

Socialist Republic of Vietnam

**SOCIALIST REPUBLIC OF VIETNAM
SURVEY ON CORRUGATED STAINLESS STEEL PIPES
FOR WATER SERVICES**

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Japan International Cooperation Agency (JICA)

Showarasekan Seisakusho Co., Ltd.

Forval Corporation

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1 Summary

SHOWARASENKAN SEISAKUSHO Co., Ltd. (hereafter “SRS”) is a pioneer in corrugated stainless steel pipe. Within Japan, SRS supplies pipe for city water supply works and projects operated by many local governments and municipalities, including the Bureau of Waterworks of the Tokyo Metropolitan Government; the Waterworks Department Public Enterprises Bureau, Public Enterprises Agency, Kanagawa Prefectural Government; the Water Supply Department of Saitama City; and the Water Supply Department of Yokohama City. The company maintains the top share in supply of corrugated stainless steel pipe for city water supply.

For the Socialist Republic of Vietnam (hereafter “Vietnam”), SRS has been engaged in a feasibility study to promote corrugated stainless steel pipe, and improve living standards by lowering the water leakage ratio, as a necessary task of development and to contribute to economic growth under the auspices of the JICA.

As a result of the feasibility study, it was found that corrugated stainless steel pipe is not prevalent in Vietnam. It has also been ascertained that all the stakeholders are very interested in the pipe, including the city water departments that are designated to operate and maintain the water supply undertaking in various domestic regions (hereafter, collectively “WACO”) and private general contractors, construction companies, and wholesale dealers who deal with water supply pipe and service systems/equipment. The pipe is considered to be promising for lowering the water leakage ratio and contributing to economic growth.

The city water supply scheme, however, is social infrastructure undertaking operated and administered by public agencies; therefore, the city water supply undertaking encompasses markets formed by those agencies currently undertaking it.

This project will clarify the advantage and contribution of corrugated stainless steel pipe and promote entrance and new development in that market formation. For such purposes, the project will be developed in the short and middle/long terms in Vietnam, keeping in mind that attaining profitability may take some time.

For development in the short and middle/long terms, not only will SRS operate promotion activities, but associate with a local partner(s) with an established position, network and achievement in the fields of water supply, development and building construction, who can be expected with contribution to the progress of this project.

The approach contemplated for the short and middle/long terms, and major activities of and challenges with the local partner are as follows:

Short term

Implementation: It is expected to take time to enter the infrastructure business and deploy SRS’ own resources. So, we will emphasize on the private sector where early sales can be expected, while associating ourselves with the partner to jointly

develop and sell products. At the same time, we will develop locally adapted products jointly with public agencies.

Target customers: In the private sector, in view of installations at hospitals, (food, beverage, chemical and pharmaceutical products), office buildings, high-class villas and hotels, the target customers will be developers, general contractors and trade contractors, as they design, build and develop those buildings. Also, in the public sector, the water supply public agencies (hereafter “WACO”) will be target customers.

Challenges: For successful development of the project, a key challenge will be to find the suitable local partner, and to establish a solid partnership. We will look for a partner among the companies who showed interest in SRS or in corrugated stainless steel pipe first, and establish an association through such effort as business visits and holding exhibitions, seminars and similar events.

Middle/Long terms

Implementation: While cultivating business opportunities and conducting sales activities through joint development of the pipe with the private partner, we will expand the market share of the pipe in Vietnam. At the same time, we will try to find business opportunities and sales activities through joint development of the pipe with WACO. The current prospect for the ratio of sales to private and to public entities is estimated at 3:7 for the middle term and 5:5 for the long term.

Target customers: Developers, general contractors, construction companies and WACO

Challenges: Since it is considered to take time for the project to attain profitability, the pipe will be imported from our Taiwan Plant to reduce costs until our local corporation expands the sales in Vietnam beyond 7,400 sections of corrugated stainless steel pipe. Therefore, it is considered difficult for the local corporation to become profitable in a short period. Also, in the sales to WACO in Vietnam, it may be assumed that WACO will find it difficult to invest funds. Thus, in addition to increasing sales in Vietnam, we propose to promote the project activities by utilizing ODA and overseas investment funds from your organization, the Asian Development Bank, the World Bank or other financial institutions as one approach.

As described above, we will implement the project promotion in the short and middle/long terms to create a market for the corrugated stainless steel pipe in Vietnam, thereby hoping to contribute to the lowered water leakage ratio and to economic growth, and proceed to a profitable

stage in the project.

We would like to realize “the creation of a safe and comfortable society through the manufacture of tubes and pipes, with visions of smiles on all people of the world” as expressed in the mission statement of SRS.

2 Purpose of the Project

(1) Prioritization of Overseas Business Activities in Business Strategy

In 2007, SRS formulated its five-year plan in which it ranked “glocal (a coinage of global+local)” business management as one of the management visions. According to the plan, SRS started activities in Asia to realize “the creation of a safe and comfortable society through the manufacture of tubes and pipes, with visions of smiles on all people of the world” as its business mission. Since then, SRS has devoted its efforts to the development of safe, hygienic water supply in Japan and other Asian countries. In our activities in Asia, local talent in Vietnam, our launching country, is employed as regular corporate staff. In daily operations, they are engaged in the city water supply business in Japan to add to their experience, and in overseas exhibitions and making business acquaintances within the city water supply agencies in Vietnam.

In recent years, SRS has deepened its cultural exchange with the City Water Supply Public Corporation of Hue City (hereafter “Hue WACO”) which made a “Safe Water Declaration” for the first time in Vietnam. There, SRS held a workshop on its products and planned and installed the corrugated stainless steel pipe network for water supply systems at three locations (central hospital, school and cultural assembly center). Elsewhere in Asia, SRS built its own plant in Taiwan and launched marketing activities for a full-scale entry to the domestic water supply market there. Next, SRS will expand its business operations in Asia to establish the foundation for glocal business management according to its business policy.

(2) Consistency with Challenges in Project Development

Vietnam, the target country for which this project is implemented, issued the City Water Supply Guideline for Urban Development No. 2025 (Law No. 117 on Production, Supply and Consumption of Potable Water based on Prime Minister’s Decision No. 1929 in November 2009). In line with the guideline, a master plan was established in which the water leakage ratio should be reduced to 25% by 2015, 18% by 2020 and 15% by 2025. According to those targets, the government and its detachments in relevant municipalities are actively trying to attain the targets. In the urban district, however, citizens cannot use the city water for drinking because the distributed water is deteriorated due to improper arrangement of the city water supply mains and branches.

In this project, SRS's corrugated stainless steel for water supply "Act Pipe" (hereafter "Object Products") is to be widely incorporated as the axis products. The Object Products now significantly contribute to the prevention of water leakage in the city water distribution system of the Tokyo Metropolis, which is famous to the world for its lowered water leakage. The Object Products are consistent with the demanding situation in Vietnam.

The Object Products will enable the prevalence of "water drinkable directly from a faucet" to improve citizen's living standard, through the advance in water quality made by city water supply piping improved by the Object Products in Vietnam.

Also, the Object Products will enable higher durability of piping by virtue of stainless steel's unique advantage of higher durability, so that piping replacement can be delayed compared with other alternatives, eventually cutting the maintenance or construction costs. In addition, the Object Products can be used in a narrow or complicated space through the advantage of corrugation in the fabrication process. If potable water is made widely available and is promoted in such sectors as health and welfare facilities of hospitals and schools; industrial production facilities producing food, beverages, chemical products, and pharmaceuticals where reliable water resources and quality water are necessary for production of substance to be put in the mouth or body; and in commercial facilities for which the sales point is higher added value, including hospitals, resort facilities and villas, such reliable, prevalent use of water resources will contribute to economic growth in Vietnam.

3 Targeting Country, Region and Cities

(1) Project Development Area

Country name: The Socialist Republic of Vietnam

Region: The project will be developed in densely populated urban cities such as Hanoi, with Ho Chi Minh City as the basis for operation activities.

(2) Reasons for Selecting the Region

To date, we have promoted cultural exchange and operation activities with Hue WACO in Vietnam. For this feasibility study, we made the survey study in Hue City and five major cities kept under the direct supervision of Vietnamese Government (Hanoi, Hai Phong, Da Nanh, Ho Chi Minh and Can Tho). As a result of the study, the foregoing region is selected as project development area for the following three major reasons:

- a) For the development of the project, not only is there a dense target population, but also partner companies are required to jointly develop products and business promotion activities (companies funded with local Vietnamese capital and foreign capital, including that from Japan) are vital. The prospective partners are found in large number in the

southern area of Vietnam, centering on Ho Chi Minh City and has advantages in accessibility.

- b) In the case of Water Supply Public Corporation of Ho Chi Minh City (hereafter, “SAWACO”) as it is supplying water mainly to Ho Chi Minh City, the water leakage ratio is 39% which is the highest of these six cities. Then, this city demands expeditious remedial actions to lower the ratio as directed by the Vietnamese Government; therefore, it has a high viability for the project to succeed.
- c) In the peripheral zone of the Mekong Delta lying in the south of Vietnam, including Ho Chi Minh City, there are many production bases related to food and beverage as well as chemical products, all these becoming target installation facilities for the Object Products.

4 Investment Environment

(1) Survey Area, Cities and Contact Sources on Investment Environment

In advance of the project development in Vietnam, we made an interview study on the investment environment in Vietnam and six selected major cities.

As described below, we made the study, focusing on the central government ministries, the selected municipalities and the water supply public corporations.

Government Ministries: Ministry of Planning & Investment; Ministry of Foreign Investment; Ministry of Commerce & Industry; Ministry of Construction; Ministry of Health; and Water Supply & Sewerage Association

Selected Municipalities: Hanoi (Investment Dept., Construction Dept., Health Dept., HAWACO)

Hai Phong (Investment Dept., Construction Dept., Health Dept., Hai Phong WACO)

Hue (Investment Dept., Construction Dept., Health Dept., Hue WACO)

Da Nang (Investment Dept., Construction Dept., Health Dept., DAWACO)

Ho Chi Minh (Investment Dept., Construction Dept., Health Dept., SAWACO)

Can Tho (Investment Dept., Construction Dept., Health Dept., Can Tho WACO)

(2) Legal Constraint

In connection with the distribution of the Object Products, we must follow two regulations regarding waterworks (water supply) in Vietnam: Regulations for Construction of Water Supply Pipeline issued by the Ministry of Construction in Vietnam (QCVN07:2010/BXD) and Design Norms for Water Supply Pipe Network (TCVN33:2006).

In the current practice, though there are norms for construction and pipe type specifications, there is no uniform norm to govern the installation locations and types of pipe laid throughout Vietnam; therefore, relevant ministries control and supervise any subject according to said norms set forth by the Vietnamese Ministry of Construction.

