Non-Traction power cost / Chi phí điện năng không sức kéo	Unit Price Đơn giá	2018	2044
Stations & CC / Ga & Trung tâm điều độ	1,208.05	13,543,376,558.6	
Depots / Đê-pô	1,208.05	4,797,760,910.6	
Tunnel / Hầm	1,114.38	2,987,149,050.0	
Total/Tổng [VND] in year 2011	-	21,328,286,519.2	-
Total /Tổng [USD] in year 2011	-	1,011,730.3	-
Total/Tổng [USD] in year 2018	-	1,423,606.1	-

Station & CC / Ga & Trung tâm điều độ

Class (Nhóm) (Station /Ga số #)	Floor (Tầng)	Area (Diện tích) (m ²)		Effective Area (Diện tích dùng điện) (m ²)	Elevator (Thang máy)		Other Equipment										Annual Power Consump. (Điện năng tiêu thụ hàng năm) (c) (b) x 0.7 x 7300Hr kWh	No of Facilities (Số lượng trang thiết bị) (d)	Annual Consp. (Tiêu thụ hàng năm) (c) + (f') x (d) kWh																																		
							Escalator (Thang cuốn)		Platform Door (Cửa ke ga)		Signal (tín hiệu)	Water Works (Hệ thống nước)	Light, Office, AC, AFC etc. (HT chiếu sáng, văn phòng, điều hòa, AFC, v.v...)		Total/Tổng (kVA)																																						
							No (SL)	kVA/No	kVA	Door Cửa	kVA/No	kVA	(kVA)	(kVA)	kVA/m ²	kVA				Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải	Demand Capa. (b) Công suất yêu cầu																															
							(f)' = (a) x (f) [kWh]	No (SL)	kVA/No	kVA	kVA	(kVA)	(kVA)	kVA/m ²	kVA																																						
S:Type (C-1, 2,3)	Entrance (Cửa vào)	20*100	2,000	400																																																	
	Concourse & Office (Sảnh chờ và Văn phòng)	20*100	2,000	600	1	2																																															
	Platform (Ke ga)	20*100	2,000	1,000																																																	
	Total (Tổng)		6,000	2,000		3	5,887				3	5	15	24	1	24	20	10								130	199	0.55	109	559,289.5	3	1,695,528.4																					
M:Type (C4 to 10)	Entrance (Cửa vào)	30*100	3,000	1,000																																																	
	Concourse & Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000	1	2																																															
	Platform (Ke ga)	20*100	2,000	1,000																																																	
	Total (Tổng)		8,000	4,000		3	5,887				5	5	25	24	1	24	30	15																																			
L:Type	Entrance (Cửa vào)	30*100	3,000	2,000																																																	
	Concourse & Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000	1	2																																															
	Platform (Ke ga)	20*100	2,000	1,000																																																	
	Total (Tổng)		8,000	5,000		3	5,887				6	5	30	24	1	24	40	20																																			
CC (Control Center) Trung tâm điều độ	1F	30*60	1,800	1,800																																																	
	2F	30*60	1,800	1,800																																																	
	3F	30*60	1,800	1,800																																																	
	Total (Tổng)		5,400	5,400		3	5,887																																														
Total																																																					

Elevator Thang máy

(e) Weight (Kg)/ Khối lượng (kg)	750
(f) Speed (m/min.)/ Tốc độ (m/phút)	45
(g) Annual Operation Hour/ Số giờ vận hành hàng năm	2,000
(h) Factor / Hệ số	0.025
(i) Power Consumption (kWh) : (a) x (b) x (c) x (d) / 860/ Tiêu thụ điện năng	1,962

Ministry of International Trade and Industry/Ministry of Construction:
 Announcement #1 issued July 29, 1993
 Bộ Ngoại thương và Công nghiệp / Bộ Xây dựng:
 Thông báo số 1 ngày 29 tháng 7 năm 1993

Power consumption for underground lighting Tiêu thụ điện năng cho chiếu sáng khu vực ngầm

(j) Length of Underground (km) Chiều dài đi ngầm (km)	8.5
(k) Number of light (Length of tunnel) Số lượng đèn (chiều dài của hầm): (m) / 20m x both side (cả 2 bên)	850.0
(l) kw/unit kw/đèn	0.36
Annual Power Consumption Điện năng tiêu thụ hàng năm (kWh) : (n) x (o) x 24 x 365	2,680,560

Depot

Class Phần	Section Phần	Area Diện tích (m ²)		Electric Power Facility (Điều kiện tiêu thụ điện)			
				kVA/m ²	Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải	Demand Capa. [kVA] Công suất yêu cầu
Depot Đê-pô	Train Inspection (Kiểm tra tàu)	14*26	364	0.30	109	0.50	707.2
	Tire Exchange (Đổi bánh xe)						
	Guide Wheel Inspection (Kiểm tra bánh dẫn hướng)	40*24	960	0.30	288		
	Body Inspection (Kiểm tra thân tàu)						
	Track Inspection (Kiểm tra đường ray)	20*36	720	0.30	216		
	Air Control Inspection (Kiểm tra hệ thống nén khí)	20*12	240	0.30	72		
	Electronics Inspection (Kiểm tra điện tử)	20*12	240	0.10	24		
	Rotating Machine Inspection (Kiểm tra máy quay)	28*50	1,400	0.30	420		
	Workshop (Xưởng sửa chữa)	40*12	480	0.30	144		
	Power Distribution (Phân phối điện)	20*12	240	0.10	24		
	Warehouse (Kho)	20*36	720	0.01	7		
	Work Car Depot (Đê-pô toa xe)	20*10	200	0.30	60		
	Feed Water & Drainage (Nước và thoát nước)				50		
	Subtotal (Cộng)		5,564		1,414		
	Yard (Lighting, Signalization etc) (Bãi tàu/Chiếu sáng, tín hiệu)	70*200	14,000	0.01	140		
Total Demand Capacity (m) Tổng công suất yêu cầu							777.2
Annual Power Consumption [kWh]: (m) x 0.7 x 20 x 365 (Điện năng tiêu thụ hàng năm)							3,971,492.0

76.8 Yen/USD 21,081 VND/USD

Main cost breakdown table with columns for Investment, FC, LC, and various equipment categories like Rolling Stock, E&M, and Tracks.

Note section containing calculation methods and source information (Source / Nguồn: FS report - 2008).

Large table showing economic growth rates and asset depreciation schedules from 2015 to 2048, categorized by Original Assets and Rolling Stock.

MODEL O&M Company Organization / Tổ chức công ty O&M

Department / Bộ phận	Unit / Đơn vị	Responsibility/ Trách nhiệm	Title Chức danh	Staff Allocation Plan / Kế hoạch phân bổ nhân viên			Salary Calculation / Tính toán lương								
				1/ 2015	01/ 2022	01/ 2037	Monthly Salary (incl. Social&Benefit) [USD] Lương hàng tháng(Bao gồm phúc lợi xã hội) [Bằng USD]	2015		2022		2037			
								MM	USD	MM	USD	MM	USD		
MM				12	12	12									
Operation / Vận hành	Managing Director / Giám đốc Điều hành			1	1	1	1,342	12	16,107	12	16,107	12	16,107		
	Traffic planning Kế hoạch vận chuyển	-Developing train time table. / Lập kế hoạch đảo tạo -Developing train-set operation plan / Lập kế hoạch vận hành tàu	Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335		
	Train operation Điều vận tàu	-Developing drivers operation plan / Lập kế hoạch điều hành các lái tàu -Managing and training drivers. / Quản lý và huấn luyện lái tàu -Operating trains. / Vận hành tàu	Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335		
			Deputy Manager / Phó TP	1	1	1	861	12	10,335	12	10,335	12	10,335		
			Staff / Nhân viên	5	5	5	225	60	13,515	60	13,515	60	13,515		
	Station business Kinh doanh tại ga	Handling day-to-day station business. Quản lý kinh doanh tại ga mỗi ngày	Driver / Tài xế	51	51	51	159	608	96,718	608	96,718	608	96,718		
			Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335		
			Station master / Quản lý ga	12	12	12	225	144	32,436	144	32,436	144	32,436		
	OCC Trung tâm điều độ	Managing Operation Control Center. Quản lý trung tâm điều độ	Staff / Nhân viên	144	144	144	464	1,728	801,360	1,728	801,360	1,728	801,360		
			Manager / Trưởng phòng	3	1	1	861	36	31,005	12	10,335	12	10,335		
		Dispatcher / Điều vận	21	21	21	225	252	56,763	252	56,763	252	56,763			
Subtotal /Cộng				241	239	239	2,888	1,089,244	2,864	1,068,574	2,864	1,068,574			
Facilities/ Rolling Stocks Trang thiết bị / Đầu máy toa xe	Managing Director / Giám đốc Điều hành			1	1	1	1,342	12	16,107	12	16,107	12	16,107		
	Rolling stocks / Đầu máy toa xe	Rolling Stock Đầu máy toa xe	Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335		
			Deputy Manager / Phó TP	3	3	3	861	36	31,005	36	31,005	36	31,005		
			Staff / Nhân viên	11	11	11	225	132	29,733	132	29,733	132	29,733		
			Worker / Công nhân	16	16	32	159	194	30,910	194	30,910	389	61,819		
	Subtotal / Cộng				31	31	47	374	101,983	374	101,983	569	132,892		
	Track /Structure /Architecture / Đường ray / Công trình / Kiến trúc	Track Đường ray	Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335		
			Deputy Manager / Phó TP	3	3	3	861	36	31,005	36	31,005	36	31,005		
			Staff / Nhân viên	13	13	13	225	156	35,139	156	35,139	156	35,139		
			Worker / Công nhân	39	39	39	159	468	74,412	468	74,412	468	74,412		
Subtotal / Cộng				56	56	56	672	150,891	672	150,891	672	150,891			
Electrical&Mechanical /Cơ & Điện	Signal/ Telecomm. Power/ AFC Tín hiệu / Điện năng viễn thông /TT thu phí tự động	Manager / Trưởng phòng	1	1	1	861	12	10,335	12	10,335	12	10,335			
		Deputy Manager / Phó TP	3	3	3	861	36	31,005	36	31,005	36	31,005			
		Staff / Nhân viên	12	12	12	225	144	32,436	144	32,436	144	32,436			
		Worker / Công nhân	48	48	48	159	576	91,584	576	91,584	576	91,584			
Subtotal / Cộng				64	64	64	768	165,360	768	165,360	768	165,360			
Subtotal /Cộng				152	152	168	1,826	434,340	1,826	434,340	2,021	465,250			
Total / Tổng				393	391	407	4,715	1,523,584	4,691	3,424,062	4,885	3,516,791			
<Source> / <Nguồn>							Operation / Vận hành						1,179,033	1,156,659	1,156,659
Monthly Salary; JETRO homepage / trang chủ JETRO							Maintenance / Bảo dưỡng						470,144	470,144	503,601
							Total Price in Y2015								
Model							1,649,177		1,626,803		1,660,260				
975 people							4,092,604		4,057,737		3,976,393				

