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2018 UPA Sustainability Report



About this Report

Characteristics of this report

Ulsan Port Authority compiles our economic, environmental, and social performances derived in the course of management activities in a disclosure report to be shared and communicated with interested parties. This report is issued every other year. This report is the fourth report, following ‘2015 Ulsan Port Authority Sustainable Management report’ published in 2016. Up to now, Ulsan Port Authority marked the year covered by the contents of the report within the title of the report. However, from this report, we marked the year of publishing within the title of the report to emphasize that this is the most recently published report. Furthermore, the title of the report was changed from ‘Sustainable Management Report’ to ‘Corporate Social Responsibility Management Report’, further cementing our commitment to the pursuit of social value and fulfillment of responsibility.

Report preparation standard

This report is prepared according to the GRI Standard which is the reporting standard for Sustainable Management, and is consistent with the Core Option. In addition, the items of ISO 26000 which is the international standard for social responsibility has been reflected as well.

Reporting period, scope and boundary

This report is prepared based on the sustainable management activity data from Jan. 2016 to Dec. 2017 by the Ulsan Port Authority, and for performances that are deemed as significantly meaningful, we included the contents within the 1st half of 2018 as well. In case of some quantitative performances, we disclosed the data covering 3 years so that the trend may be traced. We determined the report boundary by identifying the influence on the overall value chain by significant issue.

Changes from previous year

Some performances and information without any change from previous report, were restated to facilitate understanding, and in comparison with the report period for already issued reports, there were no changes in scope, and boundary of the report. Furthermore, no significant changes occurred in relation to the size, structure, ownership, and supply chain of the organization that occurred during the reporting period .

Verification of report

Contents of this report took the final confirmation procedure by an internal staff in charge, and was verified by the Korean Standards Association to enhance the accuracy and confidence of the contents. For detailed verification opinion, please refer to the appendix.

Additional information

This report is published in Korean and English, and can be downloaded from Ulsan Port Authority’s website. For any opinion on this report, please make an inquiry to the contact point below.

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We will become
responsible Ulsan Port Authority
through realization
of social values
”



CEO Message

Dear respected interested parties,

Thank you for your attention and support to Ulsan port and UPA, and I am very pleased to publish the fourth Social Responsibility Management Report containing the activities and performances in economic, social, and environment area of the Ulsan Port Authority.

First of all, Ulsan Port Authority is the institution that manages and operates the Ulsan port. Since its incorporation in July 2007, UPA is endeavoring to foster Ulsan port as a competitive central shipping and logistics base, and to contribute to the development of national economy with the utmost efforts.

Ulsan port, since its opening in 1963, has faithfully played its role as the largest industry supporting port in the country, and accordingly Ulsan port has grown into a port with an annual transportation volume of 200 million tons, and cemented its position as Korea's No.1 port in liquid logistics worthy of its name. Furthermore, UPA will move forward as an advanced port enterprise leading the 4th industrial revolution by utilizing big data to innovate port services as well as creating the Ulsan new port hinterland, and carrying out the Northeast Asian oil hub project according to plan.

Now, Ulsan port is preparing for its second leap as a competitive eco smart port pursuing social values. We will not only provide the best port service, but also take the lead to create a safe and clean green port for the benefit of future generations. Moreover, we will do our best to be reborn as Korea's representative public port enterprise pursuing social values through coexisting and growing together with the local community.

We ask for your undivided attention and support for the development of Ulsan port and for the sustainable growth of Ulsan Port Authority that will lead the new era of Ulsan port in the future.

Thank you.

August, 2018

Ulsan Port Authority President **Go Sang-hwan**

SUSTAINABILITY HIGHLIGHTS

Ulsan port, center of industrial capital “Largest transportation volume achieved since the opening of the port”

Ulsan port, Korea's biggest industry supporting port processed 223.5 million tons of cargoes in 2017, achieving the largest transportation volume since the opening of the port. The transportation volume of Ulsan port at the time of its opening in 1963 was just one million tons, but achieved the remarkable performance of increase in transportation volume by more than 200 times within 54 years since its opening. Among the cargoes, liquid cargoes such as crude oil and petroleum products, and petrochemical products occupied about 82% of transportation volume, processing 166.65 million tons, ranked 1st domestically and 3rd globally. Our strategic marketing based on analysis of transportation volume by cargo category such as target setting and providing proper incentive worked well in achieving these performances. Especially liquid cargoes, containers and Ro-Ro cargoes led the overall transportation volume. As such, the port firmly established its position as an unrivaled liquid cargo focused port not only in the country but also in Northeast Asia



Northeast Asian marine safety focused port realized “2018 Korean Safety Training for Disaster Response received Presidential Citation”

Ulsan port processes 166 million tons of hazardous cargoes annually, and is the domestic port processing the largest volume of hazardous cargoes. Furthermore, due to narrow water zone, congested port traffic and location of numerous ports for hazardous items, the potential for a large scale accident occurrence always resides due to the geographical conditions of the port. Due to this, Ulsan Port Authority regards port safety as the starting point for the competitive edge of Ulsan port, and engages in various safety management activities. The representative examples are comprised of operation of 'Ulsan port marine safety belt' under participation by 13 Ulsan port related institutions and industry associations, 'Ulsan port 3J 5S campaign' initiated for the first time among domestic ports by UPA, and disaster response website and operation of Ulsan port customized local marine climate information service, etc. The performance of the introduction and operation of Ulsan port's own safety service was recognized, and we received the prime minister citation at '2017 Safety Culture Grand Awards' held by the Ministry of Administration and Safety. Furthermore, superior safety management performances were widely recognized such as being nominated as an excellent institution in '2018 Korean Safety Training for Disaster Response' and receiving the Presidential citation.

“Won 1st prize in 2017 Korea Good Enterprise, port operation area through port service innovation”

In 2017, Ulsan Port Authority enhanced its status as the central port for liquid logistics through opening Ulsan new port Yongyeon pier and North seawall T/S pier, and improved pier productivity such as lower demurrage ratio through improvement of facilities per pier. Furthermore, UPA enhanced Ulsan port's competitive edge by expanding and improving storage yard such as incorporating idle land near Yeompo pier into a storage yard and establishing a bonded area in 6th pier storage yard. Like this, UPA relentlessly endeavored to improve port service and by doing so, received the grand prize in the port logistics area of 'The 5th Korea Supreme Management Grand Award selected by management scholars sponsored by Korean Academic society of business administration. Furthermore, UPA achieved the result of winning 1st prize in the port operation area of the 2017 Korea Good Enterprise sponsored by the Korean Standards Association. We will not stop here but further enhance competitiveness of Ulsan port and UPA through port service innovation at another level.



Institutional social value realized “low carbon green port established for future generations”

Gases emitted from ships take up more than 60% of total carbon emissions from Ulsan port, and is the main culprit in contaminating the atmospheric environment. Ulsan Port Authority re-established "Ulsan port mid to long term green port promotion strategy" to make Ulsan port an eco-friendly green port, and operates the 'Environment Ship Index' incentive system where we provide incentives to shippers who endeavor to reduce the contaminants emitted from ships. Currently, among domestic ports, the ports operating eco-friendly system to grant incentives to entering/exiting vessels are two ports: Ulsan port and Busan port. UPA leads the domestic eco-friendly port area, and carries out installation of IoT based fine dust measurement devices at 6 major piers and conducts real time monitoring. Moreover, for generation and facility expansion of new & renewable energy within the port, UPA is pouring efforts such as signing collaboration agreement on photovoltaic development project investment, and laying the groundwork to establish alternative maritime power supply facility (AMP). Through these efforts, we will actively contribute our best efforts to create the best atmospheric environment such as reducing air contaminants (PM10 etc) and fine dust in Ulsan port, exercising the best efforts to move forward towards becoming a low carbon green port.

Public institution trusted by the people with transparent management “Selected as superior integrity institution in 2017”

Ulsan Port Authority was selected as superior integrity institution ranked 1st among related public entities (v type) in the '2017 Public institution integrity level measurement' sponsored by the Anti-Corruption & Civil Rights Commission. This assessment evaluates internal and external integrity level of 573 institutions comprised of central administrative institutions, municipalities, local Education Offices, public service-related organizations. It was a result achieved as the operation performances were recognized which included Ulsan port clean belt integrity education, self-led integrity learning, vitalization of whistleblowing and corruption reporting, unfair behavior reporting system, etc. Furthermore, UPA's excellence of ethics and integrity management has been recognized externally, receiving 'Contribution to private-public cooperation in corruption prevention commendation' by the Minister of Public Safety and Security in January 2017, and 'Superior institution in public duty management' commendation by the Minister of Maritime Affairs and Fisheries in December 2017. Ulsan Port Authority will continue to grow into a trustful public institution that takes the lead in ethical management based on anti-corruption and sense of uprightness.