Also, because any project owner may choose any type of pipe for ordinary buildings (hotels, commercial facilities, high-rise buildings, etc.) so long as he/she complies with the above norms, water pipes according to foreign norms are used in hotels, office buildings, etc.

(3) Permit/Approval and License

In the interview study at the Ministry of Commerce & Industry of Vietnam, we received an answer that it was no problem for SRS to import the water supply pipe to Vietnam; however, according to the circular of Ministry of Commerce & Industry, dated September 20, 2012 (No. 23/2012/TT-BCT), an import permit system has come to effect for certain items of steel products, the importer must apply for an import permit from the Ministry of Commerce & Industry in advance of the custom clearance. The stainless steel for the Object Products is included in the scope of such permit application. Another import permit system on certain steel items like the above (Ministry of Commerce & Industry circular No. 22/2010/TT-BCT) was applied on July 5 through December 31, 2010 as a specific period applicable statute. This circular is to be nullified if the Vietnam Government judges it unnecessary. Such being the case, each item of SRS products will ask for confirmation by the competent authorities. Also, since it is difficult for SRS to obtain the license of import and distribution (trader) as a foreign corporation in Vietnam, it will obtain the license for production and wholesaling to do the activities for production as well as wholesaling.

(4) Current Status of Water Supply

Throughout Vietnam, there are 70 companies supplying water in 63 provinces. The current water supply status in Vietnam as a whole is as shown below.

Table 1 Current Water Supply Status in Vietnam as a whole

Items	Supply operation status
Average supply volume	100 ℓ/day (160 ℓ - 65 ℓ/day)
Supply time	20 hours/day (urban: 24 h supply; other rural: 12 - 6 h supply)
Water distribution pressure	10 kgf/m ³ at pumping out; 0.2 kgf/m ³ at water discharge from a faucet Note: there is no data on the pressure entering the meter.
Domestic water costs	5,000 VND/m ³

Also, the city water supply ratios and leakage ratios in the six selected cities are shown in the following table.

Table 2 Water Supply Ratios and Leakage Ratios in Six Selected Cities

Items	Status
Water supply ratios for whole country and regions/cities	Whole country: 78% North: 90% in Hanoi, 92% in Hai Phong Central: 75% in Da Nang, 98% in Hue South: 85% in Ho Chi Minh, 82% in Can Tho
Water leakage ratios for whole country and regions/cities (Note 1)	Whole country: 29% North: 30% in Hanoi, 18% in Hai Phong Central: 22% in Da Nang, 12% in Hue South: 39% in Ho Chi Minh, 20% in Can Tho

Note 1: Data supplied by Water Supply & Sewerage Association in Vietnam (2009 to 2010).

The data above was supplemented by the survey team's interview data.

(5) Rearrangement Policy of City Water Supply

In Vietnam, the departments in charge in the central and local governments post a rearrangement policy to enhance their water supply ratios and at the same time lower water leakage ratios in their respective coverage areas.

Table 3 Rearrangement Policy of City Water Supply by the Responsible Departments of the Central and Local Governments

	Main policy of the responsible ministry and departments
Central Government	Ministry of Construction <ul style="list-style-type: none"> Water supply plan is established for Hanoi City and now under planning for Can Tho. For Ho Chi Minh City, the countermeasures for water leakage are entrusted, on a trial basis, to a private company for water supply management and to pursue a lowered water leakage policy. For Hanoi City, a similar approach is being studied on a trial basis.
	Ministry of Planning & Investment <ul style="list-style-type: none"> The budget for new plan is proposed where aged water supply pipe is replaced or repaired to lower the water leakage ratio, while new water supply pipe is laid to expand the current water supply network.
Hanoi City	Ministry of Construction <ul style="list-style-type: none"> Four water supply companies working for the city propose the plan to lower water leakage. Department of Investment <ul style="list-style-type: none"> It is scheduled to newly provide 20 potable water supply stations for 2020 through 2030 as a new water supply plan.
Hai Phong City	Department of Construction <ul style="list-style-type: none"> Water will be supplied for 2,400 thousand in-city people by 2025. The current water leakage ratio of 17% will be decreased down to 15%. Department of Investment

	<ul style="list-style-type: none"> • New water supply companies will be established for three new districts to supply water under a new investment plan by 2018.
Hue City	<p>Department of Construction</p> <ul style="list-style-type: none"> • By the target year of 2015, water directly potable from a faucet will be supplied to cover 80% portion of the current water supply area, and by 2020, the same water supply will cover 90%. <p>Department of Investment</p> <ul style="list-style-type: none"> • By inviting funds from overseas, it is planned to expand the present water supply volume of 160 thousand m³ to 250 thousand m³ by 2017. Along with this, the water supply to the present 160 thousand households will be increased to 240 thousand.
Da Nang City	<p>Department of Construction</p> <ul style="list-style-type: none"> • Deteriorated PVC water pipe will be replaced with HDPE pipe. • Water supply pipe network will be managed in a more efficient way. <p>Department of Investment</p> <ul style="list-style-type: none"> • Water supply infrastructure will be rearranged with the assistance from overseas.
Ho Chi Minh City	<p>Department of Construction</p> <ul style="list-style-type: none"> • Water leakage ratio will be lowered to 32% in 2015 as a target and 25% in 2025. • The current water supply ratio of 87% will be expanded to 90% by 2015 as a target and 100% by 2025. <p>Department of Investment</p> <ul style="list-style-type: none"> • Water supply infrastructure will be rearranged with the assistance from overseas.
Can Tho City	<p>Department of Construction</p> <ul style="list-style-type: none"> • The upper limit of up to 27% in water leakage ratio may be reflected in the water charges; however, any excess will be made borne by WACO as a rule. <p>Department of Investment</p> <ul style="list-style-type: none"> • It is contemplated to work with a foreign government and an enterprise in that country.

(6) Types of Water Supply Pipe

In Vietnam, water supply pipelines are classified by Levels:

- a) Level 1: Large diameter pipe (to be used from water purification plant to discharging pipe)
- b) Level 2: Water distribution pipe (pipe network embedded in roads, etc., up to the intake point for dwellings or building)
- c) Level 3: City water main pipe (from the intake point in front of a dwelling or building to the water meter)

The Object Products correspond to Level 3 piping. In Vietnam's urban areas, the city water supply pipe is mostly of HDPE. The types of water supply pipe currently used in the six selected

cities are shown below as clarified in the study for the investment environment.

Table 4 Types of Water Supply Pipe used in the Six Selected Cities

Cities	Types of pipe employed
Hanoi City	HDPE water supply pipe; galvanized steel pipe
Hai Phong City	HDPE water supply pipe; PPR water supply pipe
Hue City	HDPE water supply pipe; lead-plated steel water supply pipe
Da Nang City	HDPE water supply pipe
Ho Chi Minh City	Concrete pipe; steel pipe; cast iron pipe; HDPE pipe; uPVC pipe, all for water supply
Can Tho City	Cast iron pipe; HDPE water supply pipe

(7) Trade Pattern and Decider in Vietnamese Water Supply Business Market

As for the trade pattern and decider in the water supply piping market in Vietnam, there are two patterns: in which WACO finally undertakes arrangement, and in which a general contractor or construction trade contractor undertakes the arrangement.

<Where the Object Products are employed by WACO>

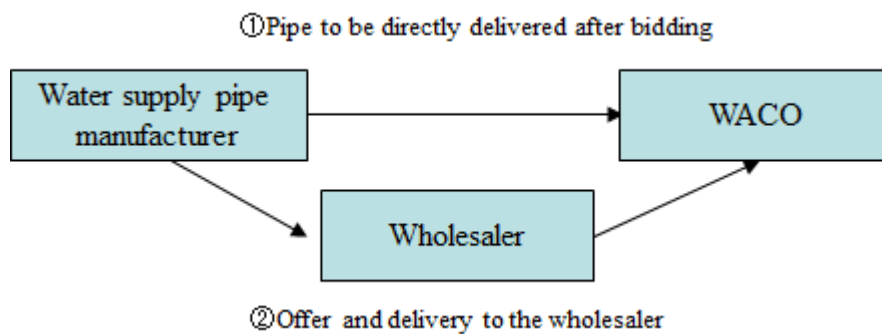


Fig. 1 Trade Pattern where the Pipe is used by WACO

In this pattern, the decider is WACO in each city (including a material purchasing company operated by WACO).

<Where the Object Products are used by a general contractor or construction trade contractor>

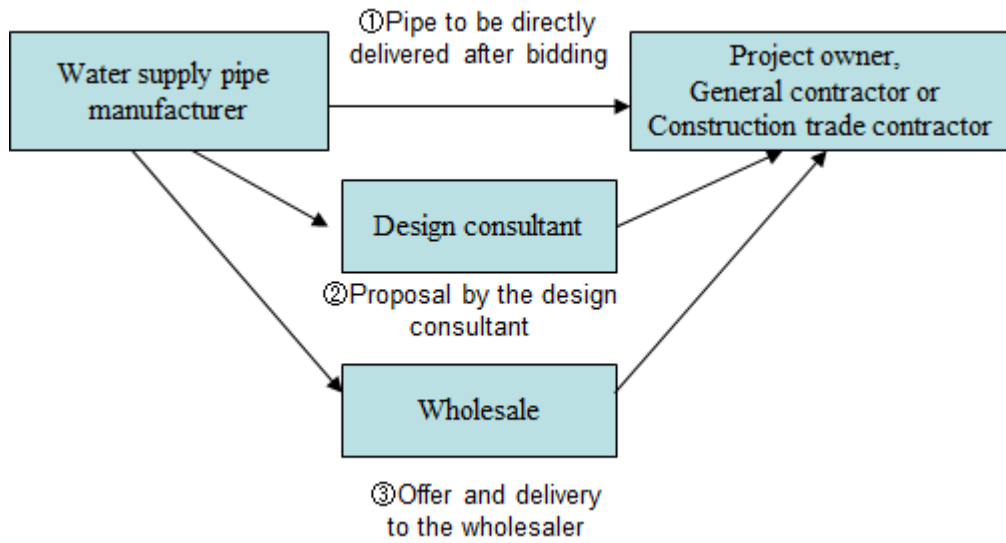


Fig. 2 Trade Pattern where the Pipe is used by a General Contractor or Construction Trade Contractor

In this pattern, the deciders are the project owner, general contractor, construction trade contractor (either local or foreign) and design consultant.