Traction Power cost / Chi phí Điện năng sức kéo	2015	2022	2037
in VND in year 2011 / VND năm 2011	13,830,018,921	20,911,318,460	27,136,854,124
in USD in year 2011 / USD năm 2011	656,042	991,951	1,287,266
in USD in year 2018 / USD năm 2015	797,423	1,205,723	1,564,680

Items / Hạng mục	Unit / Đơn vị	Formula / Công thức	2015	2022	2037
Number of cars/train-Số lượng toa tàu trên một đoàn tàu			4	4	4
Number of km of trains/day (Số km đoàn tàu chạy/ngày)	km		3,888	3,888	3,888
Number of km of cars/day (Số km toa tàu chạy/ngày)	km	(a)	15,552.0	15,552.0	15,552.0
Average passenger volume/train (Số lượng hành khách trung bình / chuyến tàu)	person-người	(b)	243.9	588.1	890.8
Average weight /passenger (Khối lượng trung bình/khách)	t / tấn	(c)	0.06	0.06	0.06
Average deadweight/car(Khối lượng tịnh trung bình của toa)	t / tấn	(d)	25.7	25.7	25.7
Average weight /car(Khối lượng trung bình toa có khách)	t / tấn	(e) =(b) x (c) +(d)	40.3	61.0	79.1
Average power consumption(kWh/1000t·km)/day Điện năng tiêu thụ trung bình (kWh/1000 tấn·km)/ngày	(kWh/1000t·km)	(f)	50.0	50.0	50.0
Average power consumption /day (Điện năng tiêu thụ trung bình / ngày)	(kWh/Day)	(g) =(a) x (e) x (f)/1000	31,365.0	47,424.6	61,543.4
Waighed average power unit price (Normal and Peak) (Giá trị đơn vị điện năng trung bình(Giờ bình thường và cao điểm))	(VND/kWh)	(h)	1,208.1	1,208.1	1,208.1
Total power cost/year-Tổng chi phí điện năng theo năm	VND	(i) =(g) x (h) x 365	13,830,018,920.9	20,911,318,460.0	27,136,854,123.6

Non-Traction power cost / Chi phí điện năng không sức kéo	Unit Price Đơn giá	2015	-
Stations & CC / Ga & Trung tâm điều độ	1,208.05	17,234,627,400.9	
Depots / Đè-pô	1,208.05	4,797,760,910.6	
Tunnel / Hầm	1,114.38	0.0	
Total/Tổng [VND] in year 2011	-	22,032,388,311.5	-
Total /Tổng [USD] in year 2011	-	1,045,130.1	-
Total/Tổng [USD] in year 2015	-	1,270,362.2	-

Station & CC / Ga & Trung tâm điều độ

Class (Nhóm) (Station /Ga số #)	Floor (Tầng)	Area (Diện tích) (m ²)		Effective Area (Diện tích dùng điện) (m ²)	Elevator (Thang máy)		Other Equipment										Annual Power Consump. (Điện năng tiêu thụ hàng năm) (c) (b) x 0.7 x 7300Hr kWh	No of Facilities (Số lượng trang thiết bị) (d)	Annual Consump. (Tiêu thụ hàng năm) ((c) +(f')) x (d) kWh																							
							Escalator (Thang cuốn)			Platform Door (Cửa ke ga)			Signal (tín hiệu) (kVA)	Water Works (Hệ thống nước) (kVA)	Light,Office,AC,AFC etc. (HT chiếu sáng, văn phòng, điều hòa, AFC, v.v...) (kVA/m ² kVA)					Total/Tổng (kVA)																						
							No (SL)	kVA/No	kVA	Door Cửa	kVA/No	kVA			Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải				Demand Capa. (b) Công suất yêu cầu																						
S:Type (C-7,8,10,11)	Entrance (Cửa vào)	20*100	2,000	400	1	2	1	2	5	15	24	1	24	20	10	0.05	20	199	0.55	109	559,289.5	4	2,260,704.5																			
	Concourse &Office (Sảnh chờ và Văn phòng)	20*100	2,000	600																																						
	Platform (Ke ga)	20*100	2,000	1,000																																						
	Total (Tổng)	6,000	2,000	3																				5,887	3	5	15	24	1	24	20	10	0.05	130								
M:Type (C9)	Entrance (Cửa vào)	30*100	3,000	1,000	1	2	2	3	5	25	24	1	24	30	15	0.05	50	394	0.55	217	1,107,337.0	1	1,113,223.6																			
	Concourse &Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000																																						
	Platform (Ke ga)	20*100	2,000	1,000																																						
	Total (Tổng)	8,000	4,000	3																				5,887	5	5	25	24	1	24	30	15	0.05	300								
L:Type (C-1 to 6, 12)	Entrance (Cửa vào)	30*100	3,000	2,000	1	2	2	4	5	30	24	1	24	40	20	0.05	50	464	0.55	255	1,304,072.0	7	9,169,710.4																			
	Concourse &Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000																																						
	Platform (Ke ga)	20*100	2,000	1,000																																						
	Total (Tổng)	8,000	5,000	3																				5,887	6	5	30	24	1	24	40	20	0.05	350								
CC (Control Center) Trung tâm điều độ	1F	30*60	1,800	1,800	3																																					
	2F	30*60	1,800	1,800																																						
	3F	30*60	1,800	1,800																																						
	Total (Tổng)	5,400	5,400	3																				5,887										20	540	560	0.60	336	1,716,960.0	1	1,722,846.6	
Total																																										14,266,485.2

Elevator Thang máy

(e) Weight (Kg)/ Khối lượng (kg)	750
(f) Speed (m/min.)/ Tốc độ (m/phút)	45
(g) Annual Operation Hour/ Số giờ vận hành hàng năm	2,000
(h) Factor / Hệ số	0.025
(i) Power Consumption (kWh): (a) x (b) x (c) x (d) / 860/ Tiêu thụ điện năng	1,962

Ministry of International Trade and Industry/Ministry of Construction:
Announcement #1 issued July 29, 1993
Bộ Ngoại thương và Công nghiệp / Bộ Xây dựng:
Thông báo số 1 ngày 29 tháng 7 năm 1993

Power consumption for underground lighting Tiêu thụ điện năng cho chiếu sáng khu vực ngầm

(j) Length of Underground (km) Chiều dài đi ngầm (km)	0.0
(k) Number of light (Length of tunnel) Số lượng đèn (chiều dài của hầm): (m) / 20m x both side (cả 2 bên)	0.0
(l) kw/unit kw/đèn	0.36
Annual Power Consumption Điện năng tiêu thụ hàng năm (kWh): (n) x (o) x 24 x 365	0.00