Safe and reliable port operation information service provided “2017 Superior institution in security duty citation received from Minister of Maritime Affairs and Fisheries”

The Ulsan Port Authority is committed to protecting port operations information from ever-intelligent and advanced cyber threats. Especially in 2017, UPA achieved zero damage by operating ransomware response team within Ulsan port related affiliates. UPA installed and is operating sophisticated information security system and implements security monitoring to prevent any external cyber-attack. Furthermore, we prevent any leak of information at the source by operating various security policies comprised of physical USB lock, document encryption(DRM), and network separation, etc. UPA operates monthly 'cyber security diagnosis week' to check vulnerable points in security and always checks the risk factors of personal information leakage accident. In order to respond to cyber threats such as DDoS attacks, ransomware infection which are external cyber threats, UPA has secured its own cyber crisis response capacity by conducting regular response training against cyber crisis and mail hacking. As a result of these information security activities and efforts, UPA received the citation as a superior institution in security duty from the Minister of Maritime Affairs and Fisheries in 2017.

Superior social responsibility management recognized “Korea Sustainability index (KSI) marine & fishery sector, 1st prize for 3 consecutive years”

Ulsan Port Authority takes the lead in practicing community contribution and sharing to get along with various stakeholders, taking responsibility for social issues. As a representative example, UPA formed "Ulsan port community coexistence council" composed of resident representatives from four nearby towns around Ulsan port for continued communication with the local community. Through this council, UPA is engaged in social contribution activities customized to the local community such as support for watching PyeongChang Winter Olympics and Palalympics, monetary sponsorship for the local children center upon the holiday season and support for watching opera performances for the culturally disadvantaged groups etc. Superior performances of these social responsibility management were highly recognized, and UPA was selected for 1st prize for 3 consecutive years in the public institution under the Ministry of Maritime Affairs and Fisheries sector of '2017 Korea Sustainability index measurement' sponsored by the Korean Standards Association. Additionally, the superior performances of these social responsibility management were recognized abroad such as winning the Gold prize in the sustainable management report area at the '2015/2016 Vision Awards' sponsored by U.S. LACP.



Leading win-win management with the local community “through fostering and supporting the marine industry”

Ulsan Port Authority leads the win-win management for local communities through promoting and supporting the marine industry. As part of the win-win management project, UPA provides support for the "Whale Festival," a local tourism content held in Jangsaengpo Whale Culture Special District, and opens up the UPA building in addition to providing financial support every year to assist local tourists. Furthermore, UPA continuously participate in the promotion of the future talent in the marine and port field by expanding the beneficiaries of the marine & port intensive experience and career exploration program to local schools. As a result, the number of recipients of the annual benefit program is on the rise to 1,202 in 2015, 2,069 in 2016, and 2,460 in 2017. In 2017, UPA received certification as 'education donation career experience institution' from the Ministry of education. In addition to that, we support human resources development in the marine and port sector and create social values shared with the local community including supporting the Sea Explorers, sponsoring education costs for human resources in the port area of Korea Port Training Institute, and supporting UNIST energy manpower development project, etc.

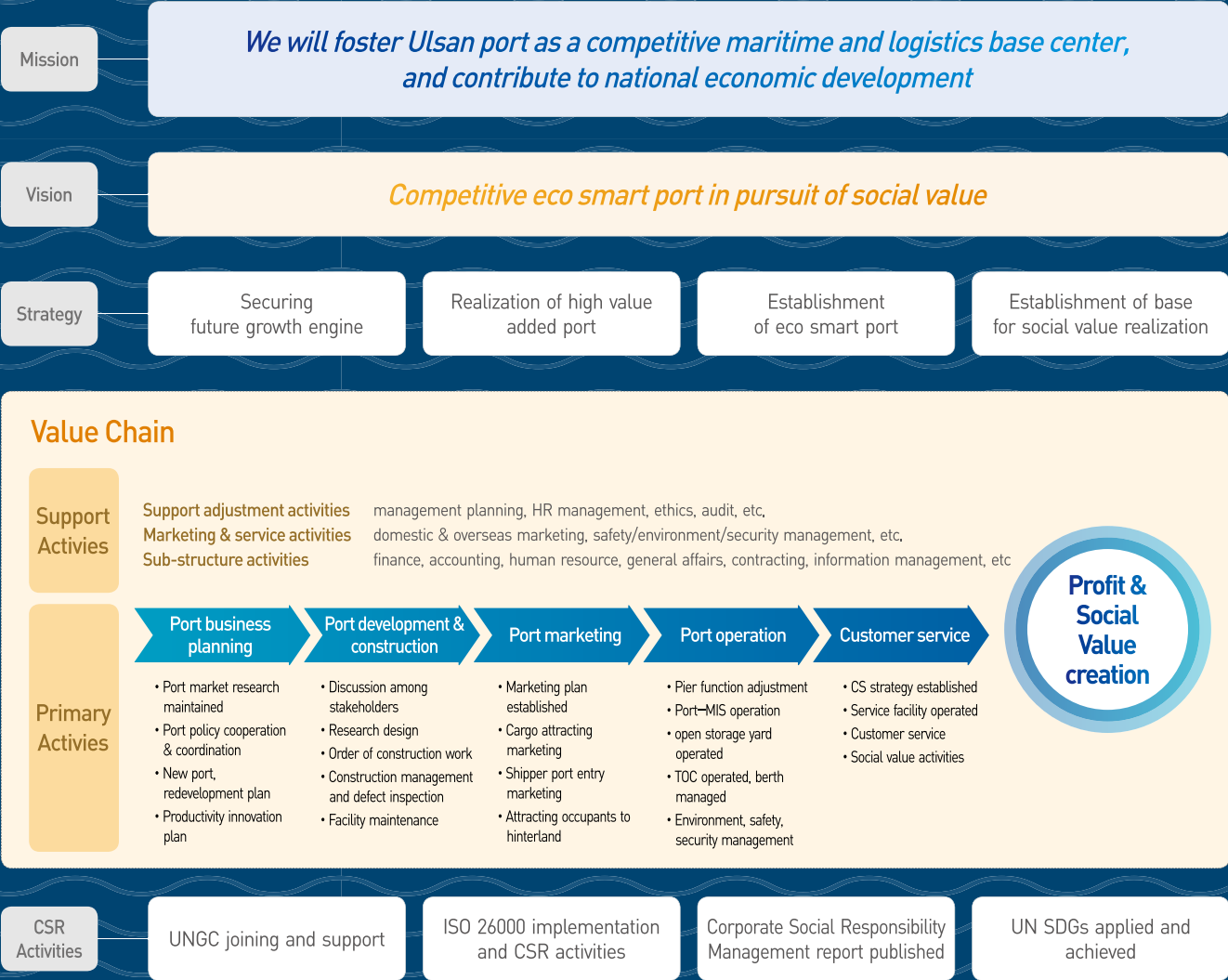
UPA Value Creation Process

Ulsan Port Authority, having perceived the external environmental changes surrounding the company, is engaging in Corporate Social Responsibility Management activities through managing crisis and opportunity. The core activities of Ulsan Port Authority are categorized as port development, port construction, port facility management, port facility operation, logistics service, etc. Through these core business activities and CSR activities, we have created revenue and public values. Furthermore, the economic, environmental, and social value thus created are shared by the overall local community including interested parties.

Changes in external environmental surrounding Ulsan Port Authority



Sustainability Management



Value Creation*



* Prepared based on 2017 data

UPA Overview

Since its opening in 1963, Ulsan Port has grown into a port with an annual trade volume of about 200 million tons, and is firmly established as the No. 1 port for liquid logistics in Korea.



Introduction to Ulsan Port Authority

major function and role

-  Implementation of construction work related to new installation, reconstruction, maintenance & dredge of port facility, and management & operation of port
-  Business entrusted from state or municipality related to port facility work, management, and operation
-  Study, research, technology development and fostering manpower for port management & operation
-  Construction and operation of neighborhood and welfare business for convenience of port users
-  Business entrusted from state or municipality
-  Construction and management & operation of overseas port

Corporation overview

Ulsan Port Authority is the public institution launched to enhance the efficiency in specialized performances of the business of development, management, and operation of Ulsan Port, and is endeavoring to contribute to national economic development by fostering Ulsan port as a competitive maritime & logistics center base. The corporation is engaged in the business of development, management, and operation of Ulsan port port facility; construction, management and operation of logistics terminal and port hinterland; study & research and development on Ulsan Port and fostering manpower; direct execution, capital contribution or funding for Ulsan port related incidental business, etc.