5 Project Strategy

(1) Outline of the Project

a) Target Market

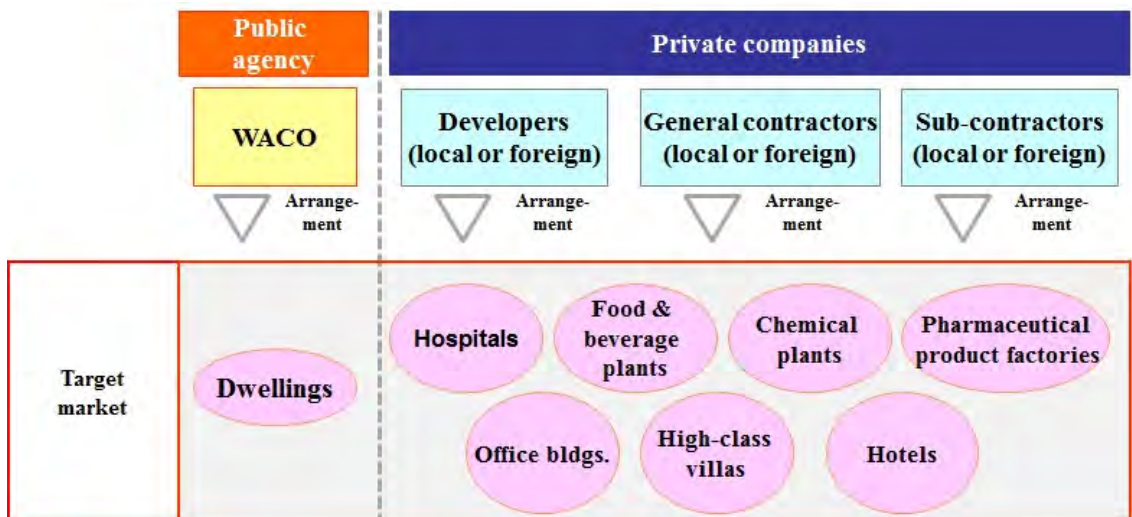


Fig. 3 Target Market

The target market for the Object Products is piping facilities for dwellings for which arrangement is covered by WACO as a public agency and the same such facilities for hospitals, food & beverage plants, chemical plants, high-class hotels and villas and office buildings for which arrangement is undertaken by private companies. In the case of the dwellings handled by WACO, the Object Products will be used as water supply pipe sections within the premises or inside the house. In the fields undertaken by private companies, the products will be used in the premises and/or buildings classified as in a “field of health and hygiene”, “field where water quality and safety become the highest concern”, “field where stainless steel is preferred to plastic materials”, and “field where higher added value is favored”. In any of these cases, the products will add to the lowered water leakage ratio and economic growth by virtue of their advantageous functions of higher durability and flexibility of self-bending and bendability.

■ Study for selecting the targeting market

- Field covered by public agencies

WACO undertakes new laying or replacement of the pipelines for the dwellings.

Table 5 Market Evaluation for Public Agencies

Characteristics of the market	<ul style="list-style-type: none"> ● In the case of Ho Chi Minh City Water leakage ratio: 39% Number of water supply contracts: about 905,000 ● In the case of Hanoi City Water leakage ratio: 30% Number of water supply contracts: about 550,000
Prospect for future growth	<ul style="list-style-type: none"> ● For Ho Chi Minh City, though the current water supply pipe is of HDPE, improvement in water leakage ratio is planned to attain 32% in 2015 and 25% in 2025; therefore, the existing pipelines are very likely to be replaced. ● For Hanoi City, along with improvement in the water leakage ratio, water supply pipelines are likely to be extended to newly cover the enlarged portion of the city included by the merger of an abutting area; therefore, new pipelines are likely to be added and the existing line to be replaced.

- Fields covered by private companies

Such markets will be sought, as will make it possible to take advantage of the characteristics and advantages of the Object Products in the fields.

Table 6 Selection of Markets in the Fields of Private Companies

Characteristics of the Object Products	Fields/Spaces where characteristics of the Object Products can be used to advantage	Corresponding markets
High durability	Field of health and hygiene	Hospitals
	Field where water quality and safety become the highest concern	Food and beverage production plants
	Field where stainless steel is preferred to plastic materials	Chemical substance production plants Pharmaceutical plants
	Field where higher added value is favored	High-class hotels and villas Office buildings
Corrugated form	Complicated spaces (ceiling and in-wall spaces)	High-class hotels and villas Hospitals
	To relieve the stress in pipes due to vibration	Food and beverage production plants Chemical substance production plants Pharmaceutical plants

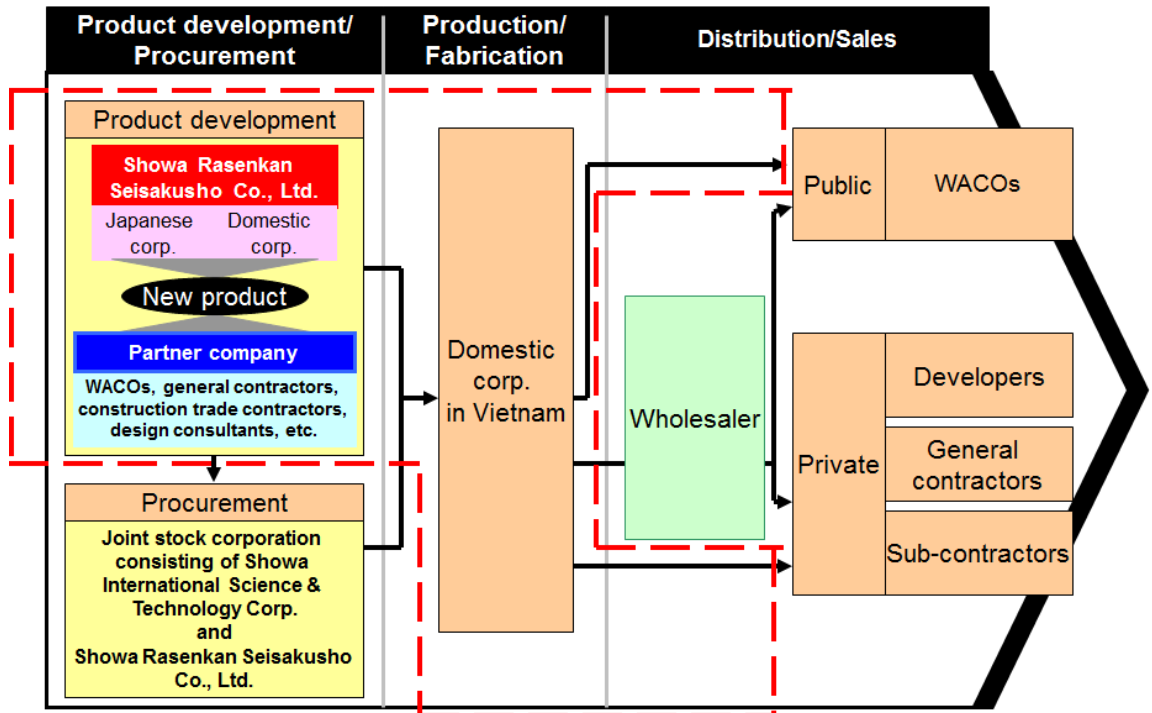
b) Characteristics of the Products

By listening to wholesalers and retailers of water supply pipe and to general contractors and construction trade contractors, it was found that through the water supply pipe market in Vietnam, though a straight type of stainless steel pipe is widely used, corrugated stainless steel pipe is not prevalent. Through sales promotions and other marketing activities stressing the comparative advantages of corrugated stainless steel pipe over ordinary stock pipe, a new market for corrugated pipe will be explored and the existing stock pipe market will be expanded to include it.

【 Characteristics of the Object Products 】

- Possess high durability as an intrinsic feature of stainless steel
- Hygienic, because stainless steel is free from ruptures due to softening or fusion
- Bendable when it is fabricated in corrugated form
- Can be freely bent at the time of placing an order, thus being least subjected to fixing limitations.

c) Scope of the Project



Scope of SRS' Undertaking (Encircled by Broken Lines)

Fig. 4 Shared Undertakings between SRS and Vietnam's Domestic Corp. for the Project

【 Product Development】

A partner company will be selected from among the prospective partners who are deciders of the Object Products in performing piping work or infrastructure or who have the capacity to propose the Object Products to the deciders (i.e., WACOs, general contractors, construction trade contractors, design consultants). SRS will be associated with that partner company to develop the products.

【 Procurement】

The new products worked out through joint efforts with the partner will be produced in SRS's Taiwan Plant and shipped to the domestic corporation in Vietnam.

【 Production/Fabrication】

The domestic corporation in Vietnam will fabricate and package the products and peripheral items shipped from Taiwan according to the requirements of each customer's order.

【 Distribution/Sales】

The domestic corporation in Vietnam will deliver the finished products to WACOs,

developers, general contractors, sub-contractors, etc. who undertake the construction of a medical establishment, industrial factory, housing or commercial facility, through a wholesaler after having obtained a manufacturing license (including a wholesale license). When the corporation obtains a wholesale license, it can make a direct deal if desired by the buyer side.

(2) Project Environment

a) Target Customers

	Public agency	Private companies		
The highest priority customers (Decider group)	WACO	Developers (local or foreign)	General contractors (local or foreign)	Sub-contractors (local or foreign)
The second-highest priority customers (Decider and proposer group)	Wholesalers or retailers influential upon WACO	Wholesalers or retailers Influential upon the private companies	Design consultants	

Fig. 5 Target Customers (by Order of Priority)

Among the target customers, the highest priority customers group consist of WACOs, developers, general contractors and sub-contractors, all having power to decide which products to use, and as the second priority customer group, there are wholesalers, retailers and design consultants, all having the capacity to propose the use of products to the highest priority customers or to render a decision.

One who is ranked as a No. 1 prospective candidate among the highest priority customers in the private sector is a general contractor (either local or foreign) who has a dual function as a developer. In addition to local companies, Japan-based companies incorporated in Vietnam may be prospective partner. The characteristic features of the public agencies and the private companies as the highest priority customers are described below.

a)-1 Public Agencies: WACO

Table 7 Status of Water Supply Pipelines Administered by WACO
in the Six Selected Cities

Areas	North		Central		South	
Cities	Hanoi	Hai Phong	Hue	Da Nang	Ho Chi Minh	Can Tho
WACO in charge	HAWACO	Hai Phong WACO	Hue WACO	DAWACO	SAWACO	Can Tho WACO
Proportion of HDPE pipe	90%	70%	More than 90%	100%	1.6%	-
Proprietorship of water supply pipe	Hanoi City Hatay City	Hai Phong City	Hue Province	Da Nang City Hoa Vang District	Ho Chi Minh City	Can Tho City
Purchasing base of water supply pipe	Technical aspect, price, schedule	Technical aspect and price	Technical aspect and price	Technical aspect and construction costs	Standards of Ministry of Construction	Standards of Ministry of Construction
Purchase decider	HAWACO	Hai Phong WACO	Hue WACO	DAWACO	SAWACO	Can Tho WACO
Water leakage ratio (Note)	30%	18%	12%	22%	39%	20%

Note: Data supplied by Water Supply & Sewerage Association in Vietnam (2009 to 2010). The data above was supplemented by the survey team's interview data.