Depot

Class Phần	Section Phần	Area Diện tích (m ²)	Electric Power Facility (Điều kiện tiêu thụ điện)				
			kVA/m ²	Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải	Demand Capa. [kVA] Công suất yêu cầu	
Depot Đè-pô	Train Inspection (Kiểm tra tàu)	14*26	364	0.30	109	0.50	707.2
	Tire Exchange (Đổi bánh xe)						
	Guide Wheel Inspection (Kiểm tra bánh dẫn hướng)	40*24	960	0.30	288		
	Body Inspection (Kiểm tra thân tàu)						
	Track Inspection (Kiểm tra đường ray)	20*36	720	0.30	216		
	Air Control Inspection (Kiểm tra hệ thống nén khí)	20*12	240	0.30	72		
	Electronics Inspection (Kiểm tra điện tử)	20*12	240	0.10	24		
	Rotating Machine Inspection (Kiểm tra máy quay)	28*50	1,400	0.30	420		
	Workshop (Xưởng sửa chữa)	40*12	480	0.30	144		
	Power Distribution (Phân phối điện)	20*12	240	0.10	24		
	Warehouse (Kho)	20*36	720	0.01	7		
	Work Car Depot (Đè-pô toa xe)	20*10	200	0.30	60		
	Feed Water & Drainage (Nước và thoát nước)				50		
	Subtotal (Cộng)		5,564		1,414		
	Yard(Lighting,Signalization etc) (Bãi tàu/Chiếu sáng, tín hiệu)	70*200	14,000	0.01	140		
Total Demand Capacity (m) Tổng công suất yêu cầu							777.2
Annual Power Consumption [kWh]: (m) x 0.7 x 20 x 365 (Điện năng tiêu thụ hàng năm)							3,971,492.0

MODEL O&M Company Organization / Tổ chức công ty O&M

Department / Bộ phận	Unit / Đơn vị	Responsibility/ Trách nhiệm	Title Chức danh	Staff Allocation Plan / Kế hoạch phân bổ nhân viên					Salary Calculation / Tính toán lương											
				6/ 2015	01/ 2016	01/ 2017	01/ 2022	01/ 2032	Monthly Salary (incl. Social&Benefit) [USD] Lương hàng tháng(Bao gồm phúc lợi xã hội) [Bảng USD]	2015		2016		2017		2022		2032		
										MM	USD	MM	USD	MM	USD	MM	USD	MM	USD	
MM				6	12	12	12	12		MM	USD	MM	USD	MM	USD	MM	USD	MM	USD	
Operation / Vận hành	Managing Director / Giám đốc Điều hành			1	1	1	1	1	1,342	6	8,053	12	16,107	12	16,107	12	16,107	12	16,107	
	Traffic planning Kế hoạch vận chuyển	-Developing train time table. / Lập kế hoạch tạo - Developing train-set operation plan/Lập kế	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
	Train operation Điều vận tàu	-Developing drivers operation plan/ Lập kế hoạch điều hành các lái tàu -Managing and training drivers./Quản lý và huấn luyện lái tàu -Operating trains./ Vận hành tàu	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
			Deputy Manager / Phó TP	3	3	3	3	3	861	18	15,503	36	31,005	36	31,005	36	31,005	36	31,005	
			Staff / Nhân viên	-	6	6	6	6	225	0	0	72	16,218	72	16,218	72	16,218	72	16,218	
			Driver / Tài xế	-	54	54	54	54	159	0	0	648	103,032	648	103,032	648	103,032	648	103,032	
	Station business Kinh doanh tại ga	Handling day-to-day station business./Quản lý kinh doanh tại ga mỗi ngày	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
			Station master / Quản lý ga	12	12	12	12	12	225	72	16,218	144	32,436	144	32,436	144	32,436	144	32,436	
			Staff / Nhân viên	36	108	144	144	144	464	216	100,170	1,296	601,020	1,728	801,360	1,728	801,360	1,728	801,360	
	OCC Trung tâm điều độ	Managing Operation Control Center./ Quản lý trung tâm điều độ	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
Dispatcher / Điều vận			-	3	3	3	3	225	0	0	36	8,109	36	8,109	36	8,109	36	8,109		
Subtotal /Cộng				56	191	227	227	227		336	160,614	2,292	849,267	2,724	1,049,607	2,724	1,049,607	2,724	1,049,607	
Facilities/ Rolling Stocks Trang thiết bị / Đầu máy toa xe	Managing Director / Giám đốc Điều hành			1	1	1	1	1	1,342	6	8,053	12	16,107	12	16,107	12	16,107	12	16,107	
	Rolling stocks / Đầu máy toa xe	Rolling Stock Đầu máy toa xe	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
			Deputy Manager / Phó TP	3	3	3	3	3	861	18	15,503	36	31,005	36	31,005	36	31,005	36	31,005	
			Staff / Nhân viên	-	10	10	10	10	225	0	0	120	27,030	120	27,030	120	27,030	120	27,030	
			Worker / Công nhân	-	24	41	55	67	159	0	0	288	45,792	492	78,228	660	104,940	804	127,836	
	Subtotal / Cộng				4	38	55	69	81		24	20,670	456	114,162	660	146,598	828	173,310	972	196,206
	Track /Structure /Architecture / Đường ray / Công trình / Kiến trúc	Track Đường ray	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335	
			Deputy Manager / Phó TP	3	3	3	3	3	861	18	15,503	36	31,005	36	31,005	36	31,005	36	31,005	
			Staff / Nhân viên	-	12	12	12	12	225	0	0	144	32,436	144	32,436	144	32,436	144	32,436	
			Worker / Công nhân	-	36	36	36	36	159	0	0	432	68,688	432	68,688	432	68,688	432	68,688	
Subtotal / Cộng				4	52	52	52	52		24	20,670	624	142,464	624	142,464	624	142,464	624	142,464	
Electrical&Mechanical	Signal/ Telecomm. Power/ AFC Tín hiệu / Điện năng viễn thông /TT thu phí tự đ ộng	Manager / Trưởng phòng	1	1	1	1	1	861	6	5,168	12	10,335	12	10,335	12	10,335	12	10,335		
		Deputy Manager / Phó TP	3	3	3	3	3	861	18	15,503	36	31,005	36	31,005	36	31,005	36	31,005		
		Staff / Nhân viên	-	12	12	12	12	225	0	0	144	32,436	144	32,436	144	32,436	144	32,436		
		Worker / Công nhân	-	48	48	48	48	159	0	0	576	91,584	576	91,584	576	91,584	576	91,584		
Subtotal / Cộng				4	64	64	64	64		24	20,670	768	165,360	768	165,360	768	165,360	768	165,360	
Subtotal /Cộng				13	155	172	186	198		78	70,063	1,860	438,093	2,064	470,529	2,232	497,241	2,376	520,137	
Total / Tổng				69	346	399	413	425		414	230,677	4,152	1,287,359	4,788	1,520,135	4,956	1,546,847	5,100	1,569,743	
<Source> / <Nguồn>																				
Monthly Salary: JETRO homepage / trang chủ JETRO																				
				Operation / Vận hành		173,854		937,659		1,182,028		1,305,054		1,590,854						
				Maintenance / Bảo dưỡng		75,839		483,690		529,892		618,256		788,354						
				Total in Y2011		249,692		1,421,349		1,711,919		1,923,310		2,379,207						

Traction Power cost / Chi phí Điện năng sức kéo	2017	2022	2032
in VND in year 2011 / VND năm 2011	10,480,915,245	15,251,524,942	20,413,477,040
in USD in year 2011 / USD năm 2011	497,174	723,473	968,335
in USD in year 2017 / USD năm 2017	666,260	969,522	1,297,662

Items / Hạng mục	Unit / Đơn vị	Formula / Công thức	2017	2022	2032
Number of cars/train-Số lượng toa tàu trên một đoàn tàu			4	4	4
Number of km of trains/day (Số km đoàn tàu chạy/ngày)	km		4,104.0	4,104.0	4,104.0
Number of km of cars/day (Số km toa tàu chạy/ngày)	km	(a)	16,416.0	16,416.0	16,416.0
Average passenger volume/train (Số lượng hành khách trung bình / chuyến tàu)	person-người	(b)	214.8	417.5	637.0
Average weight /passenger (Khối lượng trung bình/khách)	t / tấn	(c)	0.07	0.07	0.07
Average deadweight/car(Khối lượng tịnh trung bình của toa)	t / tấn	(d)	15.0	15.0	15.0
Average weight /car(Khối lượng trung bình toa có khách)	t / tấn	(e) =(b) x (c) +(d)	29.0	42.1	56.4
Average power consumption(kWh/1000t·km)/day Điện năng tiêu thụ trung bình (kWh/1000 tấn·km)/ngày	(kWh/1000t·km)	(f)	50.0	50.0	50.0
Average power consumption /day(Điện năng tiêu thụ trung bình / ngày)	(kWh/Day)	(g) =(a) x (e) x (f)/1000	23,769.6	34,588.8	46,295.5
Waighed average power unit price (Normal and Peak) (Giá trị đơn vị điện năng trung bình(Giờ bình thường và cao điểm)	(VND/kWh)	(h)	1,208.1	1,208.1	1,208.1
Total power cost/year-Tổng chi phí điện năng theo năm	VND	(i) =(g) x (h) x 365	10,480,915,244.7	15,251,524,941.6	20,413,477,040.4