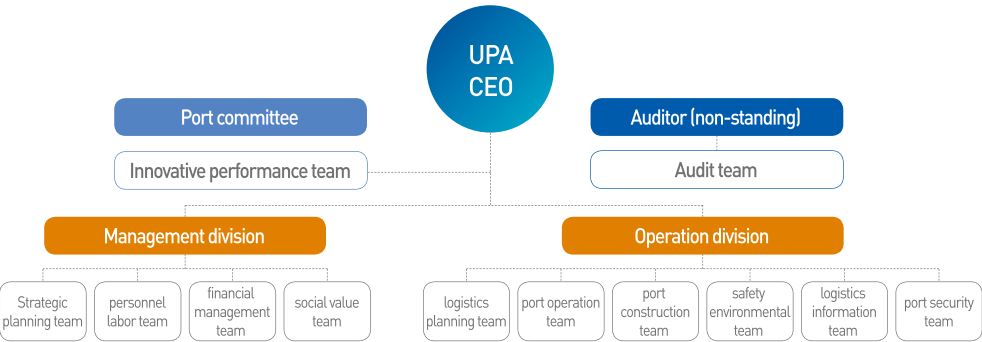
Company name	Ulsan Port Authority	Institution type	public enterprise type II
Representative	Go Sang-hwan	Competent organization	Ministry of Maritime Affairs and Fisheries
Date of incorporation	July 5, 2007	Sales	82,812 mil. Won
basis of establishment	Port Authority Act Article 4 para. 2 (Law #06918) Port Authority Act enforcement decree Article 1-2 (Presidential Decree #18147)	Net profit	30,266 mil. Won
Location of headquarters	Ulsan port Marine Center, 271 Jangsaengpogorae-ro, Nam-gu, Ulsan city	No of executive/employees	110 people

as of Jun 2018

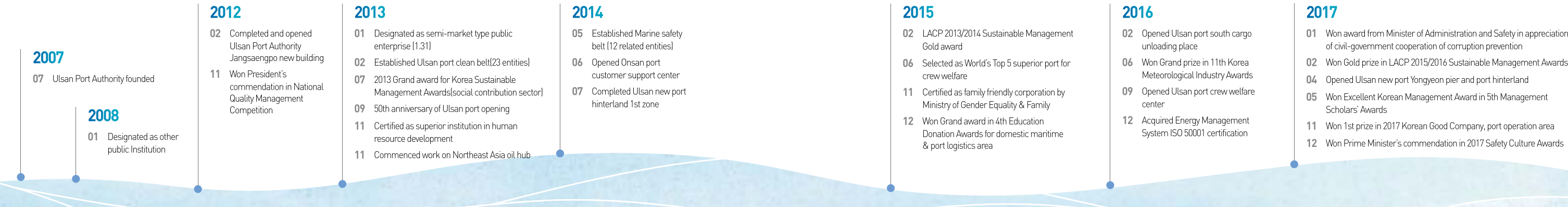
Organization

The organization of Ulsan Port Authority is comprised of 2 divisions and 12 teams. The management division is comprised of 4 departments: Strategic planning team, personnel labor team, financial management team, and social value team, and Operation division is comprised of 6 teams: logistics planning team, port operation team, port construction teams, safety environmental team, logistics information team, and port security team. There is innovative performance team directly under the CEO, and audit team directly under the auditor.

as of end of June, 2018



UPA History

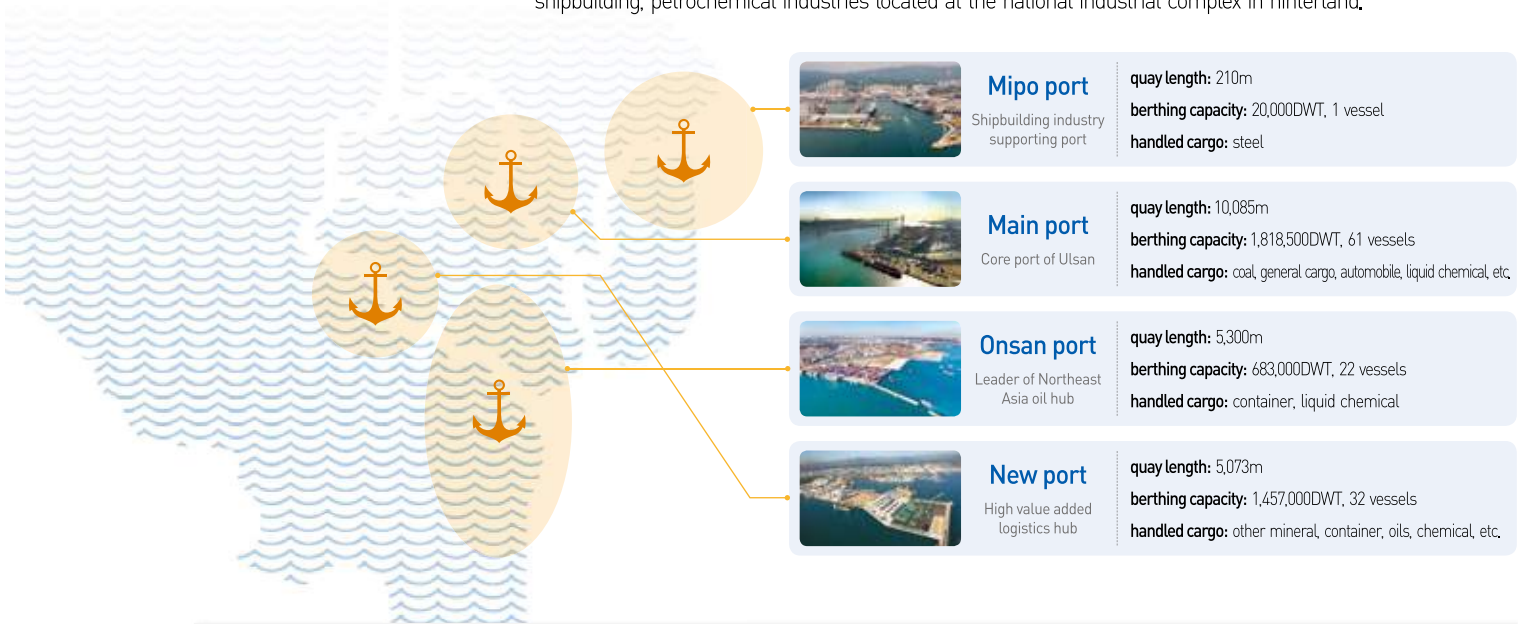


Major business

Ulsan Port Authority is engaged in the construction, management and operation of Ulsan port comprised of Ulsan main port, Onsan port, Mipo port, and Ulsan new port; construction, management and operation of port hinterland; direct execution and capital contribution to port related incidental business as its main business.

Characteristics of Ulsan port

Ulsan port is the naturally gifted port with little difference between the rise and fall of the tide(approx. 60m) and deep waters which maintain a fixed temperature. It is a hub port for liquid logistics supporting automobile, shipbuilding, petrochemical industries located at the national industrial complex in hinterland.

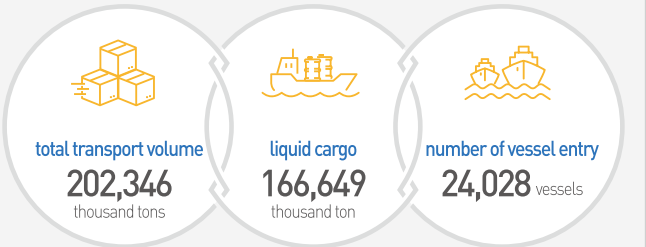


Port facility



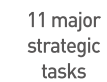
* Port facility data is based on July end, 2018.

2017 Ulsan port operation status



Mid to long term Management Strategy

Vision and Management Strategy structure

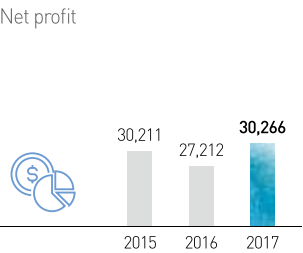
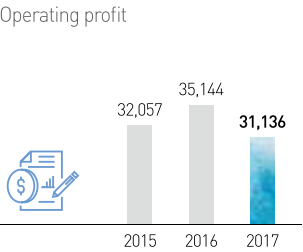
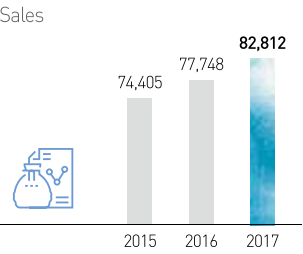


II PA Overview

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Major management performance

Major economic performance



Economic performance

Economic performance

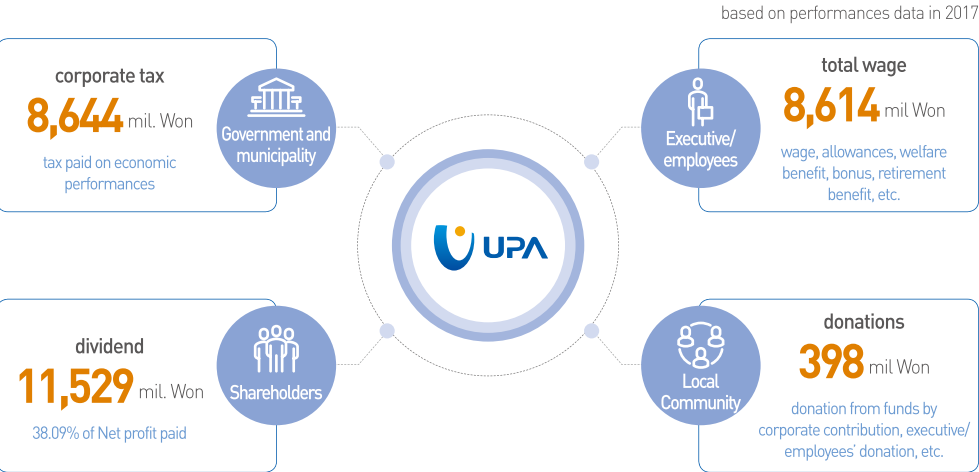
Ulsan Port Authority recorded sales of 82,812 mil Won in 2017 thanks to the newly created revenue source from new port hinterland completion and increase in port facility user fees based on the effort to expand transport volume, showing 6,51% increase from previous year. With regard to the hinterland business that we have been preparing steadily, we explored niche demands by improving systems as well as diversifying marketing channels for attracting regional industry specialized high value added enterprises. The occupancy ratio that remained at only 38,6% in 2016 improved to 93,5% in 2017, and standard occupancy ratio of 100% was achieved in March 2018. In 2017, Ulsan Port Authority realized debt-free management by financing from internal revenues. Since the incorporation in 2007 until the present day in 2018, we have recorded profitable management for 11 consecutive years. By maximized use of assets and enhanced financial health due to timely sale of idle properties, we recorded a debt ratio of 23,5%, and an operating profit ratio of 7,6% in 2017.