In the case of WACOs in the north and central areas, the proportion of HDPE water pipe exceeds 70%. Since each WACO has the power to decide on water pipe purchases and the decision is based on technical aspects, quality and prices, the Object Products highly contributing to the lowered water leakage ratio can be said to have a good chance of entry.

Every city is promoting lowering of the water leakage ratio. In particular, the bigger cities of Ho Chi Minh and Hanoi show a high leakage ratio compared with other cities and thus their awareness and needs to reduce their leakage ratios are high.

a)-2 Private Companies: Developers, General Contractors and Sub-contractors

Developers, general contractors and sub-contractors undertake the design, construction and project administration of the construction projects in the target markets covering hospitals, food & beverage production plants, chemical substance production plants, high-class hotels and villas, office building, etc. The following part of the report gives the approximate number of developers, general contractors and sub-contractors, the trend of the sector, the deciding power for purchasing and the need for the Object Products.

【 Approximate number of Developers, General Contractors and Sub-contractors and Construction Projects】

Out of these developers, general contractors and sub-contractors incorporated with domestic capital, those that are engaged in large projects, listed on the stock exchange in Vietnam are counted at 157. They undertake investment in construction projects in various parts of Vietnam, and some undertake the design, construction and project administration for plumbing systems and building services systems for buildings. Also, in the case of construction projects, the costs for water supply and other lifeline piping systems are in the range of 5% to 10% of the total investment costs.

【 Trends of the Sector】

Since the summer of 2012, the construction industry sector in Vietnam remained sluggish and it is said that any steady increase in the number of collective housing and office building construction projects is hard to expect. On the other hand, foreign investment has continued in line with the Vietnamese government's policy for industrialization, and a certain number of developers, general contractors and construction trade contractors have bright prospects for investment demand from hospital and medical facility construction in the sector of health and hygiene, in addition to food and beverage production plants, chemical substance production plants, etc.

【 Deciding Which Type of Water Supply Pipe is Used】

There are the following four patterns for deciding the water supply pipe to be used for a building:

- A project owner decides the type.
- A developer or general contractor decides it as part of the delivery processes for construction entrusted by the project owner.
- A design consultant decides it as part of his proposition to the project owner, developer, general contractor or others.
- A sub-contractor sitting under the umbrella of the developer or general contractor decides after requesting product propositions to the wholesaler or retailer.

【 Needs for the Object Products】

As a result of the interview study, it has been found that the companies consider the products to be advanced products in Vietnam,

and show high interests. While some companies look for cheap but durable water supply pipe, there are also target customers who want to use “pipe having a longer service life, even at a higher cost,” “pipe dispensing with laborious installation work,” or “stainless steel pipe, since there is no alternative,” showing a desire to purchase it. Prospectiveness, usage and needs of the private companies that showed interests in the Object Products among those we conducted interview studies are shown in Table 8.

Table 8 Interests and needs from private companies in the Object Products

Contractors & sellers	Stock exchange	Usage & needs	Prospective ness
Full V capital GC “A”	Listed	Commercial facilities, educational institution, social infrastructure	Yes
Full V capital GC “B”	Listed	Hospital, hotel, high-class villas, government bldg..	Yes
Full V capital GC “C”	Listed	Hospital, food & beverage plant, chemical substance plant	Yes
Full V capital GC “D”	Listed	Food plant, medical line plant, hospital	Yes
Full V capital GC “E”	Listed	Project related to water supply service	Yes
		Oil refinery	Yes
Full V capital GC “F”	Not listed	High-class collective housing	Yes
Wholesaler “G”	Not listed	High-class collective housing, hospital, food plant	Yes
Wholesaler “H”	Not listed	Chemical substance plant, office building	Yes

Starting with the companies shown in Table 8, we will promote the products’ sales and further prevalence to domestic general contractors and wholesalers in Vietnam. Relying on aforementioned features, our sales promotion and dissemination of the product will be advanced by emphasizing and including as our sales tools “the advantages of the Object Products,” “categorical specifications of the products,” “a price list of the products,” “simulated illustration in a model case,” “achievement in an actual installation,” and “comparison of maintenance costs between the products and plastic water supply pipe.”

b) Partner Companies

b)-1 Developers, General Contractors, Sub-contractors and Design Consultants

In this project, developers, general contractors, sub-contractors and design consultants are the highest priority customers (decider group) and, at the same time, are ranked as prospective partners who may join in a partnership to develop products in joint

efforts. On a project in which the Object Products will be used, we will develop custom specification products for sale, together with developers, general contractors and sub-contractors, as well as with design consultants who will assist or administer the development and material procurement activities for the above traders.

At the time of the interview study too, there were several general contracting companies who proposed to jointly develop a product together with SRS. As expeditiously as practicable, we will visit those companies who showed keen interest in the Object Products and SRS to consider and coordinate the development activities in more concrete terms in the form of a partnership.

b)-2 Supplier Companies

This project is based on the basic approach to produce unfinished materials for the Object Products in SRS's Taiwan Plant and ship them to Vietnam; however, to cope with a potential risk of those materials becoming unprocurable, we must study the possibility of material procurement in Vietnam and formation of production. For this purpose, we made the interview study by visiting a stainless steel manufacturer operating on the basis of Vietnamese capital. As a result, it was found that stainless steel material (pipe) could be imported from Japanese and foreign manufacturers and that a certain company might become a supplier of the desired products in the future if technical assistance were provided; however, we could not find any proper company who can produce the desired product meeting the requirements and criteria for the Object Products presently. For the time being, while procuring the unfinished products from Taiwan, we will try to formulate a network of stainless steel fabricators that will enable production of Object Products meeting the requirements and criteria.

c) Sales Channels

For the Object Products, the sales channels are as follows.

- General contractors and construction trade contractors who install them in hospitals, plants, etc.
- WACOs selling and installing them for dwellings.
- Wholesalers and retailers selling them to WACOs and building construction projects across Vietnam .

The roles those contractors are expected to play are described in the part of "Target Customers".

The wholesalers and retailers will be selected on the condition that they meet the following criteria:

- They should be familiar with the water supply business in Vietnam, and having a sales network thereof.
- They should have a business setup to manage proposal-based dealings.
- They should be capable of not only sales part but also installing the Object Products.
- They should have interest in SRS and the Object Products and are strongly willing to buy them.

They are expected to propose and sell the Object Products in the finished form to general contractors and construction trade contractor and WACOs. They should exchange sales information in a perpetual way and exert all their efforts to jointly develop and sell any non-standardized products.

d) Competing Environment

d)-1 Corrugated Stainless Steel Pipe and Pipe Types currently used in Vietnam

Table 9 Corrugated Stainless Steel Pipe and Pipe Types currently used in Vietnam

	Metallic water supply pipe			Plastic water supply pipe
	Stainless steel		Other metals	
Major types of pipe	Corrugated stainless steel pipe	Straight stainless steel pipe	Cast iron pipe	HDPE pipe PPR pipe uPVC pipe PVC pipe
Price range	200,000 and over	43,800 and over	33,209 and over	-HDPE pipe: 11,000 - 16,300 -PPR pipe: 22,000 - 39,500 -uPVC pipe: 12,740 - 14,850 -PVC pipe: 10,120 - 15,840
Durability	High	High	Low	High
Major usage	Not prevalent	- Water supply pipe -Factory -Collective housing -Office building -Hotel	-Water supply pipe -Detached house	-Water supply pipe -Factory -Collective housing -Detached house -Hotel -Office building
Where pipe is bent in laying, whether an attachment part is required or not?	Not required	Required	Required	Required

Note 1: Prices are based on 1m section, dong as unit and quoted from the data on water supply pipe price ranges used in a city where survey study was made. The corrugated stainless steel is quoted from SRS' own scheduled price.

Note 2: For concrete pipe, the price is for 300 mm diameter pipe.

- The corrugated stainless steel pipe can be used for every route of currently laid water service lines, plants (including food, beverage and chemical substance production plants), collective housing, detached houses, office buildings or hotel.
- For the collective housing and office buildings, plastic water supply piping, such as

HDPE pipe, is widely used for its low costs, despite rather inferior durability compared with the stainless steel pipe, since their inhabitants or users are less concerned about the quality of water.

- Though the corrugated stainless steel pipe is higher than other types of pipe in terms of costs, the former can be used bent so that no special attachment part is required when it is laid in a curving section.
- The corrugated stainless steel pipe costs roughly 5 to 20 times more than plastic pipe, such as HDPE water supply pipe; however, the former is advantageous in sectors where the stainless steel is preferred to plastic pipe. Also, though the corrugated stainless steel pipe costs three times as much as the straight stainless steel, the former is effective when it is used in a space in which a pipe section has to be bent while keeping its durability, or in which a pipe section is always subjected to stress due to vibration of a pump.

d)-1 Competing Companies

For each type of competing pipe products, their suppliers of those used in Vietnam are listed below.

<Straight stainless steel pipe>

This type of pipe is supplied by domestic companies. Also, there are foreign products that are mainly supplied from the water service pipe manufacturers of Europe, Taiwan or Thailand, having their home office or production base in these respective countries. Though those manufacturers are competing companies, they are also suppliers.

<Cast iron pipe>

This type of pipe is supplied by domestic manufacturers, and water service pipe manufacturers of Europe and China. As for the pipe supplied during the French governance, the details cannot be ascertained.

<Plastic water supply pipe>

This type of pipe is supplied by the domestic manufacturers, and European and Chinese manufacturers of the plastic pipe. Of these domestic manufacturers, the major companies named by WACO and the sellers whom we contacted for the interview study are Hoa Phat; Tien Phong; Binh Minh; Dat Hoa; Vihapile; Bach Dang; and De Nhat.

(3) Characteristics and Advantages of this Project

Characteristics and advantages of the project are threefold as given below.

- a) The Object Products have contributed to lowering the water leakage ratio in various cities and towns in Japan where the leakage ratios are significantly improved compared with

cities in Vietnam, and to regions and areas where the lowering is impending, in countries other than Vietnam.

- b) The Object Products have advantages over competing products in “durability” and “corrugation” in that the Object Product can be installed many spaces, dispense with any attachment part and save work load.
- c) The Object Products are not prevalent in Vietnam and the need for them arises both from WACOs and general contractors/construction trade contractors.