<Source> / <Nguồn>

FS report 2008

Non-Traction power cost / Chi phí điện năng không sức kéo	Unit Price Đơn giá	2017	-
Stations & CC / Ga & Trung tâm điều độ	1,208.05	16,542,964,273.2	
Depots / Đê-pô	1,208.05	4,797,760,910.6	
Tunnel / Hầm	1,114.38	1,265,145,480.0	
Total/Tổng [VND] in year 2011	-	22,605,870,663.8	-
Total/Tổng [USD] in year 2011	-	1,072,333.9	-
Total/Tổng [USD] in year 2017	-	1,437,030.0	-

Station & CC / Ga & Trung tâm điều độ

Class (Nhóm) (Station /Ga số #)	Floor (Tầng)	Area (Diện tích) (m ²)	Effective Area (Diện tích dùng điện) (m ²)	Elevator (Thang máy)		Other Equipment										No of Facilities (Số lượng trang thiết bị) (d)	Annual Consump. (Tiêu thụ hàng năm) ((c) + (f)) x (d) kWh																									
				No (a) (SL)	(f) = (a) x (f) [kWh]	Escalator (Thang cuốn)			Platform Door (Cửa ke ga)			Signal (tín hiệu) (kVA)	Water Works (Hệ thống nước) (kVA)	Light, Office, AC, AFC etc. (HT chiếu sáng, văn phòng, điều hòa, AFC, v.v...) (kVA/m ² , kVA)				Total/Tổng (kVA)			Annual Power Consump. (Điện năng tiêu thụ hàng năm) (c) kWh (b) x 0.7 x 7300Hr																					
						No (SL)	kVA/No	kVA	Door Cửa	kVA/No	kVA			Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải			Demand Capa. (b) Công suất yêu cầu																								
S:Type (C-1 to 4)	Entrance (Cửa vào)	20*100	2,000	400	1	3	1	3	5	15	24	1	24	20	10	0.05	20	199	0.55	109	559,289.5	4	2,268,553.3																			
	Concourse & Office (Sảnh chờ và Văn phòng)	20*100	2,000	600																				3	5	15	24	20	10	0.10	60											
	Platform (Ke ga)	20*100	2,000	1,000																				24	1	24	0.05	50														
	Total (Tổng)	6,000	2,000	4																				7,849	5	5	15	24	1	24	20	10	0.05	130	199	0.55	109	559,289.5	4	2,268,553.3		
M:Type (C5 to 8)	Entrance (Cửa vào)	30*100	3,000	1,000	1	3	1	5	5	25	24	1	24	30	15	0.05	50	394	0.55	217	1,107,337.0	4	4,460,743.3																			
	Concourse & Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000																				3	5	25	24	30	15	0.10	200											
	Platform (Ke ga)	20*100	2,000	1,000																				24	1	24	0.05	50														
	Total (Tổng)	8,000	4,000	4																				7,849	6	5	25	24	1	24	30	15	0.05	300	394	0.55	217	1,107,337.0	4	4,460,743.3		
L:Type (C9 to 12)	Entrance (Cửa vào)	30*100	3,000	2,000	1	3	1	5	5	30	24	1	24	40	20	0.10	200	464	0.55	255	1,304,072.0	4	5,247,683.3																			
	Concourse & Office (Sảnh chờ và Văn phòng)	30*100	3,000	2,000																				3	5	30	24	40	20	0.10	200											
	Platform (Ke ga)	20*100	2,000	1,000																				24	1	24	0.05	50														
	Total (Tổng)	8,000	5,000	4																				7,849	6	5	30	24	1	24	40	20	0.05	350	464	0.55	255	1,304,072.0	4	5,247,683.3		
CC (Control Center) Trung tâm điều độ	1F	30*60	1,800	1,800	0	0																																				
	2F	30*60	1,800	1,800																				0																		
	3F	30*60	1,800	1,800																				0																		
	Total (Tổng)	5,400	5,400	0																				0																		
Total																					13,693,940.0																					

Elevator Thang máy

(e) Weight (Kg)/ Khối lượng (kg)	750
(f) Speed (m/min.)/ Tốc độ (m/phút)	45
(g) Annual Operation Hour/ Số giờ vận hành hàng năm	2,000
(h) Factor / Hệ số	0.025
(i) Power Consumption (kWh) : (a) x (b) x (c) x (d) / 860/ Tiêu thụ điện năng	1,962

Ministry of International Trade and Industry/Ministry of Construction:
Announcement #1 issued July 29, 1993
Bộ Ngoại thương và Công nghiệp / Bộ Xây dựng:
Thông báo số 1 ngày 29 tháng 7 năm 1993

Power consumption for underground lighting Tiêu thụ điện năng cho chiếu sáng khu vực ngầm

(j) Length of Underground (km) Chiều dài đi ngầm (km)	3.6
(k) Number of light (Length of tunnel) Số lượng đèn (chiều dài của hầm): (m) / 20m x both side (cả 2 bên)	360.0
(l) kw/unit kw/đèn	0.4
Annual Power Consumption Điện năng tiêu thụ hàng năm (kWh) : (n) x (o) x 24 x 365	1,135,296

*Condition of Non-Traction Power calculation: Calculation to be made for Option with 14 stations (with escalators/elevators comprised in the initial investment costs)

*Điều kiện để tính toán điện không sức kéo: Việc tính toán có thể được thực hiện cho Phương án với 14 ga (bao gồm thang cuốn/thang máy nằm trong chi phí đầu tư ban đầu)

Depot

Class Phần	Section Phần	Area Diện tích (m ²)	Electric Power Facility (Điều kiện tiêu thụ điện)				
			kVA/m ²	Installed Capa. Công suất lắp đặt	Load Fact. Hệ số tải	Demand Capa. [kVA] Công suất yêu cầu	
Depot/ Đê-pô	Train Inspection (Kiểm tra tàu)	14*26	364	0.30	109	0.50	707.2
	Tire Exchange (Đổi bánh xe)						
	Guide Wheel Inspection (Kiểm tra bánh dẫn hướng)	40*24	960	0.30	288		
	Body Inspection (Kiểm tra thân tàu)						
	Track Inspection (Kiểm tra đường ray)	20*36	720	0.30	216		
	Air Control Inspection (Kiểm tra hệ thống nén khí)	20*12	240	0.30	72		
	Electronics Inspection (Kiểm tra điện tử)	20*12	240	0.10	24		
	Rotating Machine Inspection (Kiểm tra máy quay)	28*50	1,400	0.30	420		
	Workshop (Xưởng sửa chữa)	40*12	480	0.30	144		
	Power Distribution (Phân phối điện)	20*12	240	0.10	24		
	Warehouse (Kho)	20*36	720	0.01	7		
	Work Car Depot (Đê-pô toa xe)	20*10	200	0.30	60		
	Feed Water & Drainage (Nước và thoát nước)				50		
	Subtotal (Cộng)		5,564		1,414		
Yard(Lighting, Signalization etc)(Bãi tàu/Công trường)	70*200	14,000	0.01	140	0.50	70.0	
Total Demand Capacity (m) Tổng công suất yêu cầu						777.2	
Annual Power Consumption [kWh]: (m) x 0.7 x 20 x 365 (Điện năng tiêu thụ hàng năm)						3,971,492.0	

Elevated station	Number 10
Underground station	4
Depot	15ha

Expense and Capital in Cash for Starting Operation / Chi phí và Vốn tiền mặt để Bắt đầu Vận hành

[M VND]