Major Management indicator

	item	unit	2015	2016	2017
Stability	Current ratio	%	206	211	342
	Equity ratio	%	81.87	79.82	80.96
	Debt ratio	%	22.15	25.28	23.52
	Debt dependency ratio	%	12.78	15.97	15.68
Profitability	Return on total asset ratio(ROA)	%	4.06	3.48	3.80
	Return on equity ratio(ROE)	%	4.96	4.36	4.69
	Sales to operating profit ratio	%	43.08	45.20	37.60
	Sales to net profit ratio	%	40.60	35.00	36.55
Activity	Total revenue to expenditure ratio	%	158.52	146.31	149.85
	Total asset turnover ratio	%	10.01	9.93	10.38
	Receivable turnover ratio	—	27.72	49.44	38.91
	Non current asset turnover ratio	%	10.90	10.59	11.23
Growth	Equity turnover ratio	%	12.23	12.44	12.83
	Sales growth ratio	%	3.81	4.49	6.51
	Total asset growth ratio	%	12.22	5.30	1.89

Distribution of economic performances

Ulsan Port Authority shares the economic performances with interested parties comprised of government and public Institution, shareholders, executive/employees, local community, etc.

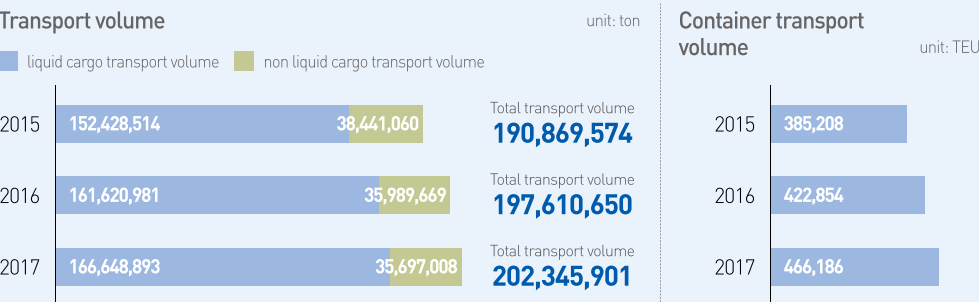
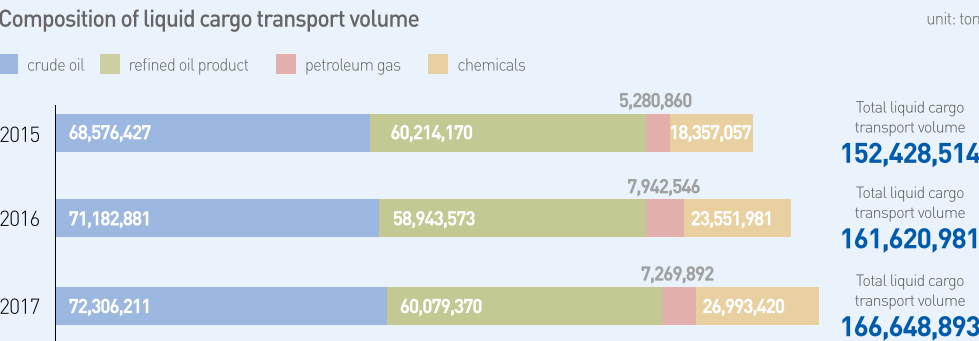


Operation performance

Ulsan port, as global scale refineries and multinational chemical companies are concentrated here, has an advantage in processing liquid cargoes such as crude oil, refined oil products, chemical industrial products, etc. Ulsan port is processing the world's largest liquid cargo transport volume, and is ranked third in the world based on a single port after Rotterdam and Singapore. Total transportation volume which is the core performance indicator determining the management performance and the status of Ulsan Port Authority, was recorded at around 223,5 million tons in 2017, which is the highest figure since the port's opening. The total transport volume is keeping annual average growth trend of 1.97% during the period of 2015 to 2017. Especially, when oil hub business comes on track in consecutive order after the full sale of zone 1 to 3 in hinterland, Ulsan port is anticipated to achieve the 2022 target performance of a total transport volume amounting to 230 million tons with ease. Liquid cargo occupies 80% or more out of the total transport volume, and is directly linked to Ulsan port's growth. Ulsan Port Authority is focusing on demand creation by port infrastructure establishment and marketing. In 2017, liquid cargo transport volume recorded 166,650 thousand tons, showing continuous growth.

Liquid cargo is mainly comprised of crude oil, oil refined product, petroleum gas and chemicals. Crude oil, with the largest percentage, recorded 43,4% of all Korean standard liquid cargo in 2017. Especially as crude oil functions as the source of Korea's economic activities, we actively support the expansion of harbor facility and storage tanks by related enterprises, and operate the port efficiently to provide smooth unloading work. Refined oil product is one of the key cargoes of Ulsan Port together with crude oil, and its transport volume is on the growing trend, due to larger demand thanks to the global economic recovery. In case of petroleum gas, current percentage remains at only 4,4%(as of 2017) out of all liquid cargoes, but is attracting attention due to its explosive growth rate of an average of 11,2% per year from 2015 to 2017, thanks to the growth of related industries and facilities expansion, etc. Furthermore, the transport volume of chemicals is steadily increasing due to larger demand triggered by global economic recovery and facility expansion by refineries emphasizing non refinery business, showing a growth rate of 13,7% during 2015~2017.

Meanwhile, the container transport volume also achieved a historical record, processing 466,186TEU which is a 10,2% increase from the previous year, thanks to diversified sea route services.



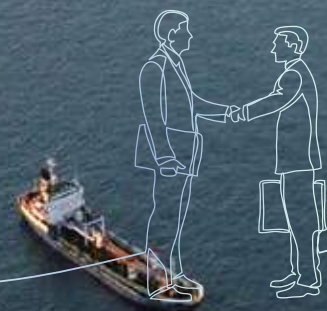
UPA realizing social values

UPA will be reborn as a leading port-based public corporation which builds a partnership with local communities to become a growing public corporation and carries out various social contribution activities, such as promoting local communities and pursuing social values.

Realization of high value added Ulsan port

Implementation of institution's social responsibility

Expanding transparent & fair corporate culture



Citizens' participation

Definition of interested parties and participation system

There are numerous interested parties around Ulsan Port Authority, comprised of not only the internal stakeholders composed of executive/employees and labor union, but also diverse externally, including related institutions such as government institution, National assembly, municipalities, customers, communities, citizens, etc. Ulsan Port, in consideration of the level and significance of the mutual influence on the operation of the corporation, selected groups of interested parties and classified the groups of interested parties according to the flow of created value. Moreover, we are exerting efforts on communication efforts, such as securing communication channels suitable to interested areas by classification and setting communication targets.

Key Player

internal constituent



The principal agent to create core value of the corporation

Context Settler

related Institution



The principal agent to influence value creation of the corporation thru policy and support

Subject

customer



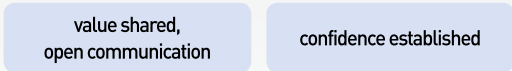
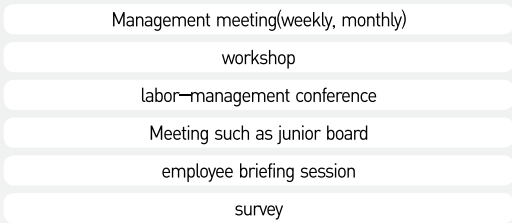
developmental-cooperative supporter based on the corporation's major business activities

Crowd

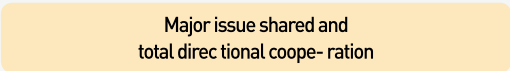
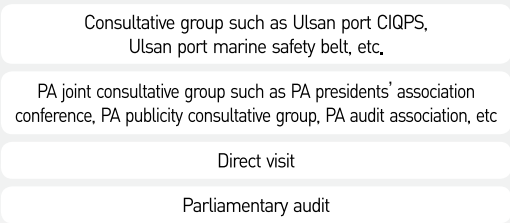
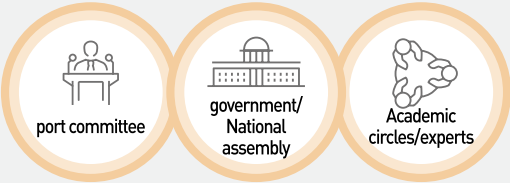
citizen