By the intrinsic characteristics of “high durability” pertaining to the stainless steel and “corrugation,” they have made contributions and achievements in lowering the leakage ratio in the city water service business in Japan and Taiwan. In addition, we have continued to cooperate with Hue City, which issued a “Safe Water Declaration” coupled with the lowered leakage ratio. Our achievement gained by lowering the leakage ratio in an advanced country, and in the Vietnam city where the leakage ratios have been improved compared with other cities in Vietnam, will become a very advantageous point in developing the project.

Also, the Object Products have a characteristic feature of durability that the stainless steel has intrinsically and the added fabrication of corrugation. Consequently, they can be installed in a wider range of spaces than those adaptable to the plastic pipe as competing products. In addition, they can be used by bending a pipe section, due to the flexibility of the stainless steel and thus dispense with attachment parts required at a joint and in other places, except for a minimum one, reducing the work load. Further, they are not prevalent in Vietnam. Through the interview study, it was learned that not only WACOs but general contractors/construction trade contractors in the private sector were keenly interested in them and had large needs. From now on, we will advance the prevalence and sales promotion activities to jointly develop products, produce and promote sales.

For the purpose of selling the Object Products, the price will be set at ten dollars per meter with the understanding that the Object Products will become the key products and also by taking account of the fact that the unfinished products are imported from SRS’s own plant in Taiwan and that a replacement budget for service pipe has been established by SAWACO to be the highest priority among WACOs (about 100 dollars covering the laying of service pipe, 20 mm dia. and 4 m long, and a water meter). As compared with the competing products, that price is 5 to 10 times higher; however, the Object Products will be sold to the target customers by fully explaining that the competing products necessitate additional attachments as another cost element, and emphasizing the characteristics and advantages of the Object Project. Though the general contractors/construction trade contractors raised the price as a key issue, six companies out of eight, whom we made the interview study with, were keenly interested

in the Object Products and each company group had its own construction plan for hospitals, plants, hotels, etc. We will continue our effort for the deepening of cooperation, business development and sales promotion with these companies.

(4) Targets of this Project

By making the Object Products prevalent in Vietnam, this Project is aimed at attaining the targets of advancing the living standard and contributing to economic growth through the lowered water leakage ratio. During the process of forming a corrugated stainless steel pipe market, the needs for locations and markets where the products are used might change; however, we will try to contribute to the water supply system providing quality water corresponding to the changed needs.

Though it will require some time for us to reach a stage of profitability as a business, the target sales amounts in the first year through third year (number of standard pipe sections sold of the Object Products) on the middle case, the year of initial profitability in a single term, assumed sales amount/assumed operating profit, and the dissolution year of accumulated losses are planned as follows.

a) Target of sales amount and number of pipe sections sold

1st year: zero sales amount (no Object Products sold)

2nd year: ¥12,530,664 in sales amount

(2,370 pipe sections of the Object Products will be sold)

3rd year: ¥20,778,696 in sales amount

(3,930 pipe sections of the Object Products will be sold)

Several general contractors that showed interests in the Object Products, and that have proposed to our survey team the joint product developments, therefore being our prospective partners, have scheduled construction undertakings of high-class hotels and villas as well as a hospital. We aim at engaging in such projects and alongside.

By engaging such projects, sales amount can be projected to increase; high-class hotels will consume 3 sections of the Object Product for each room, and the hospital would use one section of the Object Product per 10m² of space.

Note : For the period of first half of the 1st year (July-December 2013), as the personnel of the SRS home office will visit Vietnam on business trips to jointly develop the products and promote business, all of the sales amount belongs to the home office.

For the period of second half of the 1st year (current term, January-June 2014), as SRS Vietnamese domestic corporation is to be engaged in joint product development and

business promotion, no sales amount is assumed.

- b) Stage of short term profitability: 2021 (9th year after the establishment of the domestic corporation)

Sales amount (assumed): ¥84,595,200

Operating profit (assumed): ¥20,566,116

- c) Dissolution of accumulated losses: 2024 (12th year after the establishment of the domestic corporation)

(5) Scenario of Project Development

- a) Scenario at the Initial Period (Establishment of the domestic corporation to 3rd year)

In the initial year, the domestic corporation will be engaged in joint product development with WACO and solidifying the mutual relation with the partners along with joint product development and sales promotion. From the second year, the corporation will extend the business and sales promotion of the then existing products and newly developed products.

In the third year, the corporation will work toward the target of 3,930 pipe sections equivalent to the existing products (20 mm in dia., 1 mm in wall thickness) and an accumulated sales record of 6,300 sections in the first three years.

Table 10 Target Sales Records during 1st to 3rd Years

Laying work (Target market)		Usage	Targeting customers	G'mnt Private	1st year	2nd year	3rd year	Total
Dwellings	Detachedhouses: Embedded water supply lines	New/Renewal	WACO	Government	0	0	0	0
	Detached house: Indoor water supply lines	New/Renewal	WACO	Government	0	450	1,090	1,540
High class hotels	In-floor	New	Gen. contractors Con. trade contractor	Private	0	1,200	1,200	2,400
Hospitals	Indoor water supply lines	New	Gen. contractors Con. trade contractor	Private	0	250	500	750
Plants	Factory: Embedded water supply lines	New	Gen. contractors Con. trade contractor	Private	0	80	160	240
	Factory: Indoor water supply lines	New	Gen. contractors Con. trade contractor	Private	0	40	80	120
Office	Indoor water supply lines	New	Gen.	Private	0	0	450	450

bldgs.			contractors Con. trade contractor					
Other housing & bldgs.	Other than above. Through WACO or G.C. or C.T.C.	New/ Renewal	Wholesalers Retailers	Private	0	350	450	800
Total (unit: pipe sections)					0	2,370	3,930	6,300

b) Scenario at the Intermediate Period (3rd to 5th years)

Up to the fifth year, the corporation will make efforts toward the targets of 194,200 pipe sections (equivalent to the pipe, 20 and 25 mm in dia., 6 m long, and 1 mm in wall thickness) and of roughly 3:7 in proportion of the sales amount to WACO and to the private companies.

Table 11 Target Sales Amounts up to 5th Years

Laying work (Target market)		Usage	Targeting customers	1st to 3rd year	4th year	5th year	Total
Dwellings	Detached houses: Embedded water supply lines	New/ Renewal	WACO	0	0	0	0
	Detached house: Indoor water supply lines	New/ Renewal	WACO	1,540	1,660	2,100	5,300
High class hotels	In-floor	New	Gen. contractors Con. trade contractor	2,400	1,200	1,200	4,800
Hospitals	Indoor water supply lines	New	Gen. contractors Con. trade contractor	750	750	750	2,250
Plants	Factory: Embedded water supply lines	New	Gen. contractors Con. trade contractor	240	480	840	1,200
	Factory: Indoor water supply lines	New	Gen. contractors Con. trade contractor	120	240	450	1,350
Office bldgs.	Indoor water supply lines	New	Gen. contractors Con. trade contractor	450	450	450	1,350
Other housing & buildings	Other than above. Through WACO or G.C. or C.T.C.	New/ Renewal	Wholesalers Retailers	800	840	1,320	2,960
Total (unit: pipe sections)				6,300	5,620	7,500	19,420

c) Scenario in the Long term (Longer than 5 years)

Up to the tenth year, the corporation work toward the targets of 87,920 pipe sections (equivalent to the pipe, 20 mm in dia., 6 m long, and 1 mm in wall thickness) and of roughly 5:5 in the proportion of the sales amount to WACO and to the private companies.

In order to contribute to the challenges in product development broadly as well as to the promotion of sales and further prevalence of the Object Product, speedy new installation and renewal of infrastructure and building service systems are indispensable, including the Object Products, by taking a wider view of the whole water supply services from the water treatment station to the indoor water supply lines in each dwelling or building. There are, however, obstacles expected with WACO in terms of funding. The project will be implemented while maintaining a favorable relationship with the stakeholders engaged in the water supply service in Vietnam, including WACO, and while seeking financial backing from ODA, overseas investment and lending, etc. of your institution, the Asian Development Bank, the World Bank and other institutions as operation tools.

(6) Structural Formation for Project Implementation

a) Formation for Project and Service Development

In principle, we will be associated with general contractors and/or construction trade contractors in the form of a partnership in Vietnam to develop corrugated stainless steel pipe in a form to suit the customer's needs. The following three points will be taken as key criteria in selecting those contractors serving as a partner.

- They now hold the status of an enterprise fit to become a partner, such as being listed on Vietnam's stock exchange.
- They keep multilateral connections and transaction parties in Vietnam.
- They have a business posture conformable to the dealing patterns and contracting conditions of SRS.

The partner will be asked to introduce SRS's standard products in its business lines and to try to develop new finished products from the non-standard products through the interview study and business proposal on customers' needs. The first thing to do will be to establish a favorable relationship with the partner by conducting publicity and sales promotion activities to make the Object Products known to the people concerned with the water service.

Among all, we consider the following entities the partner candidates: SAWACO from the public agencies, with which we conducted our interview study; six general contractors and construction trade contractors that showed interests in the Object Products and that have scheduled development projects of hospitals, hotels and factories; and the wholesalers and retailers that have records of business dealings in construction projects of high-class hotels and villas pursuing high added-values

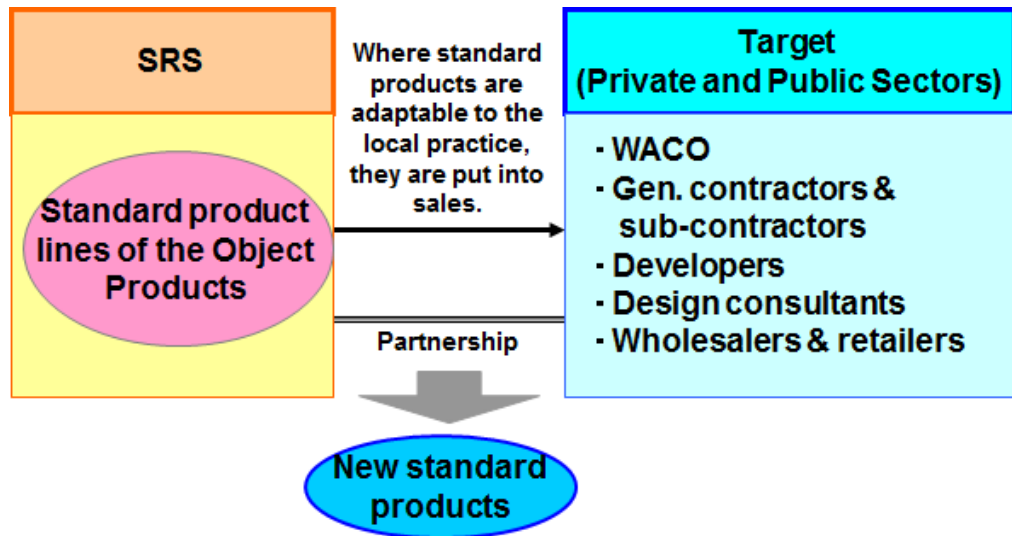


Fig. 6 Image of Product Development

b) Law Material Procurement Plan

In principle, the law material is imported from SRS plant in Taiwan in the form of unfinished product; however, to diversify procurement risk due to import duties, we try to substantiate the relation with a prospective company from which we can purchase the material adaptable to our own standards through the exchange of information with local suppliers, subsequent to the formal operation of the domestic corporation.

c) Production Plan

In July 2013, SRS will obtain the license for the production and the wholesale/retail in V. From January 2014, it will finally fabricate the unfinished products imported from SRS Taiwan plant, and pack and deliver the finished products to the customers.