Entity Đơn vị	Support Category Mục hỗ trợ	Phase	Prep. for Establishment	1st FY for Prep OP.	2nd FY for Prep OP.		3rd FY for Prep OP.	Operation	Remarks Ghi chú
		Giai đoạn	Chuẩn bị thành lập	Năm đầu tiên chuẩn bị mở cửa	Năm thứ 2 chuẩn bị mở cửa		Năm thứ 3 chuẩn bị mở cửa	Vận hành	
		Entity Status	City	Company before Operation			Company in Operation		
		Tình trạng đơn vị	Thành phố	Công ty trước khi vận hành			Công ty khi vận hành		
		FY	2013		2014		2015		
			H1	H2	H1	H2	H1	H2	
O&M	Financial Supprt (MCD) Hỗ trợ tài chính (Quản lý Kiểm soát - VP trụ sở chính)	Salary + welfare Lương + Phúc lợi	-	2,334	2,886	2,886	3,290		See another sheet / Xem bảng khác
			city's officer (8p) nv thành phố (8p)	43 personnel người	43 personnel người	43 personnel người	43 personnel người		
		Office Rental Thuê VP	-	929	929	929	1,210		0.3M VND/m2/month, 12m2/perssonel 0.3tr VND/m2/tháng, 12m2/người
			use city's property sử dụng tài sản của TP	516m2	516m2	516m2	672m2		
		Car Rental Thuê xe	150	300	300	300	300		5,000JPY/day/car 5,000JPY/ngày/xe
			1 car	2 car	2 car	2 car	2 car		
		Others Khác	30	712	823	823	960		Office Consumables and PR activities. Đồ dùng văn phòng và các hoạt động PR.
			20% of above / của những phần trên						
		One-time Expenses Chi phí 1 lần	200	875	8,175	0	325		PC, desk are assumed as personel equipment. (100kJPY x personel.) Máy tính cá nhân, bàn ghế được coi là thiết bị cá nhân. (100kJPY x số nhân viên)
			Furniture Nội thất	Furniture Nội thất	Training in JP (22p) Đào tạo tại Nhật (22 ng)	-	Furniture Nội thất		
		Half FY Total Tổng nửa năm tài chính	380	5,150	13,112	4,937	6,084		
		Salary + welfare Lương + Phúc lợi	-	4,784	5,454	22,474	25,620		See another sheet
			-	-	-	-	-		
		Office Rental Thuê VP	-	-	-	-	-		
			use pj's property sử dụng tài sản của dự án	use pj's property sử dụng tài sản của dự án	use pj's property sử dụng tài sản của dự án	use pj's property sử dụng tài sản của dự án	use pj's property sử dụng tài sản của dự án		
		Car Rental Thuê xe	150	300	300	300	300		5,000JPY/day/car 5,000JPY/ngày/xe
			1 car	2 car	2 car	2 car	2 car		
		Others Khác	30	1,017	1,151	4,555	5,184		Office Consumables and PR activities. Đồ dùng văn phòng và các hoạt động PR.
		20% of above / của những phần trên							
	One-time Expenses Chi phí 1 lần	-	-	-	-	-		covered by construction project. do dự án xây dựng trả	
		-	-	-	-	-			
	Half FY Total Tổng nửa năm tài chính	180	6,101	6,905	27,328	31,104			
	Fin support Hỗ trợ tài chính	Half FY Total Tổng nửa năm tài chính	560	11,251	20,017	32,266	37,188		
	Capital in Cash / Vốn tiền mặt		-	25,181	-	-	-		It is for unexpected delay of city budget allocation. The amout is equivalent to average of H2-FY2013 to H1-2015 Đề phòng cho phần trễ không mong muốn trong thời gian nh ận ngân sách từ thành phố. Giá trị tương đương giá trị trung bình trong giai đoạn từ nửa sau năm 2013 đến nửa đầ u năm 2015

Note: / Ghi chú:

Training in JP : [air ticket (150kJPY) + accommodation (15 kJPYx2 months)] x staff # + Interpreter (80kJPYx 2months) X 2

/ Đào tạo tại Nhật : [vé máy bay (150kJPY) + chi phí ăn ở (15 kJPYx2 tháng)] x số lượng nhân sự + Phiên dịch (80kJPYx 2 tháng) X 2

Monthly Salary & Welfare of O&M Company / Lương tháng và Phúc lợi của Công ty O&M

Price is in Y 2013./ Giá năm 2013.

	Position Vị trí	Monthly salary + welfare(14%) Lương tháng + Phúc lợi (14%) [USD]		Y 2013 H2		Y2014		Y2015 H1		
		Operation Vận hành	Training Phase GD đào tạo	personnel Nhân sự	total Tổng [USD]	personnel Nhân sự	total Tổng [USD]	personnel Nhân sự	total Tổng [USD]	
Head Office / VP chính	GM, supervisor TGD, giám sát	3,356	1,452	3	4,357	3	4,967	3	5,662	
	Manager Giám đốc	1,342	581	7	4,065	7	4,634	7	5,283	
	Engineer Kỹ sư	861	373	3	1,118	3	1,274	3	1,453	
	Deputy manager Phó GD	861	373	14	5,216	14	5,946	14	6,779	
	Office Worker Nhân viên VP	464	201	21	4,217	29	6,638	29	7,567	
	Total / Tổng [USD]				18,972		23,460		26,744	
	Total / Tổng [M VND]				389		481		548	
Op. Unit Line 2a / Đơn vị Vận hành 2a				Y 2013 H2		Y2014		Y2015 H1		
	Manager Giám đốc	1,342	581	6	3,484	29	19,199	29	21,887	
	Engineer Kỹ sư	861	373	0	0	0	0	0	0	
	Deputy manager Phó GD	861	373	67	24,963	188	79,852	188	91,032	
	Semi-skilled worker Nhân viên bậc trung	230	100	105	10,451	377	42,776	377	48,764	
	Un-skilled worker Nhân viên chưa có KN	160	69	0	0	257	20,285	257	23,125	
	Office Worker Nhân viên VP	464	201	0	0	90	20,601	90	23,485	
Total / Tổng [USD]				38,898		182,713		208,293		
Total / Tổng [M VND]				797		3,746		4,270		

Minimum salary in Y2013 is **49** USD.

(Lương tối thiểu năm 2013 là)

Annual salary increase rate is **14%**

(Tỷ lệ tăng lương hàng năm là)

Ave. salary of 17-corp. of Ministry of Industry and Commerce

(Lương trung bình của 17 tập đoàn thuộc Bộ Công Thương)

6.7 M VND is applied for Deputy Manager.

(tr VND được áp dụng cho chức vụ Phó GD.)

APPENDIX 5

Blueprint for the Office IT System of Hanoi Metro O&M organization

INDEX

1. Introduction

- 1.1. Objective of this Documents
- 1.2. General Overview of Office IT System
- 1.3. Configuration Overview of Office IT System

2. Function

- 2.1. Functional Overview
- 2.2. Budgeting & Controlling
- 2.3. AR, AP Management and Payment
- 2.4. Treasury
- 2.5. Material Purchasing
- 2.6. HR
- 2.7. Revenue & AR Management

3. Internal Controls

- 3.1. Overview
- 3.2. Electrical Authorization

4. Project Time Schedule

Appendix:

- A-1 Business Process Map for Office IT System
- A-2 Network Overview for Office IT System

1. Introduction

1.1 Objective of this Document

This document provides the concept plan for Office IT system which mainly consists of "Enterprise Resource Planning (ERP) system".

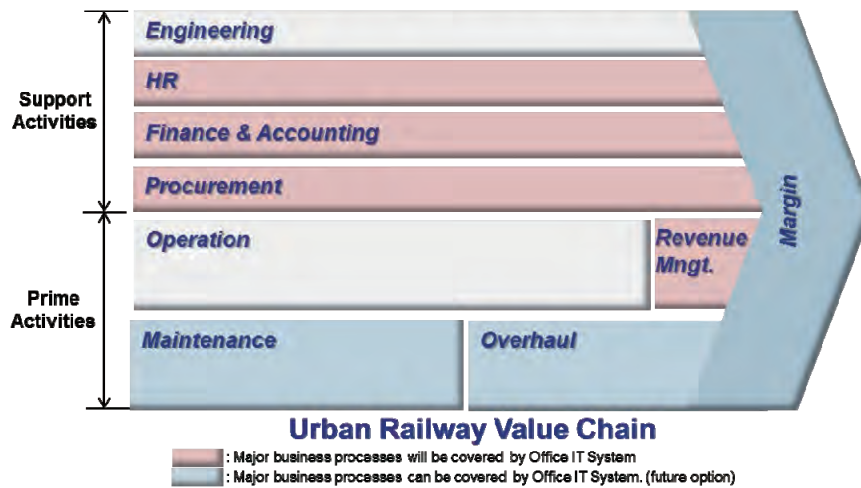
Step	Document	Objective	Contents
SAPI study (2012)	Blueprint	Providing concept plan.	<ul style="list-style-type: none"> - Objectives - Required Functions - Network Overview
Technical Cooperation (2013 - 2014)	Input information	Providing regulatory requirement and business processes of O&M company.	<ul style="list-style-type: none"> - Regulatory Requirement (Such as specific accounting for railway) - Business Processes (w/o sys. details) - Report List (w/o sys. details) - Detailed Network Configuration
Construction Project - Bidding (2013 - 2014)	Requirement	Describing owner's requirement which should be a part of bidding document.	<ul style="list-style-type: none"> - General Requirement - Business Processes (w/ sys. requirement) - Report List (w/ sys. requirement) - Project Schedule
Construction Project - Implementation (2014 - 2015)	Detailed Design	Providing detailed documents for system implementation.	<ul style="list-style-type: none"> - General Definition (w/ system function) - Network Diagram (w/ equipment list) - Business Processes (w/ system flow) - Report List (w/ layout) - Data Diagram, Code List and Master Data - Programming - Proposed ROI on IT system - Detailed Network Configuration (for set-up)

1. Introduction

1.2 General Overview of Office IT system

ERP system covers the technology and concepts for the integrated business management from the viewpoint of effective use of management resources, i.e. cash, human resources, assets etc. Most of railway companies in developed countries use ERP system to mainly form the business processes in their support activities.