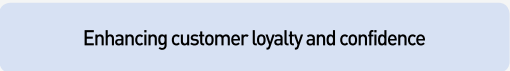
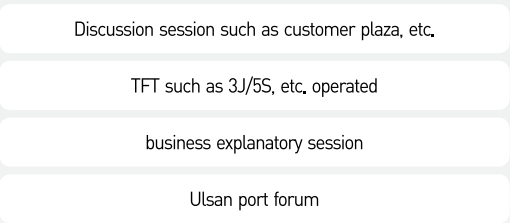
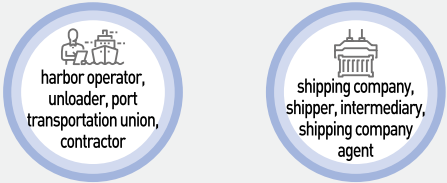
Interested parties exercising direct, indirect influence on the corporation's policy



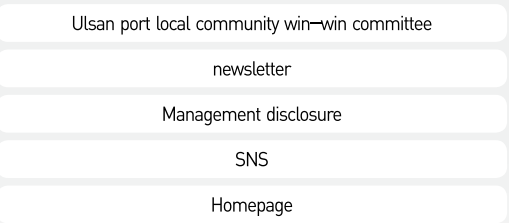
- Regular management meeting held
- Junior board operated to set up free communication channel
- Mid to long term management strategy rolling TFT operated (all departments)
- Consensus created by briefing session on Vision & Strategy system



- Oil hub business information session held inviting Ulsan city councilor
- Visit National assembly members' office to enhance friendly relationship
→ Petroleum and alternative fuel business Act revision which is mandatory requirement for oil hub business
- Marine fishery families greeting session held
- PA presidents association conference: 17 agendas deliberated including personnel interchange of PA personnel
- Port Authority operation association composed and operated



- 'Customer Comes First Ulsan Port Authority 2017 briefing session on business promotion duties' held for Ulsan port industry & groups
- Ulsan port quality management forum held in preparation for Ulsan port's 4th industry(2 times)
- Job creation briefing session to port industry groups, briefing session on new vision to related institutions and port industry groups
- Regional tour conference by customer group (harbor operator, logistics provider, tenant, port constructor)



- 'Ulsan port community win-win committee' held (quarterly)
- Social contribution activities diversified
- Offline (Blue wave) and online newsletter published (quarterly)
- Ulsan Port Authority 10 year history published & distributed
- Official SNS operation
- Ulsan port supporters operated (12 people)

Citizens' participation

Interested parties interview

In order to gather more detailed and deeper opinions on Ulsan Port Authority's sustainable management activities, interviews were conducted on interested parties. As the interviewees, we selected 7 groups of interested parties with significant influence on Ulsan Port Authority's operation and performances among all interested party groups, and we selected one interviewee from each interested party that is representative of each group. The opinion heard from the interview will be actively referenced and reflected in the corporate social responsibility and management activities of the corporation, and was utilized in deriving important issues in the Corporate Social Responsibility Management report.

Central government Institution

Establishment of exemplary case in conversion of nonregular employees to permanent position anticipated

Recently emphasized problems of youth unemployment or switchover of non-regular employees to permanent position are emerging as the issues of Ulsan Port Authority. We anticipate the switchover of non-regular employees to permanent position that has been promoted since last year to be completed wisely through communication between diverse interested parties. Moreover, we expect the Corporation to fulfill the role of the public enterprise by improving the management revenue as the characteristic value of a corporation.

Ministry of Oceans and Fisheries, secretary **Seong Yeol-san**

Municipal Institution

To become the Port Authority equipped with specialty and efficiency, contributing to enhanced customer satisfaction level

Port Authority system is intended for further specialized and efficient promotion of the port management and operating work that used be performed by the government. Accordingly, we have to spare no efforts on port vitalization by rendering higher quality port services than those services that used be provided under government's operation. To actively attract customers, we have to gather port users' VOC through diverse channels and think hard about improving service quality. Furthermore, we have to maintain customer's loyalty, by removing the factors hazardous to safety such as ship traffic, and enhance customer satisfaction level through active adoption of various incentive systems.

Ulsan Regional Maritime Affairs & Fisheries Office, Port logistics planning department, section chief **Lee Hyeon-su**

Customer(shipper)

Ulsan Port Authority preparing for the unification of South and North Korea, as a specialized port

Ulsan port has no further factors favorable for development. I expect Ulsan to become a specialized port through the specialization of already operated container harbor and liquid cargo dedicated harbor. In case Ulsan port can be used as the foothold port for the Northeast Asia Siberian railway by linking with the North port, it would take only 2~3 days to Vladivostok and save logistics cost. In preparation for unification of South and North Korea, we need to consider measures for linking maritime transportation with railway transportation.

Ulsan port shipper logistics Association, chairman **Cha Gi-hwan**

Local Community

Contribute to making Ulsan port the logistics moving space where local residents and tourists get together

We think what the Ulsan Port Authority should consider as the most important is contribution to the local community by developing Ulsan port. Therefore, we anticipate the Port to put customers first which is the fundamental basis for Ulsan port development, and conduct customer-centered management. At the same time, we would appreciate it if the Port endeavored to make the port not only the moving space for logistics but also the place where the citizens and tourists come together through creating networks with the local community.

Ulsan metropolitan city, Voluntary service center, General manager **Kim Sun-hee**

Contractor

The basics of port is safety, work hard on establishing a safe port after inspection of safety risk on value chain

The fundamentals of a port is safety. We have to construct safe ports, and logistics shall continue smooth flow without any disruption in the inflow and outflow. An unsafe port may cause enormous loss of lives, and contaminate the sea. Furthermore, in case any port is blocking and halting the logistics flow, corporations cannot maintain normal operation. Especially, if daily necessities and oil cannot be procured on time, an oil price hike or inflation would ensue, directly affecting the people's lives. We expect the Port to verify the safety risk on the value chain and subsequently conduct safe operation and management of the Port.

Korea Port, representative **Choi Yeon-wu**

Customer (shipping company)

Be the mediator of communication for stabilization of the port industry

The enterprises and practitioners in the port industry are facing difficulties due to a number of external factors such as the enlargement of vessels, recession and extreme competition in the port industry, tightened safety regulations, etc. These difficulties lead to the conflicts among interested parties, making the market situation even harder. We need a mediator to listen to the voices from the interested parties and mediate between the parties. We anticipate Ulsan Port Authority as a public institution, playing the role of a mediator.

Ulsan port shipping company agent association, chairman **Seo Jae-cheol**

Labor union

Serious consideration is required for a new growth engine

The current businesses of Ulsan Port Authority are limited. The uncertainty of the oil hub business persists, and after 5~6 years, no harbor would be available for development. Seeking a new growth engine business is urgently needed. Serious consideration on the expandability of current businesses is required. Furthermore, Ulsan Port Authority's region, Jangsaengpo is lagging behind significantly. As a member of the local community, the Port should pursue various social contribution activities, participating in the development of Jangsaengpo region.

Ulsan Port Authority, Labor Union leader **Kim Seong-yeol**

Major Issues
in Corporate
Social
Responsibility
Management

Importance assessment process

Ulsan Port Authority is engaging in a broad range of corporate social responsibility management activities from an economic, environmental, and social aspect. Out of the corporation's various corporate social responsibility management activities, we derived the important issue according to the importance assessment framework presented by GRI, in order to fill in this report mainly with issues that carry importance and interest to the corporation and the interested parties.

Importance assessment process



STEP 1 Identification _Identification of issues related to Corporate Social Responsibility Management

Ulsan Port Authority conducted importance assessment, referencing the importance assessment procedure presented by GRI as well as the method presented by IR framework of IIRC(International integrated report committee). We found out the internal and external issues on corporate social responsibility management within the corporation by conducting analysis of government policy direction, media analysis, related enterprise analysis, ISO 26000 implementation level diagnosis, etc.

Analysis on government policy direction	Social value Framework Act(draft), Management assessment standard, 100 national tasks by new government, government innovation plan, Ministry of Maritime Affairs and Fisheries' policy direction are analyzed to derive the new issues to respond to
Media analysis	Analysis on the materials exposed to the press from Jan, 2015 to Dec, 2017 to identify the external perception on the issues related to Ulsan Port Authority's Corporate Social Responsibility Management
Analysis on related institution	Recent issues on Corporate Social Responsibility Management report are identified and benchmark cases derived based on the Sustainable Management report from domestic and foreign institutions in identical or similar industry
ISO 26000 implementation level diagnosis	Based on ISO 26000 diagnosis tools developed under the Ministry of Knowledge Economy, implementation level of social responsibility is assessed and priority tasks are selected by identifying pros and cons
Interested parties interview	Core interested parties group and representative of each group is selected according to legal, financial, and operational responsibility and influential level upon Ulsan Port Authority's management, and in-depth interviews were conducted.