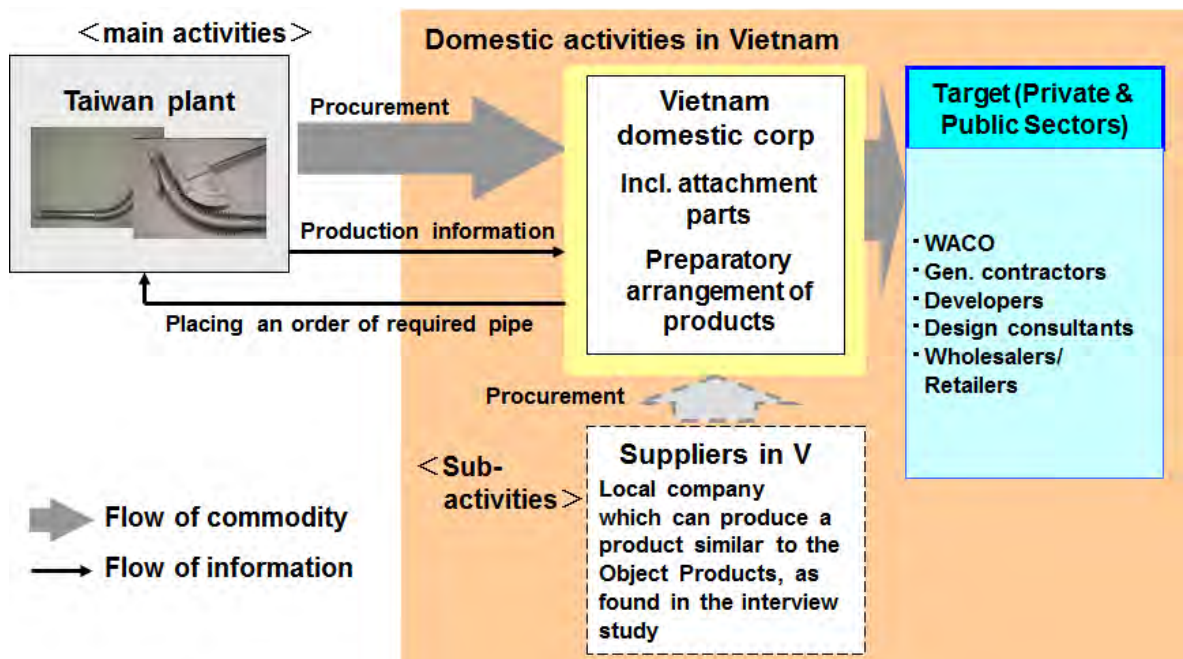


Fig. 7 Image of Production Plan

d) Distribution and Sales Plan

It is intended to make the Object Products prevalent through the sales promotion activities while keeping a partnership with such those deciders of the Object Products as developers, general contractors, design consultants and with such in a position to be capable of proposing the products to the decider as wholesalers and retailers.

Specifically, the following approaches are considered:

- To make a preparatory arrangement for joint development of a product by making visiting sales promotion targeting on developers and general contractors who showed interest in the Object Products, and, upon the agreement, to establish the structural formation and enter the joint product development.
- At the same time, to perform the prevalence and sales promotion activities for the Object Products through exhibitions, and product workshop, seminars and other business opportunities held to screen the prospective dealers in the fields of water supply business.
- To promote the finding of prospective customers of the Object Products and of prospective partners for product development.
- Taking the Object Products as axis products, to operate new production and sale by proposing the joint development to a prospective partner and producing non-standard products for sale when such need for the non-standard products arises.

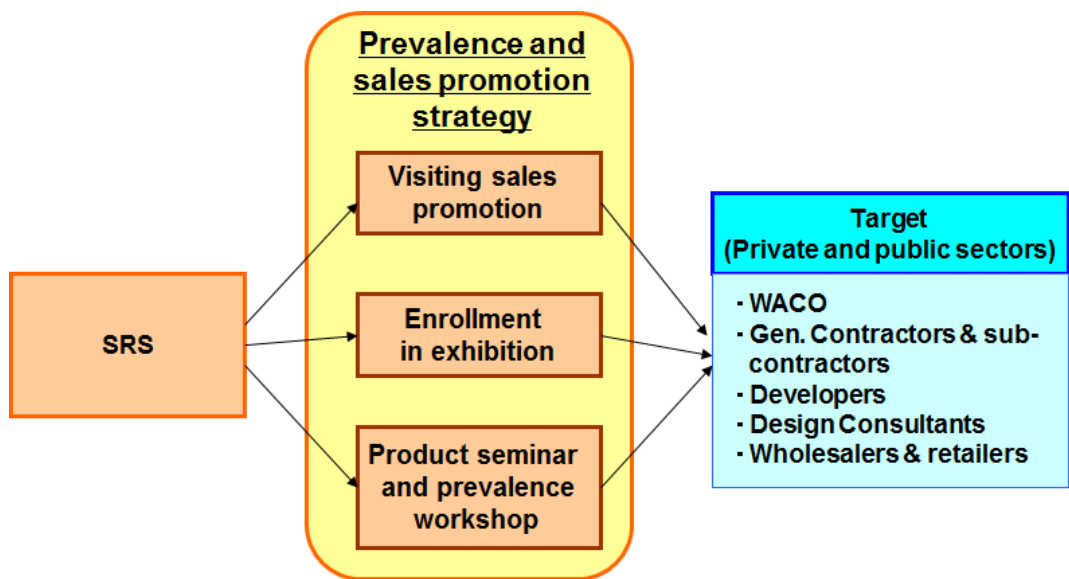


Fig. 8 Image of Prevalence and Sales Promotion

<A Tool Used in Prevalence and Sales Promotion>

In the prevalence and sales promotion, a business tool incorporating the following information will be used.

The tool will serve as a key one for the prevalence and sales promotion and be prepared in Vietnamese and Japanese. In the preparation of the tool, the following points will be specifically taken into account by emphasizing the advantage of the Object Products: comparison of characteristics and prices of the Object Products and HDPE pipe, which has a large share in the market.

■ Contents of the Tool

- (1) Characteristics and advantages of the Object Products
- (2) Comparison of the Object Products and HDPE pipe in characteristics and price in a model case
- (3) Specifications of the Object Products
- (4) Price list of the Object Products
- (5) Past project records of the Object Products in actual construction (The project records will be explained to include achievements in Japan, Taiwan and Vietnam.)
- (6) About SRS

■ Point Emphasized in the Tool

In connection with the characteristics of the Object Products and the model case comparison with HDPE pipe as described in (2) above, detailed accounts will be given

as shown in Table 11 below to emphasize the characteristics in properties and price and advantages of the Object Products.

Table 12 Comparison of the Object Products and HDPE Pipe to be Incorporated in the Tool

[Price]		[The Object Products]	HDPE Pipe
Quotation Price	Water supply pipe	¥4,000	¥638
	Attachment parts	¥10,878	¥4,096
	Total price	¥14,878	¥4,724

[Characteristics of the products]	Comparison
• Strength	Object Products > HDPE pipe
• Heat resistance	Object Products > HDPE pipe
• Flexibility (to be bent)	Object Products > HDPE pipe
• Adaptable to various locations	Object Products > HDPE pipe
—Just adaptable to such facilities as will be strict about health and hygiene	Object Products > HDPE pipe
—Just adaptable to such facilities as where quality water is considered to be added value	Object Products > HDPE pipe
• A numerous number of attachment parts when the pipe is bent	Object Products > HDPE pipe
• Saving in work load when the pipe is bent	Object Products > HDPE pipe
[Despite three times of price difference compared with HDPE pipe, the customers select the Object Products for reasons such as:]	
—High durability in far excess of that of HDPE pipe (not to crack or dissolve)	
—Can be used at facilities where added-values of quality water is desired in terms of health and hygiene that HDPE cannot grant.	
—For its bendability, peripheral parts are limited.	
—Laborious procedures at installation can be avoided.	

6 Operation Plan

(1) Team Formation

a) Inhouse Formation

For the operation in Vietnam, SRS' operation bases in other countries will be utilized as linked to its own “glocal” management scheme.

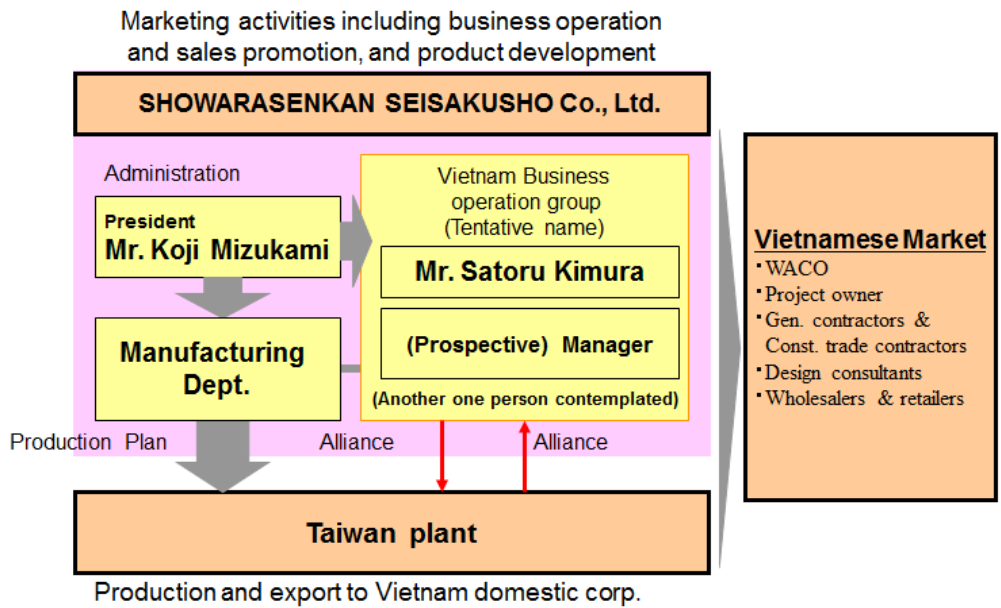


Fig. 9 Formation Before the Establishment of Vietnamese Production/Fabrication Plant (July to December 2013)

In the case of this formation before the establishment of Vietnamese production/fabrication plant, the business operation and sales promotion and other marketing activities and product development will be undertaken by the staff seconded in Japan on a business trip basis. The production of unfinished materials and their export to the Vietnam domestic corporation will be undertaken in Taiwan.