O&M Company for urban railway in Hanoi, hereinafter called O&M Co., will start managing second line (line 3) and introducing interoperable AFC system. At this time, their business process would be more complicated. Thus, ERP system will be an important tool for O&M Co. as well.

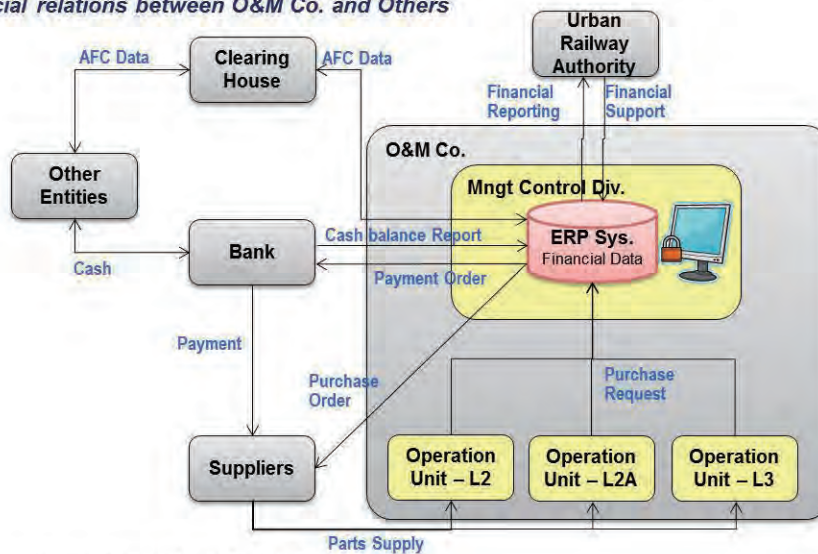


1. Introduction

1.2 General Overview of Office IT system

The following figure shows the financial relations between O&M Co. and other entities. Because those transactions and report data will be kept in ERP system, the data in ERP shall be protected from threats such as unauthorized access. Thus, internal control described in chapter 3 shall be considered as mandatory requirement.

Financial relations between O&M Co. and Others



Note: Business process map is described in Appendix A-1

1. Introduction

1.3 Configuration Overview of Office IT System

To realize the robust business processes, Office IT system should be formed by the following items.

■ System Scope

System	Description
Finance	ERP system - It is used for financial work. (The functional overview is described in chapter 2 in this document.)
Internal Communication	Intranet Web - It is used to share company's information such as: > company regulations > announcement to employees > application forms such as vacation claim
	File server - It is used to share files within company. - Files in this server should be protected by access control and back-up.
External Communication	E-mail - It provides company own domain. (xxx@companyname.com) - It is used for internal and external communication.
Peripherals	Network printers - It is used for documentation work.
	PC - It is equipped with GUI (Graphical User Interface) of ERP, e-mail software and intranet web software. - Fileserver and network printers are accessed through PCs.

Note: Network configuration is described in Appendix A-2.

2. Function

2.1. Functional Overview

The following function will be provided by ERP system. (For the details, please see Appendix-1 "Business Process Map")

■ Functional Overview

Function	Description
Finance & Accounting	Budgeting & Controlling - This function provides WBS code on projects for projects progress monitoring, and benefit/cost center code for managerial accounting. - These coding also enable company to set the cost allocation factors.
	Period Closing - Financial closing (non-consolidated) Incl. Tax calculation. (Financial report must be prepared by market-available application software for easy editing.)
	AR Management - Client management through master database. - Account receivable recording and controlling
	AP Management - Supplier management through master database. - Account payable recording and controlling
	Payment - Bank account balance, payment check and foreign gain/loss. (FB data can be produced as future option.)
	Treasury - Cash management and controlling linked to payment obligation and receivable.
	Fixed Assets - Fixed assets management which has interface with procurement module and provides automatic depreciation calculation)

2. Function

2.1. Functional Overview

(Continued from previous page)

■ Functional Overview

Function		Description
Procurement	Material Purchasing	- Parts management, purchasing and receiving
	Refurbishment&Modification	- Construction-in-progress management and interface with Fixed-asset for assets recognition.
	Inventory management*1	- Inventory management
HR	HR	- Staff management through HR master database. - Salary calculation based on HR master database. (Calculation of projected benefit obligation (PBO) is excluded.)
Revenue	Fare	- Revenue recognition
	Non-Fare	- Revenue recognition - Period distribution based on contract information.

*1: This is only for financial reporting, not for physical inventory management.

2. Function

2.2. Budgeting & Controlling

Objective

- Securing company's cash resources through budget control
- To achieve sustainable operation, IT system provides financial report to management board for their long-mid term planning, investment decision and monitoring financial condition in a timely and effective manner.

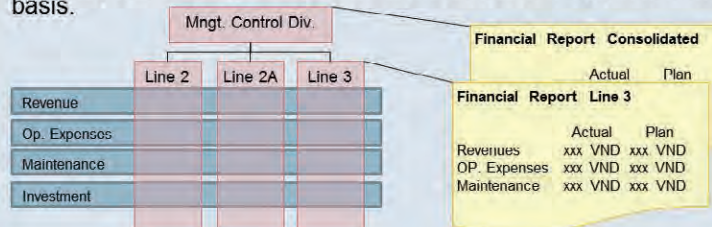
Required Function

- Providing Budget WBS (Work Breakdown Structures) Code to enable management to monitor financial condition properly.

Ex.

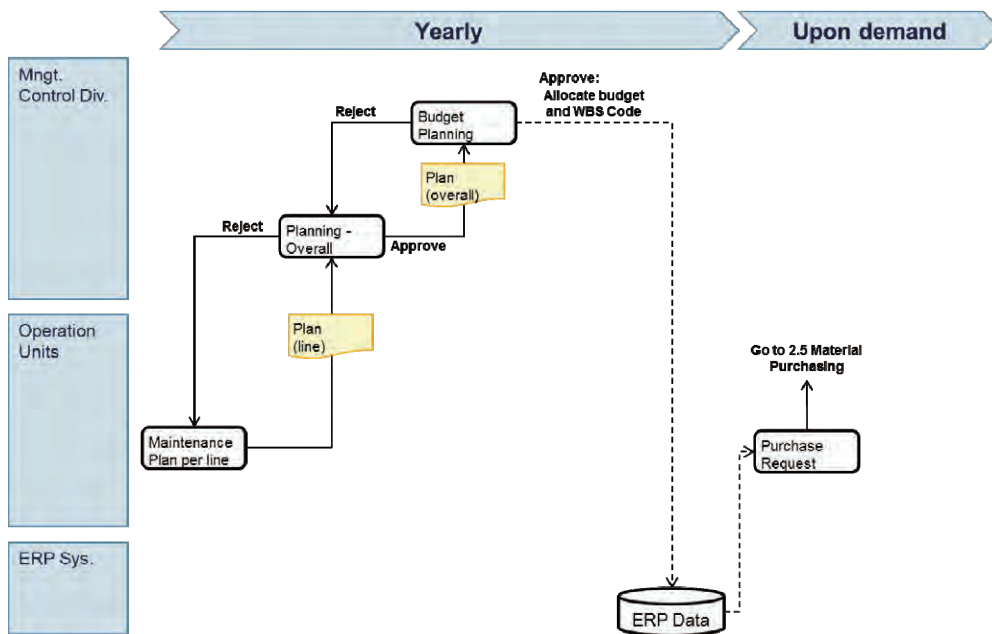
Project #	Investment Type	Line #	Dept. #	Budget #	Account #
-----------	-----------------	--------	---------	----------	-----------

- Providing financial report based on segment accounting per monthly basis.