STEP 2 Prioritization _Setting of priority

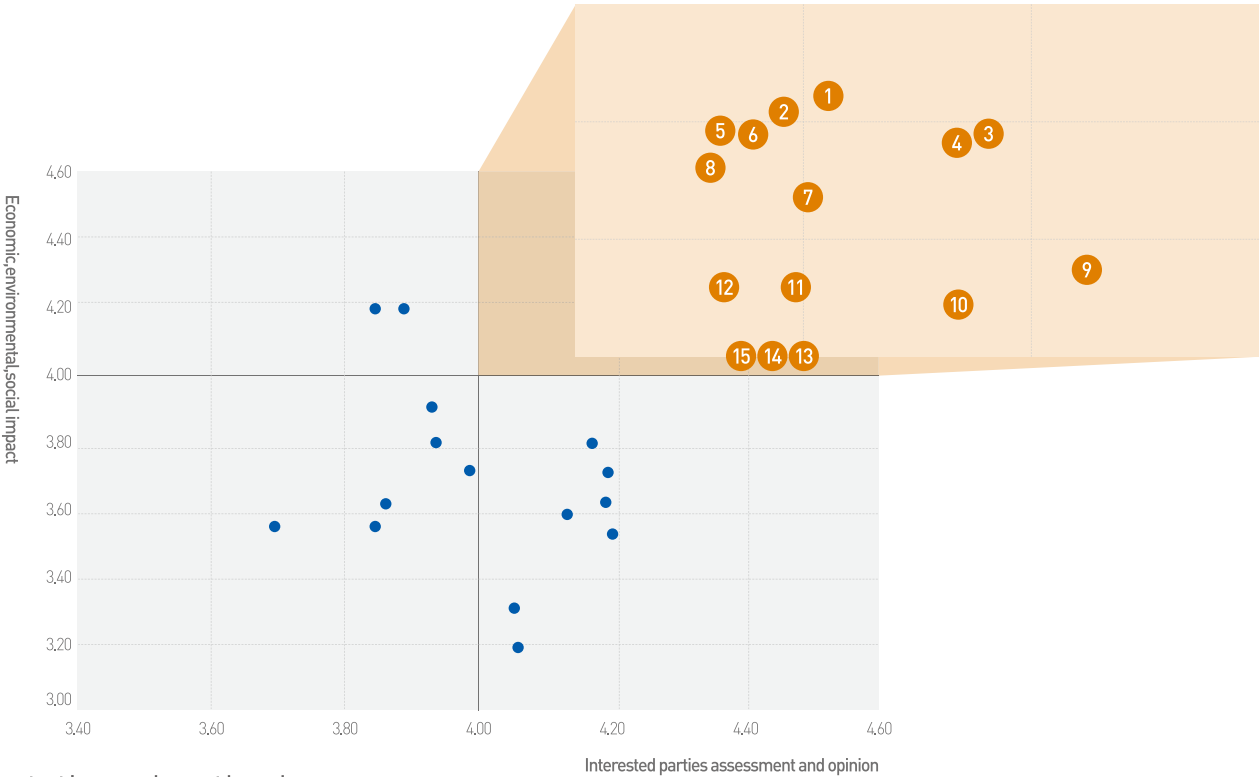
According to the relevancy assessment result through internal and external environmental analysis, a survey was conducted on interested parties from June 21 to June 28, 2018. By prioritizing Ulsan Port Authority's corporate social responsibility management issues viewed from interested parties, we finally derived 15 important issues.

STEP 3 Validation _Verification of feasibility

The important issues thus derived underwent internal review and then were verified on its effectiveness to be used for planning and composing the contents of this report. The corporation determined the contents of this report by setting the reporting level of issues and linking them to the strategic tasks of the corporation.

Important issue derivation result

Important issues were derived with the business Impact as the economic, environmental, and social impact arising from activities of Ulsan Port Authority placed on X axis and the assessment and opinion of interested parties surrounding the corporation placed on Y axis. As a result, 15 related issues out of 31 issues in total were derived as important issues.



Important issue and report boundary

sequence	Important issue	GRI Topic	Report boundary	
			internal	external
1	Response to market change and future growth engine explored	—	●	●
2	Customer safety (factors hazardous to safety such as ship traffic removed)	GRI 416: Customer Health and Safety	●	●
3	Ethical management system established and operated (Ethics and uprightness)	GRI 205: Anti—corruption	●	●
4	Liquid cargo safety management enhanced	GRI 403: Occupational Health and Safety	●	●
5	Publicness of public institution emphasized, social value created	—		●
6	Transparent decision making structure established and operated (governance)	—	●	
7	Safety of port construction laborer ensured, and port facility safety stepped up	GRI 403: Occupational Health and Safety	●	●
8	Economic performances (liquid cargo transport volume, increase in number of vessel entry, management assessment response, etc.)	GRI 201: Economic Performance	●	●
9	Enhanced knowledge, experience, specialty of executive/employees on port industry	GRI 404: Training and Education	●	
10	Integrated disaster management system established	—	●	●
11	Eco—friendly port infrastructure established	GRI 302: Energy GRI 305: Emissions		●
12	Security system reinforced (protecting Ulsan port customer and citizens' personal information)	GRI 418: Customer Privacy		●
13	Job creation(new, female, youth, local talent etc.)	—		●
14	Participation by interested parties (strengthened communication with customer, community, and citizen)	—	●	●
15	Labor—management relations improved	GRI 402: Labor/Management Relations	●	

Important Issue Management Approach

Classification	Classification of important issues	Background and Policy of Sustainability Viewpoint
Economic <div></div>	1. Response to market change and future growth engine explored	Since revenues of Ulsan Port Authority is mainly sourced from port facility user fee, usage and vitalization of the port is closely related to the corporation's revenue structure, Furthermore, economic performances and financial status of the corporation is important as the foothold for investment in promoted projects, Ulsan Port Authority achieved profitable management for 11 consecutive years through operational performances such as annual transportation volume of 200 million tons in 2017, Based on a stable financial structure, we are actively promoting future growth projects such as Northeast Asia oil hub establishment project, etc,
	8. Economic performances	
Environmental <div></div>	11. Eco-friendly port infrastructure established	International environmental regulation is gradually becoming strict, Especially, the expectation and demand on response to climate change by the global society is on the rise, Due to the characteristics of Ulsan port's industry, we cause the occurrence of materials affecting the environment including air and sea contaminants in the course of port operation comprised of vessel operation, shipping and unloading, etc, Ulsan Port Authority as the principal operator of Ulsan port fully bears the responsibility to manage Ulsan port's environmental risk,
	2. Customer safety 4. Liquid cargo safety management enhanced 7. Safety of port construction laborer ensured and port facility safety stepped up 10. Integrated disaster management system established	The issue of occurrence and prevention of port safety accidents has been repeatedly raised every year, Especially due to the port practician's lack of awareness on safety, port accident continues to occur, Since Ulsan port has the characteristics of high percentage of liquid cargo amounting to 80% of total cargoes and domestically the largest hazard-handling port, a specialized port safety management is required, Ulsan Port Authority, in order to fulfill such responsibility on safety, makes assurance doubly sure to ensure prevention of all safety accidents related to the port such as unloading, sea work, facility and disaster, etc,
Social <div></div>	3. Ethical management system established and operated	Recently, a series of corruption cases such as request for favor in recruitment, corruptive procurement occurred in other institutions, Because of this, the people's distrust on public enterprises deepened and hence demand for intensive ethical management has reached the highest level, Moreover, as the 'Improper Solicitation and Graft Act' was enforced from late 2016, Ulsan Port Authority will not only comply with the stricter laws, but also pursue even stricter moral, ethical values to gain confidence and sympathy from the people,
	5. Publicness of public institution emphasized, social value created 13. Job creation	Since the policy basis and external demand for stricter publicness of public enterprises and creation of social values increased, Ulsan Port Authority, as a public enterprise operating a port, is concentrating its efforts on job creation based on public projects and economic vitalization of the local community,
	9. Enhanced knowledge, experience, specialty of executive/employees on port industry 15. Labor-management relations improved	Enhancing capacities of our executive/employees is an important issue for Ulsan port, in the aspect of securing the manpower to lead the new growth engine project in a responsible and professional manner, Ulsan Port Authority fosters the manpower that will achieve the mission and vision of the corporation through systemic management of human resources, Moreover, we emphasize communication and cooperation between the labor and management in the course of achieving this target to secure sustainability of the organization based on further future oriented win-win partnership,
	12. Security system reinforced (protecting Ulsan port customer and citizens' personal information)	As the era of the 4th industrial innovation came, threat of cyber-attack based on intellectual information technology (ICBAM) and at the same time, ransomware attack cases are continuously found targeting general executive/employees of public institutions, Especially, when cyber terror and infringement of personal information accident occurs, corporations face the result of losing confidence, Therefore, we have to establish and manage a systemic information security system,