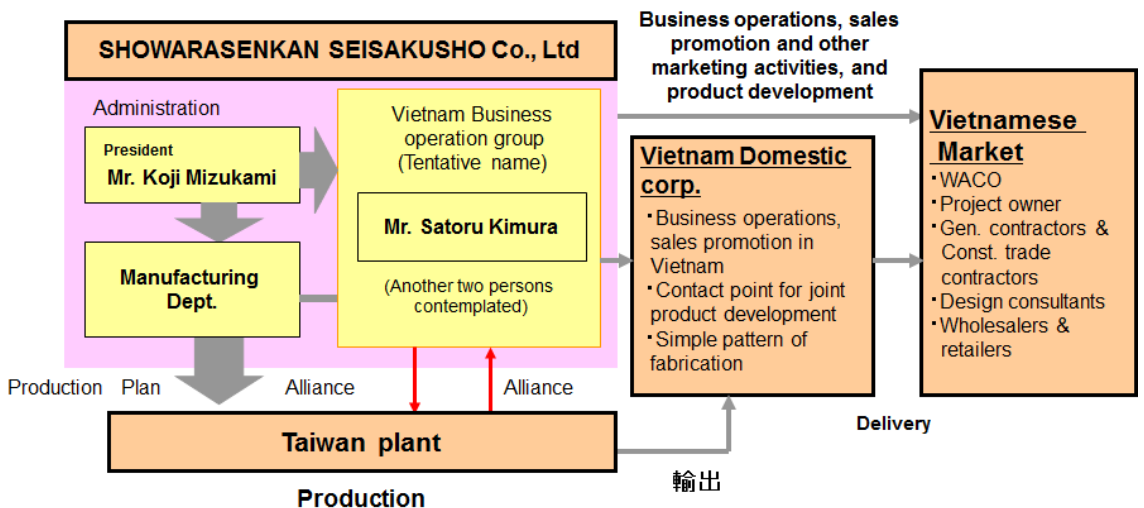


Fig. 10 Formation After the Establishment of Vietnam Production/Fabrication Plant (After January 2014)

After the production and fabrication plant is established in Vietnam (January 2014 and subsequent years), the business operations, sales promotion and other marketing activities, and product development will be undertaken jointly by the Japan home office and Vietnamese domestic corporation.

The Vietnamese domestic corporation will be engaged in the business operations and sales promotion activities in Vietnamese and have the function of contact point for joint product development and of simple pattern of fabrication. The unfinished products for the Object Products will be supplied by the SRS Taiwan plant in succession.

b) Form of Vietnam Domestic Corporation

At the initial stage, the Vietnamese domestic corporation will be established with 100% Japanese fund. As there is no uniform standard on the water supply pipe in Vietnam, WACO, project owners, developers, general contractors and construction trade contractors usually purchase the pipe depending on municipal guidelines or requests from project owners. Accordingly, the Object Products will be taken as the axis products in the deployment in the market, but non-standard products may be developed for sale jointly with the company which can serve as the partner of SRS in Vietnam. Why 100% self-owned domestic corporation is selected, instead of a joint venture corporation with a local company, is to evade a trouble with a local partner and to prevent the technological information on the Object Products from spreading outside.

c) Personnel Assignment, Deployment and Fostering

Starting in July 2013, Mr. Satoru Kimura of Showa Rasenkan Sesakusho Co., Ltd. and the candidate for the representative of the domestic corporation will form a business operation group (tentative name), initiating the operation activities in Vietnam. Starting in January 2014, the candidate will become the manager of the domestic corporation (simultaneously he will be assigned for separate bi-functions to administer the accounting and business promotion).

(2) Investment Plan and Funding Plan

a) Investment Plan

Starting in January 2014, the domestic corporation will reside in a rental plant in the locale. In the rental plant, the unfinished products will be imported from the SRS Taiwan plant and attachment parts are fabricated and packaged. The production of products in Vietnam will start when the total demand in Vietnam exceeds 20% of the yearly production volume at the Taiwan plant (equivalent to about 7,400 sections of the Object Products). The rent and production equipment will cost ¥4,062,008.

Table 13 Investment Plan

No.	Category	Supplier	Cost (¥)	Set	Installation (scheduled)	Operation start (scheduled)	Purpose and outline	Payment
1	Rental plant	Developer in Dong Nai Province	4,062,008	1	Jan. 2014	Jan. 2014	Assumed to be 300 m ² . Interior fitting & yearly rent listed	To be paid to the developer
2	Bulge forming die and mold	Jpn home office	80,000,000	1	-	-	Fabrication device	Paid in Jpn
3	Pressure leakage tester	Jpn home office	20,000,000	1	-	-	Tester of fabricated pipe	Paid in Jpn
4	Annealing furnace	Jpn home office	10,000,000	1	-	-	Used to polish stainless pipe	Paid in Jpn
5	Service system for the plant	Jpn home office	18,000,000	1	-	-	Electric, water and air supply	Paid in Jpn

b) Financing Plan (Fund Procurement Plan)

The following funds will be borrowed from the Japan home office.

- 2013: ¥20 million will be borrowed. (Out of this amount, ¥10 million will be used for the capital stock.)
- 2014: ¥10 million will be borrowed.
- 2015: ¥15 million will be borrowed.

The ¥2 million for interior fitting in Table 13 above will be included in the borrowed fund of ¥20 million.

Also, the plant will be located in the following industrial park.

[Location] Dong Nai Province

[Type] Rental plant (built for Japan-based small and medium companies)

[Site area] 300 m²

[Rent (assumed)] \$6.5/m² per month

The rent will also include charges for common benefits and auxiliary service items (one-stop services).

When the plant starts the production of the Object Products in V, the equipment items listed in Nos. 2 to 5 will be procured from Japan.

c) Strategy Reaching a Profitability Stage

As shown in b) above, the present operation will be implemented by borrowing the total ¥45 million from the Japan home office from 2013 to 2015. It is considered time-consuming for the domestic corporation to enter the already formulated market of water supply infrastructure in Vietnam, yielding profit.

Also, the Object Products is considered to derive advantages in lowering the water

leakage ratio in Vietnam too by virtue of their characteristics and in view of the achievement attained in other countries; however, as they are not prevalent in Vietnam, it is considered to take substantial time to succeed in the prevalence and sales promotion activities in the private sector.

Hence, as strategy to reach a profitable stage, the following tasks are considered key milestone criteria.

(Strategy to reach a profitable stage and relevant tasks for the project operation)

- During the 1st to 3rd years, the prevalence and sales promotion activities as well as sales record and business operation expenses will be analyzed. Based on the analysis, an improvement plan will be worked out and implemented.

The Japan home office will try to grasp the situation and study the continuity of the presence in Vietnam every month.

- Funding shall only be provided from the Japan home office, and if the domestic corporation's borrowing as deemed necessary in order to continue its business exceeds ¥35million, withdrawal procedures shall be started unless otherwise directed by the Japan home office.

(3) Numerical Plan

The numerical study has been made for three patterns: high case, middle case and low case. The following “assumed profit and loss statement,” “assumed balance sheet,” “assumed cash flow calculation,” and “assumed financial cash position table” are based on the middle case.

<Premises for Each Case>

High Case:

- A case, where any order is received from a general contractor, construction trade contractor or wholesaler in a period of January through June 2014 after entering the rental plant, is added. Based on the result of the interview study, it is assumed that a total of 370 pipe sections are ordered for hospitals and factories.
- It is assumed that in the 2nd and 3rd years, there are brisk sales in the private sector (general contractors and construction trade contractors).

Middle Case:

- The 1st year will be devoted to development of products jointly with a general contractor, construction trade contractor and water supply public corporation, without any sales of pipe.
- In January 2014, SRS' formal presence will be established at the rental plant.
- The sales number of pipe sections in 2nd and 3rd year is assumed for the private sector (general contractors and construction trade contractors).

Low Case:

- No sales are assumed for two year from July 2013 to June 2015.
- From July 2013 to June 2015, the Japan home office personnel will take charge of the development of localized specifications with developers, general contractors, construction trade contractors and WACOs, and the prevalence and sales promotion activities, all on a local trip basis.
- From July 2015, sales will be expected. Since the development of products and the prevalence and sales promotion will be undertaken by Japan home office personnel on a trip basis, local activities are limited. According to the activity load in the locale, a middle range of sales record is assumed between the 2nd year and 3rd year of the middle case.

<Conditions of Calculation>

The Object Products is assumed to be 6 m long and \$60 per pipe section (\$10 per pipe section).Following considerations were made in setting the price.

- Referring to the cost of products produced at Taiwan Plant, the price was set so as not to affect the profitability of the Plant.
- New installation cost of the SAWACO service pipe that is highly prioritized in WACO. (approx. \$100 as the cost for a water meter and 20 mm in dia., 4 m long service pipe installation.)
...Details are as follows: water meter-related cost for \$20 to \$30 and peripheral parts and equipment cost for another \$20 to \$30, which totals in \$40 to \$60.
Thus, per meter price of the 4m pipe itself is \$10 to \$15.
- Based on \$1=¥88.12

a) Assumed Loss and Profit Statement

Assumed loss and profit statement for three years from the 1st year (July 2013 through June 2014) to 3rd year (July 2015 through June 2016)

<Outline>

From the 1st year to 3rd year, the operating profit will be in continual deficit, the deficit will increase year by year.

The accumulated operating profit/loss will be ¥14,332,943.

Table 14 Assumed Profit and Loss Statement

Unit : Japanese yen	1st year (July 2013 to June 2014)	2nd year (July 2014 to June 2015)	3rd year (July 2015 to June 2016)
Sales	0	12,530,664	20,778,696
Sales costs	0	12,041,326	19,753,238
Gross profits	0	489,338	1,025,458

Selling costs(*)	2,263,666	5,926,661	7,193,095
Operating profit	-2,263,666	-5,437,323	-6,920,137
Interest payment	215,000	430,000	752,500
Ordinary profit	-2,478,672	-5,867,323	-6,920,137
Current income after tax	-2,478,672	-5,867,323	-6,920,137

(*) Details of selling costs

The following two items, Overhead and Rent, comprise large portions of overall selling costs.