2. Function

2.2. Budgeting &Controlling



2. Function

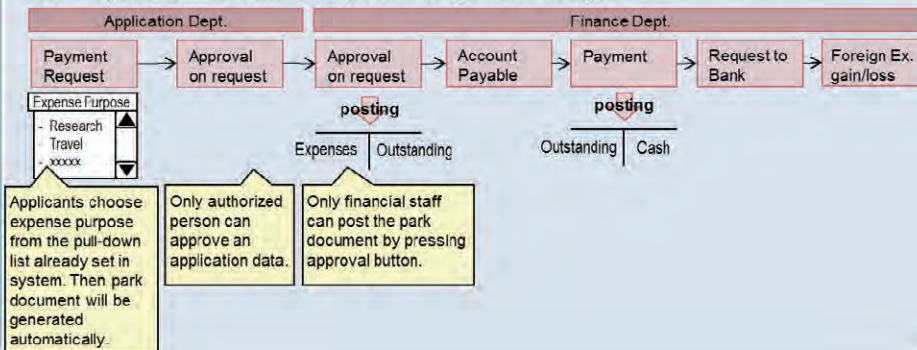
2.3. AR,AP Management and Payment

Objective

- Securing company's financial data to prevent unauthorized cash-out and/or incorrect data posting.
- Providing transparency on payment process.

Required Function

- Providing Work Flow function with access control. Only authorized person can approve the data and post it to general ledger.



2. Function

2.4. Treasury

Objective

- Securing company's cash resources to prevent cash shortage.

Required Function

- Cash management based on AP/AR data and budget plan.

```

    graph LR
      subgraph Yearly
        BP[Budget Planning]
        BP --- Note[For details, see "2.2 Budgeting & Controlling"]
      end
      subgraph Daily
        AM[AP management]
        AR[AR management]
      end
      subgraph Monthly
        CP[Cash Planning]
      end
      BP --> CP
      AM --> CP
      AR --> CP
  
```

2. Function

2.5. Material Purchasing

Objective

- Securing company's cash and asset resources.
- Providing transparency on procurement process.

Required Function

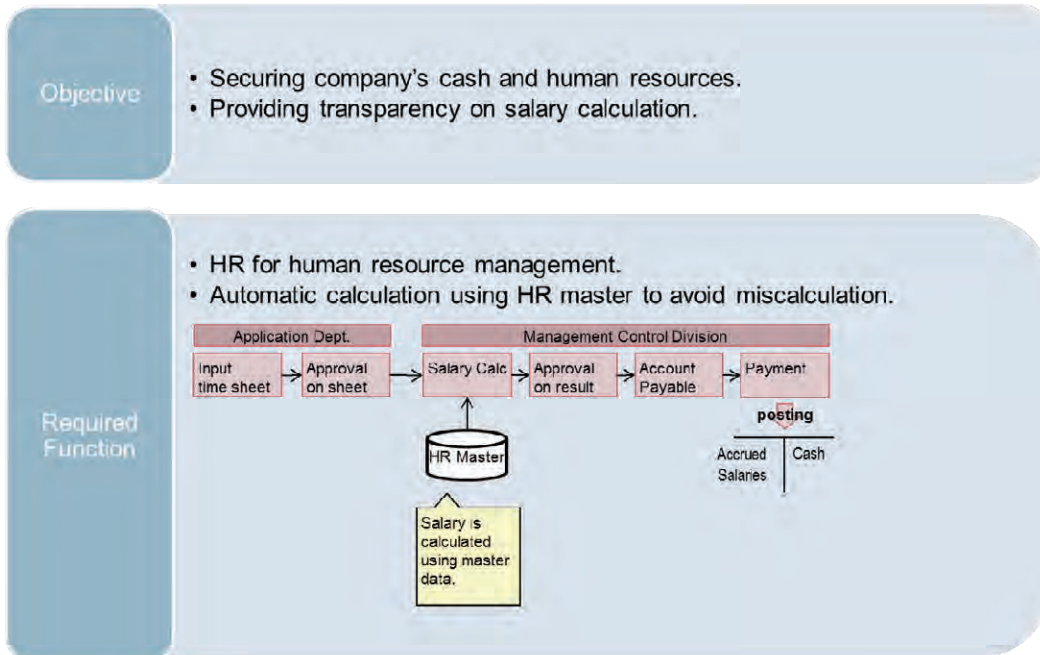
- Parts master for pull-down menu to prevent incorrect data input.
- Supplier master to avoid dealing with unauthorized supplier.

```

    graph LR
      subgraph Application_Dept [Application Dept.]
        PR[Purchase Request]
      end
      subgraph Management_Control_Division [Management Control Division]
        AO[Approval on request]
        RQ[Request for Quotation]
        E[Evaluation]
        PO[Purchase Order (PO)]
      end
      subgraph App_Dept [App. Dept.]
        AI[Acceptance Inspection]
      end
      subgraph Mngt_Control_Div [Mngt. Control Div.]
        AP[Account Payable]
        P[Payment]
      end
      PR --> AO --> RQ --> E --> PO --> AI --> AP --> P
      SM[(Supplier Master)] --> RQ
      PL[Parts list] --> PR
      Note1[Applicants choose parts from the pull-down list already set in system. Then purchase document will be generated automatically.]
      Note2[Suppliers register in "Supplier master" can be selected]
  
```

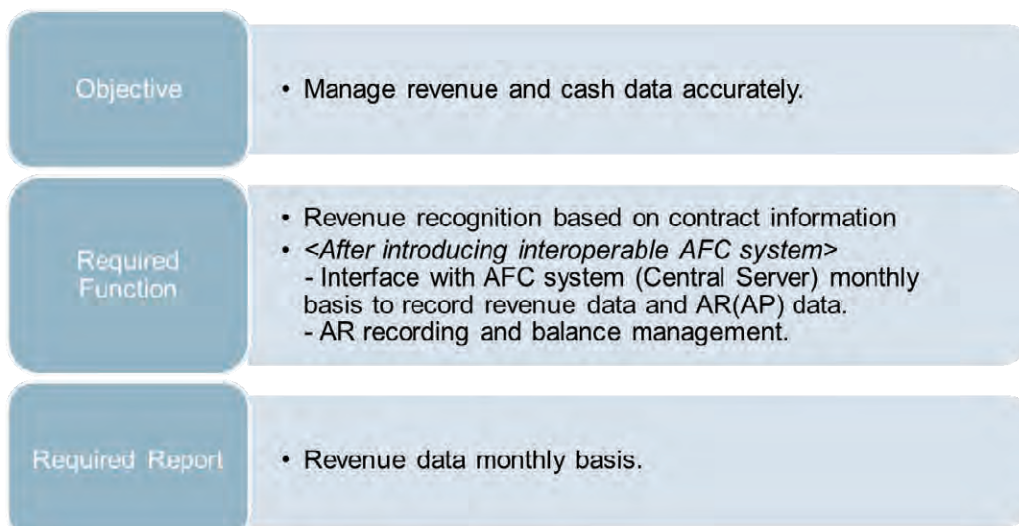
2. Function

2.6. HR



2. Function

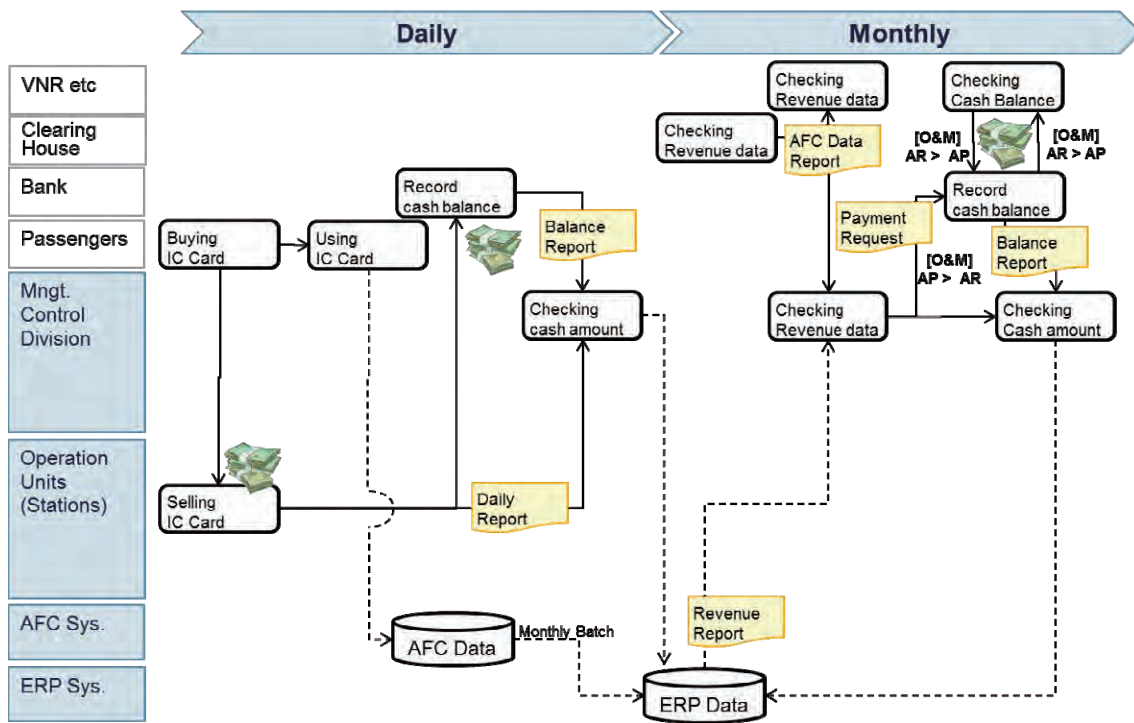
2.7. Revenue & AR Management



2. Function

2.7. Revenue & AR Management

This image is for interoperable AFC system.