Management direction	Major assessment indicator and 2017 performances		Relevant interested parties	Dept. in charge
• Enhance marketing to attract transport volume • Achieve new business promotion target such as Northeast Asia oil hub, hinterland, LNG bunkering, North Pole logistics, etc, • Enhance port infrastructure competitiveness	<div></div> Transport volume 202,346 thousand tons	<div></div> Sales 82,812 mil. Won	Shareholders (government) executive/employees	Strategic planning team Logistics planning team
• Promote energy management activities based on ISO 50001 • Introduction of fine dust measurement device at port • Promote photovoltaic & wind power generation project	<div></div> Number of beneficiary vessels to ESI incentive 267 vessels	<div></div> Fine dust in port 44.75 ug/m³	Customer Local community	Safety environmental team
• Port facility safety diagnosis and repair/reinforcement • Improve ship traffic condition for safety • Safety accident prevention training centered around unloading site • Establish proactive prevention and response system to minimize damage from disaster casualty	<div></div> Maritime port safety index 0.071	<div></div> Ground port safety index 0.081	Customer	Port operation team Port construction team Safety environmental team Port security team
• Establish non-corruption management system by promotion of ISO 37001 certification and advance ethical management • Embody and substantialize human right management	<div></div> Comprehensive integrity level Grade 2	<div></div> Corruption prevention training completion ratio 97.8%	Government Citizen Executive/employees	Strategic planning team Auditor team
• Good job creation and vitalization of local economy by hinterland development and occupant support • Vitalization of related industry and local economy by successfully establishing energy hub	<div></div> Job creation 555 jobs	<div></div> '17 new recruits 81 people	Local community Government Citizen	Port operation team
• Establish and substantialize human capacity strengthening base • Vitalize and substantialize labor-management communication • Derive performance through mutually respecting and being considerate of labor-management cooperation	<div></div> Per capita education & training hour 101.7 hours	<div></div> Labor-management cooperation index 72.95 points	Executive/employees	Personnel labor team
• Enhance information security level and strengthen capacity • Training and PR to establish information security culture • Protect personal information and telecommunications infrastructure	<div></div> Information security management status assessment 88.46 points (A+ grade)	<div></div> Personal information and cyber infringement accident 0 case	Government Citizen Executive/employees Customer	Logistics information team

UPA realizing social values

Realization of high value added Ulsan port

Enhancing port competitiveness for the future

Customer oriented service



Enhancing port competitiveness for the future



Bird's eye view of Northeast Asia oil hub

Project chronology

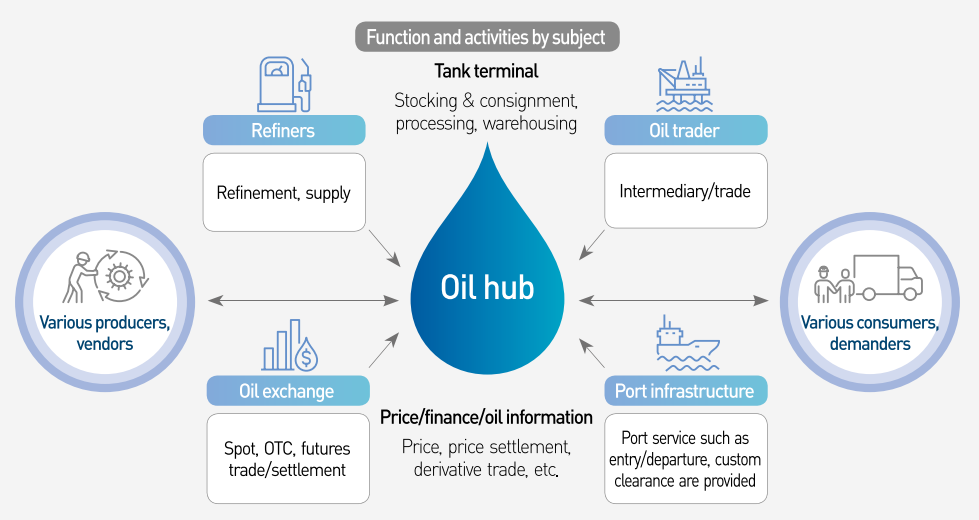
Oct. 2008	Selected as gov't's 100 major tasks (jointly by Ministry of Land, Infrastructure and Transport, Ministry of Knowledge Economy)
Aug. 2009	Preliminary feasibility study on Oil hub Ulsan area project (KDI)
Nov. 2010	Analysis on qualification and feasibility of private investment (KDI)
Dec. 2011	Oil hub North port area basic design contract (Ministry of Knowledge Economy)
Jun. 2012	Oil hub development direction finalized (consent between Ministry of Land, Infrastructure and Transport and Ministry of Knowledge Economy)
Apr. 2012	Oil hub promotion council (UPA, KNOC, Ulsan city) organized → Mar. 2014 Ulsan Customs office, Dec. 2014, Ulsan Regional Office of Oceans and Fisheries added
Nov. 2013	North port area infrastructure facility work commenced in 2nd half year
Feb. 2014	Ulsan North port joint venture (KOT, Korea Oil Terminal Co., Ltd) incorporated
2014	Oil hub 1st phase upper facility investor invited (Korea National Oil corporation)
Apr. 2015	Northeast Asia oil hub Ulsan South port business feasibility study and basic planning
Aug. 2015	Selected as oil hub Phase 2 public institution preliminarily feasible project(KDI)
Jun. 2017	<ul style="list-style-type: none">Ulsan North new port lower infrastructure(oil hub phase 1) completedNortheast Asia oil hub phase 2(South port) project preliminary feasibility study passed(KDI)

Northeast Asia oil hub project

Overview of Northeast Asia oil hub project

Northeast Asia oil hub project is Ulsan port's future growth engine project, where 1 trillion 747,8 bil Won is invested from 2010 to 2026 to construct 8 berths at 1~200,000 ton berth facility including warehousing facility for 24,13 million barrels and one dolphin harbor, tank facility for warehousing 24.13 million barrels, 685,000m² land for warehousing facility at Ulsan new port.

Concept of Northeast Asia oil hub project



	Classification	Total	Phase 1(North new port)	Phase 2(South new port)
Project size	Berth facility	Berth facility 8 berth	10~60 thousand ton 5 berths, 120 thousand ton 1 berth	200 thousand ton 2 berths
	Warehouse facility (land)	24,13 million barrel (684 thousand m2)	8,13 million barrel (302 thousand m2)	16 million barrel (382 thousand m2)
	Total cost	1 tril 747,8 bil Won	669,4 bil Won	1 tril 78,4 bil Won
	Project period	2010-2026	2010-2020	2019-2026

Role and promotion status of each institution for Northeast Asia oil hub

	Institution in charge	Role	Progress
Phase 1 North port	UPA ULSAN PORT AUTHORITY	Create lower infrastructure such as berthing facility, pier, etc.	Lower infrastructure created such as berthing facility, pier (landfill) - Phase 1 period: Nov. 2013-Jun. 2017
	KNOC KOREA NATIONAL OIL CORPORATION	Establish and operate upper infrastructure such as tank terminal, organize investors	<ul style="list-style-type: none">Completed design and construction to be commenced for upper infrastructure (tank terminal)Invited investors for upper infrastructure projectJoint venture(KOT) incorporated for Upper infrastructure establishment and operation: SPC(Special Purpose Company) with participation of KNOC, UPA and private capitalDeregulation and system improvement for vitalization of Northeast Asia oil hub project
	The Government of the Republic of Korea	Construction of outer facilities such as north seawall, shore, etc.	<ul style="list-style-type: none">North seawall (2,200m) completed in front of Phase 1 oil hub siteShore under construction on the side of Phase 1 oil hub site
Phase 2 South port			<ul style="list-style-type: none">Preliminarily feasibility study conducted by KDI(Sept. 2015–Jun. 2017)Feasibility standard met at AHP 0,519 as a result of comprehensive analysis on economic feasibility (B/C), policy and profitability(P/I)

Phase 1 upper part facility of Northeast Asia oil hub project completed

With regard to the Northeast Asia oil hub business, phase 1 lower infrastructure construction work, comprised of berthing facility with 6 berths and harbor that was allocated under the responsibility of UPA, commenced in November 2013 and was completed in June 2017. However, in case of the upper part work (promoted by Korean National Oil Corporation) that had been promoted with targeted completion in 2018, commencement is somewhat delayed due to difficulties in organizing investors. Currently, efforts are concentrated in inviting new investors.

Revision of Petroleum and Alternative Fuel Business Act passed

As the Petroleum and Alternative Fuel Business Act was amended in March 2017 and blending of petroleum products in general bonded area is allowed, Ulsan port is now equipped with the condition for producing oil like the world's 3 major oil hubs (U.S, Gulf Bay, Europe ARA, Singapore). Thanks to the revision of related law, the legal status of oil trader is anticipated to be secured, and attraction of overseas capital investment, which used be difficult, would be accelerated.

Efforts to attract and foster global oil traders

In order to secure the growth engine as the mid to long term liquid logistics hub and to expedite the vitalization of Northeast Asia oil hub project, attracting physical oil traders to Ulsan port is absolutely required. In this regard, Ulsan Port Authority entered into an alliance with Korea Trade Investment Promotion Agency (KOTRA) and carried out new oil trader attracting activities. Moreover, we introduced an oil trader customized incentive where port facility user fee is exempted for 3 years to any oil trader who attracted a new liquid cargo that has not entered Ulsan port during the last 5 years. Furthermore, Ulsan Port Authority is providing monetary support to energy trader fostering project implemented by the Ministry of Industry, Commerce and Resources, and Ulsan National Institute of Science and Technology(UNIST) for successfully establishing the Northeast Asia oil hub project. We are actively engaged in the efforts to foster oil trading specialized manpower, such as letting some of our own employees take the course.