Unit : Japanese yen	1st year (July 2013 to June 2014)	2nd year (July 2014 to June 2015)	3rd year (July 2015 to June 2016)
Overhead	795,996	2,048,196	2,653,416
Rent	1,031,004	2,062,008	2,062,008
Other expenses	436,666	1,816,457	2,477,671

<Premises>

1. From July 2013 to June 2014, SRS will be engaged in the product development jointly with developers, general contractors and construction trade contractors. Also, it will be engaged in the product development for localized specifications jointly with WACO.
2. A period from July 2013 to December 2013 will be considered the prevalence and sales promotion period for the Object Products by the Japan home office personnel on a trip basis. If any sales occurs in this period, they will be listed in the Japan home office transaction, as the domestic corporation will have not obtained any license and therefore no sales will not be able to be listed in that corporation.
3. After the corporation has obtained the production license in January 2014, the domestic corporation's manager will conduct the prevalence and sales promotion for the Object Products together with the Japan home office personnel coming on a trip basis; however, it is assumed that no sales will occur.
4. Since sales volume in Vietnam is small at the initial stage of the production operation, as small a floor area as 300 m² at the rental plant will suffice for the purpose to lower the initial investment.
5. The material will be procured from the SRS Taiwan plant.

<Conditions of Calculation>

1. Until the sales volume in Vietnam will reach a substantial level (yearly about 7,400 pipe sections equal to 20% of the yearly total production at the SRS Taiwan plant), the procurement from the Taiwan plant will be continued. The procurement costs are calculated at 85% of the selling product.

b) Assumed Balance Sheet

Assumed balance sheet for the three years from the 1st year (July 2013 to June 2014) to the 3rd year (July 2015 to June 2016) is as shown in Table 15.

Table 15 Assumed Balance Sheet

unit: Japanese yen

1st year	(July 2013 to June 2014)		
[Assets]		[Liabilities]	
Current Assets	15,580,000	Current Liabilities	0
Fixed Assets	1,933,334	Fixed Liabilities	10,000,000
		[Capital]	
		Capital Stock	10,000,000
		Surplus	-2,478,666
Total Assets	17,521,334	Total Liabilities & Assets	17,521,334

2nd year	(July 2014 to June 2015)		
[Assets]		[Liabilities]	
Current Assets	19,854,021	Current Liabilities	0
Fixed Assets	1,799,990	Fixed Liabilities	20,000,000
		[Capital]	
		Capital Stock	10,000,000
		Surplus	-8,345,989
Total Assets	21,654,011	Total Liabilities & Assets	21,654,011

3rd year	(July 2015 to June 2016)		
[Assets]		[Liabilities]	
Current Assets	28,067,204	Current Liabilities	0
Fixed Assets	1,666,670	Fixed Liabilities	35,000,000
		[Capital]	
		Capital Stock	10,000,000
		Surplus	-15,266,126
Total Assets	29,733,874	Total Liabilities & Assets	29,733,874

<Premises>

- Japanese ¥20 million, ¥10 million and ¥15 million are to be borrowed from the Japan home office in the 1st year, 2nd year and 3rd year respectively, provided that out of ¥20 million, ¥10 million is to be funded in the capital stock.

<Conditions of Calculation>

- The fund from the Japan home office will be borrowed at interest of the long term prime rate +1%.

c) Assumed Cash Flow Calculation

The cash flow calculation is attached hereto from the 1st year (July 2013 to June 2014) to 3rd year (July 2015 to June 2016) is as shown in Table 16.

Table 16 Assumed Cash Flow

Unit : Japanese yen	1st year	2nd year	3rd year
	(July 2013 to June 2014)	(July 2014 to June 2015)	(July 2015 to June 2016)
I. Cash flow from business operation activities	-2,412,000	-12,665,630	-7,954,788
II. Cash flow from investment activities	-2,000,000	0	0
III. Cash flow from financial activities	10,000,000	10,000,000	15,000,000
V. Increase & decrease of cash & cash equivalents	5,588,000	-2,665,630	8,364,793
VI. Initial balance of cash & cash equivalents	10,000,000	15,588,000	12,922,370
VII. Ending balance of cash & cash equivalents	15,588,000	12,922,370	21,287,163

d) Assumed Financial Cash Position Table

The assumed financial cash position table for the 1st year (July 2013 through June 2014) through the 3rd year (July 2015 through June 2016).

7 Risk Factors

(1) Risks in Strategy

① Changes in Market Trend

Currently, the corrugated stainless steel is not prevalent in Vietnam.

In proceeding to the prevalence and sales promotion activities, the following two risks due to changes in the market trends in Vietnam are taken into account.

- a) A risk of a competing product having the same quality, function and characteristics as the Object Products emerging in Vietnam.
- b) A risk of target needs changing in the target fields of hospitals, food and beverage plants, chemical substance plants, pharmaceutical plants, office buildings, high-class villas, hotels, etc.

Though we will try to promptly expand the share of the Object Products in Vietnam, in the event that such a competing product as a) above emerges, we will take the risk abating measures by surveying and analyzing the characteristics, price and appraisal of customers of the competing products, including working out and carrying on proper countermeasures

of new product development, price changes, giving new added values and others to keep the advantage of the Object Products in V.

As for the changes in the target needs in b) above, we will respond with the new product development, new policy in business operation and sales promotion, while making exchange of information with general contractors, developers and design consultants who are the target customers and conducting by ourselves the market survey.

(2) Risks in Business Operation

① Increase in Labor Costs

In Vietnam, minimum wage rating was revised twice in 2011, so that the wage increased by 60% in one year. The minimum wage was further revised in January 2013. To provide against almost yearly increase in wage through recent years, an expectable increase in the labor costs will be budgeted. Also, to provide against an excessive rise in the labor costs, the in-house operation rules and evaluation system will be established in an effective way.

② Import Duties

Though it is the fundamental route to import from the SRS Taiwan plant, such procurement method may be worth considering as where the import is routed via Singapore as a party to ASEAN Free Trade Convention so as to lower the import duty. However, there may be a chance in which maximum duty is imposed in a specific item group when the custom office supervises the application of custom duties in the fifth year after the investment; therefore, we have to prepare, from an early stage, the numerical plan for which we keep it in mind that maximum custom duty of 10% is applicable.

(3) Financial Risks

① Risks in Foreign Exchange

To cope with risks in foreign exchange, the import of materials, sales (recovery of payment) and payment of personnel expenses, all in K after January 2014 will be made in USD or Vietnamese Dong to be least subjected to fluctuation in foreign exchange rates.

② Borrowing Risks

As a principle, borrowing of funds will be made through the Japan home office. The risks in remittance of borrowed money will be hedged with the consultation with and corresponding safety measures of the remittance bank after the home office has consulted with the domestic corporation.

(4) Risks in Compliance

① Legal Restrictions

The legal restrictions on water supply services in Vietnam are imposed by the Ministry of Construction in Vietnamese Government. In cities, construction departments of the

municipalities effect the observation and administration according to the Ministry’s restrictions. We will observe and abide by the present legal restrictions and new requirements put into effect through new laws and regulations including circulars to be issued by the central government, the Ministry of Construction and the municipalities. In the event that the domestic corporation finds it difficult to follow new compulsory requirements, it will promptly consult with the Japan home office to find an alternative solution.

② Environmental Risks

We will observe and abide by the laws and regulations on environmental matter in V. By giving attention to the restrictive movements in the Ministry of Natural Resources, the Ministry of Health as well as People’s Committees and departments concerned with the environmental matter, we will make every effort not to violate any restriction during and after the sale. In the development of new products with the partner, we will cope with the environmental restrictions in Vietnam.

In the event that it is found difficult for us to properly cope with any restrictive movements in product development and sales promotion or that we are concerned about infringement of the restrictions, we will instantaneously suspend our activities on the product development, import or sales promotion and discuss the matter with the Japan home office so that those activities would not impose unfavorable influence to environmental circle in Vietnam.

8 Milestone Schedule for Production

Table 17 Milestone Schedule for Production

Milestone for production	2013												2014												2015											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1. Joint development of products	[Red]																																			
2. Setting up and operation of the plant	[White]																																			
Selection of the site (Rental plant)	[White]																																			
Reservation of the site (Rental plant)	[White]																																			
Application of license for the plant	[White]																																			
Remittance of capital fund	[White]																																			
Application of registration of the domestic corporation	[White]																																			
Purchase/installation of production equipment	[White]																																			
Fixing of plant interior	[White]																																			
3. Business operation and sale	[Red]																																			

Key milestones in red. Subordinate milestones in yellow

(1) Joint Development of Products

Joint effort will be directed to localize the product specifications for the stainless steel pipe, together with WACO (SWACO, HAWACO, local private enterprises (local or alien-based general contractors, construction trade contractors, design consultants, etc.). In this period, the personnel of the Japan SRS home office (i.e., Japanese employees or Vietnamese employee) will visit, to do R&D work, the operation bases of WACO and local or alien-based enterprises located in Vietnam.

Also, where SRS wins a sales contract of the Object Products, the Japan home office will undertake the contract execution and delivery of the products, as the registration of the domestic corporation has not been formalized.

(2) Setting up of the Plant

In order to start the production and fabrication of the products in a small scale, a rental plant which permits small production operation will be selected and occupied. In addition to the production license, a wholesale license will be obtained.

(3) Import, Business Operation and Sale

Since the domestic corporation has started the operation at the rental plant as a domestic entity (after the acquisition of the production license and the wholesale license) by January 2014, it will engaged in the import of unfinished products to and business operation and sales promotion in Vietnam.

9 Economic Effects Derived from the Present Production

Through the implementation of the present production project, the corrugated stainless steel pipes are incorporated in indoor water supply lines at each dwelling in the precincts of SAWACO and HAWACO authorities to refine the pipelines, eventually improve the quality of water by virtue of the reduced water leakage ratio. Then, it is expected that citizens in these precincts can drink “potable water directly from a faucet,” thus improving the living standard of the citizens. Further, this improvement would be enlarged to other cities to lower the leakage ratios there on a city by city basis.

Also, the water service improvement will contribute to the advance in economic growth. As the Object Products destined as the axis products exert the durability intrinsic to stainless steel and flexibility of bending and being bent, they will contribute to the hygiene surroundings where quality water is available to enterprises and trade people, in particular in health and hygiene fields, trade circles strict about the quality and safety of water, a field preferring stainless steel materials to plastic products and trade seeking added values.

Specifically, the Object Products will provide people with quality water in hospitals, plants (food, beverage, chemical substance and pharmaceutical products), office buildings, high-class

villas, hotels, etc. By virtue of the quality water, the economic effects will be expected by the advance in medical service in hospitals, the productivity and improved quality in plans, and added values in office buildings, high-class hotels and villas.