3. Internal Controls

3.1. Overview

IT application controls (ITACs) must be implemented as much as possible to ensure the proper authorization, completeness, accuracy, and validity of transactions.

IT Application Controls (ITACs)

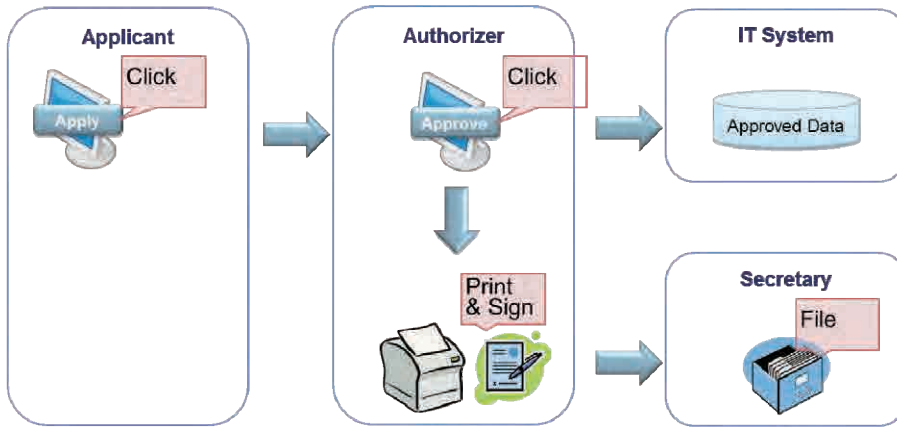
Control Type	Objectives	Examples
Input controls	To ensure reasonable assurance the data received for processing through IT system; 1) have been authorized properly and converted into proper data form, 2) have not been lost, suppressed and duplicated.	- Input by pull-down list. - Input using master data. - Data entry area limitation. - Warning for irregular input. - Electrical authorization
Processing controls	To provide reasonable assurance that data processing has been performed as intended.	- Automatic calculation - Automatic posting
Error data controls	To notice error processing and/or irregular transaction to users.	- Error report - Irregular transaction report.
Access controls	To ensure only authorized personnel can access the restricted data area.	- Individual ID and password

Source : METI (Ministry of Economy, Trade and Industry) "System Management Standard - Supplementary Edition (Guidance for IT Controls over Financial Reporting)"

3. Internal Controls

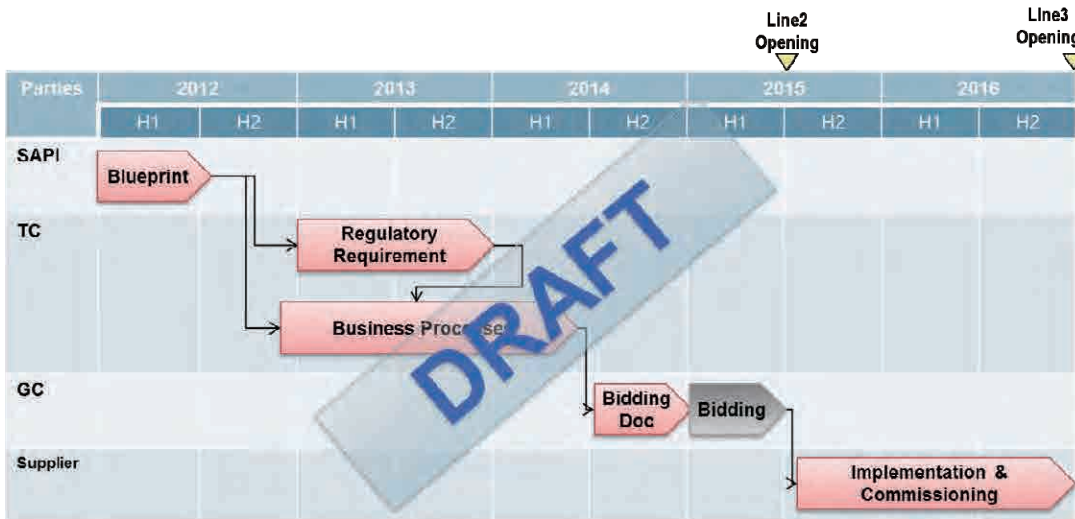
3.2. Electrical Authorization

Although electrical authorization is one of effective ITACs to indicate clearly authorization stamp, it can be used together with "autograph" in considering of Vietnam's circumstances.



A01 – Business Process Map

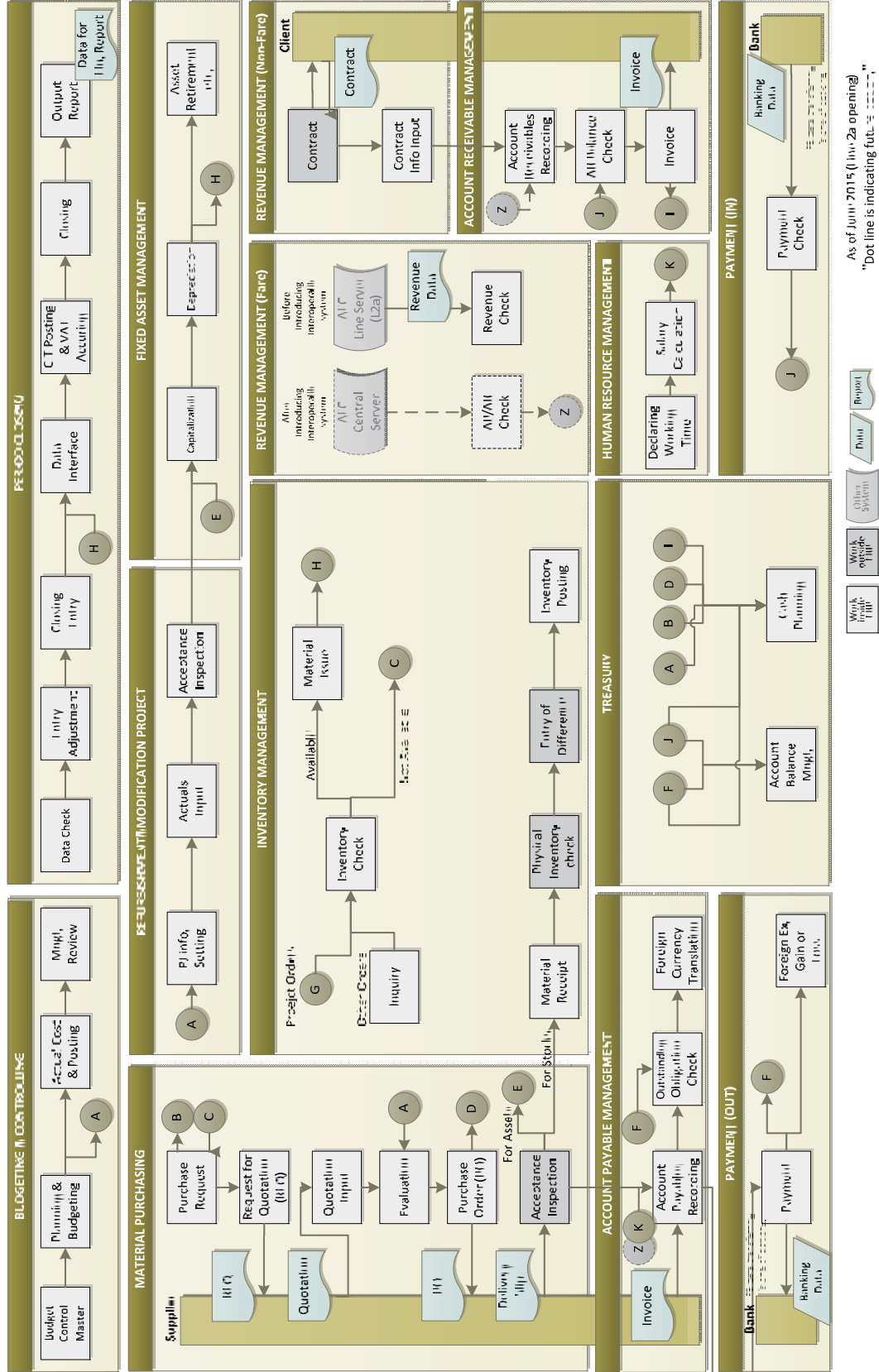
4. Project Time Schedule



: Documents to be prepared by parties.

: Opening Date of Lines.

A01 - Business Process Map



A02- Network Overview