Bunkering vitalization incentive system

In case of tanker vessels mainly entering Ulsan port, as cargo unloading work and fueling work cannot be performed simultaneously unlike other vessel types for the sake of safety, additional use of harbor or berth was required for fueling.

To overcome this burden, Ulsan Port Authority vitalized bunkering market by adopting bunkering vitalization incentive system where bunker oil is attracted as catalyst cargo, and exempting port facility user fee up to 12 hours to any outer port tanker vessel for any additional use of harbor or berth for fueling.

In 2016 which was the initial year of incentive introduction(Jan. 2016), total performance of vessel fueling increased by 2,3% from the previous year, and fueling tanker vessels increased by 95,4%. In 2017, vessel fueling increased by 1,2% in contrast to 2016, and fueling tanker vessels increased by 23,5%. Meanwhile, thanks to increased vessel fueling, added value created by Ulsan port is analyzed as around 35 billion 268 million Won*.

* Based on the economic analysis upon the introduction of the bunkering incentive system

Enhanced PR

Ulsan Port Authority is actively engaged in PR activities for attracting investors, in order to preoccupy the future market by participating in oil hub related international exchanges, and posting related contents on the English website. In 2017 we carried out joint marketing with commercial tank terminals. By linking Ulsan port's liquid cargo processing infrastructure and Northeast Asia oil hub business with the warehousing facility status of the tank terminal, we advertised on the tank storage magazine subscribed by world's major liquid cargo shippers and tank terminal related parties. Furthermore, we are publishing 'Oil Hub monthly' to all citizens so that they can easily understand this business.

Enhancing port competitiveness for the future

Establishment and Operation of Port hinterland

Overview of port hinterland establishment project

Ulsan Port Authority is promoting port hinterland establishment project to convert Ulsan port that is currently biased towards simple unloading and warehousing function to a high value adding type port linking the port to hinterland by securing port hinterland that is absolutely insufficient so far.

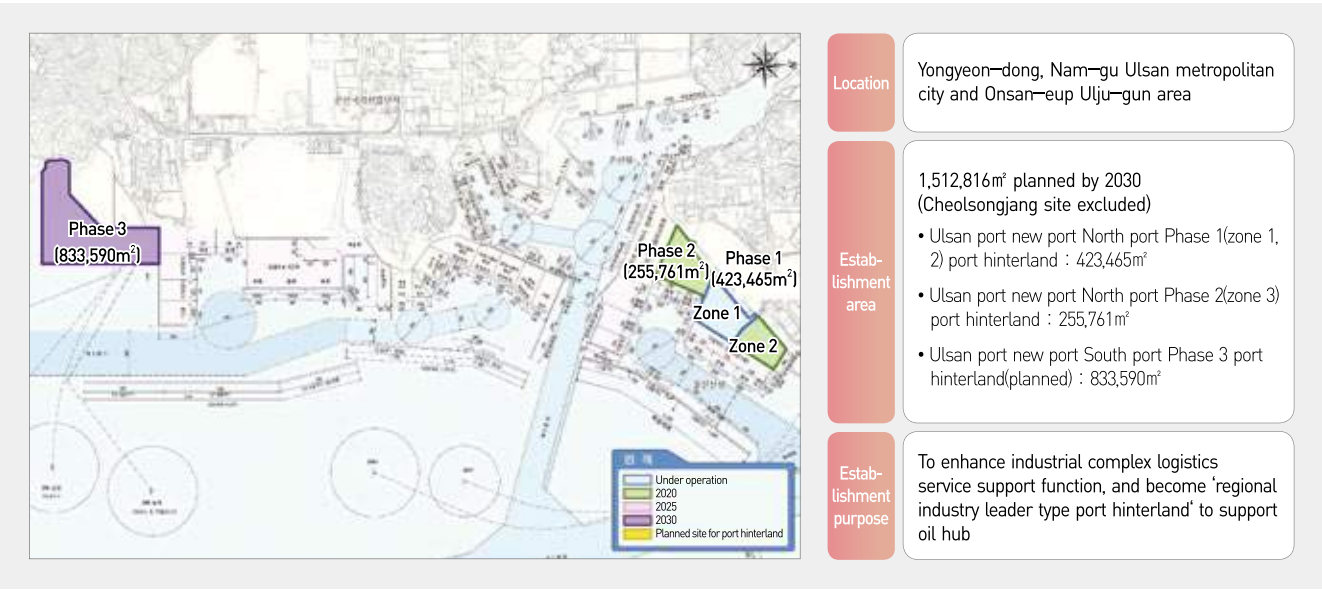
Ulsan new port hinterland, where the project is under progress, is going to be established with the size of 1,512,816㎡ by 2030. Especially, while Ulsan new port North port hinterland (Phase 1, 2) currently under progress is general hinterland established by Ulsan Port Authority’s own financial resources, and is different in operational and establishment concept from free trade zone type hinterland that is established by injecting government funds for the purpose of attracting foreign investment through free trade activities,

Through the port hinterland establishment project, Ulsan Port Authority will support Southeastern Korean export & import activities and Northeast Asia oil hub project, and establish the foundation for the development of sea-land linking logistics system in preparation for the vitalization of future trades around the East Sea and toward the North in addition to enhancing logistics service support function at the industrial complexes around Ulsan port.

Port hinterland establishment status*

Classification	Total	Phase 1		Phase 2
		Zone 1	Zone 2	Zone 3
Area	681,000m ²	242,000m ²	183,000m ²	256,000m ²
Project period	May 2010–Feb. 2020	May 2010–Jul. 2014	Nov 2013–Feb. 2020	Nov. 2012–Apr. 2017
Use	complex logistics, manufacturing, oil hub support	complex logistics, manufacturing	oil hub support	complex logistics, manufacturing
Cost	127.2 bil Won	45.1 bil Won	42.1 bil Won	40 bil Won
Sponsor, financing	UPA			

Ulsan new port hinterland establishment plan



100% occupancy ratio in Ulsan new port hinterland achieved through customized support

As government’s ‘hinterland management policy’ works as an obstacle in attracting manufacturing enterprises specialized to Ulsan, we relaxed the qualification requirement for manufacturers as potential tenants to hinterland established at Ulsan new port, and prepared a strategic means to attract business type specialized for the local industry. Furthermore, by exploring potential candidates in other areas under cooperation with Ulsan—city and by implementing marketing strategy customized to tenants’ business model, zone 1 & 2 hinterland occupancy ratio that remained at 10.3% in 2016, recorded 100% in March 2018. Through this, we anticipate not only a creation of transport volume comprised of 240,000 TEU of containers and 620,000 tons of general cargo, but also a creation of 521 quality jobs and 18,000 construction jobs for factory work by attracting new investment amounting to 426 bil. Won for 5 years to come.

Port hinterland tenant company support system

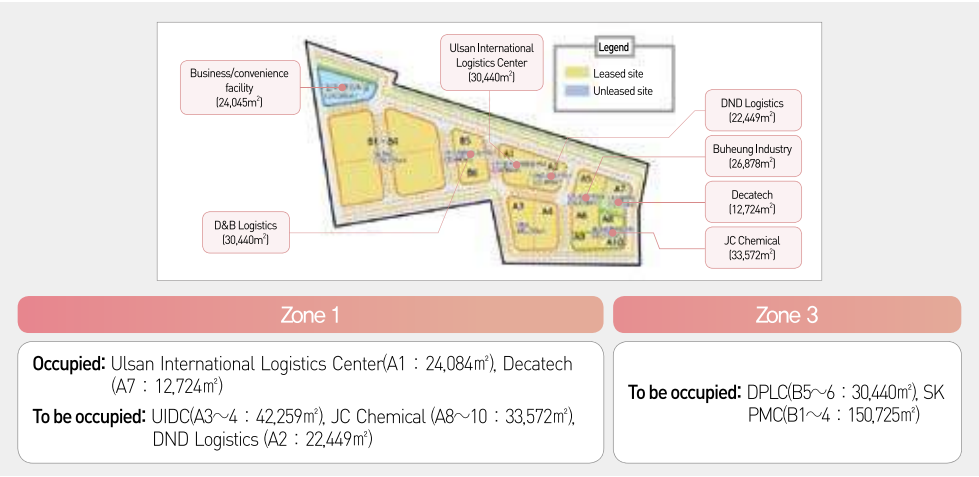
① Hinterland management guideline : fair & equal system improvement reflecting the characteristics of the port

Classification	Details	
	Hindrance factor	Improvement
Hindrance in manufacturers occupying hinterland removed	Manufacturers are excluded from occupancy qualification despite high percentage of imports of raw & intermediary materials, and is disadvantaged in occupancy	percentage of imports is added to the qualification for occupancy
Unequal merit points between industries improved	Improvement in merit points necessary to attract manufacturers who are disadvantaged in occupying hinterland	merit points adopted to 5 specialized manufacturing sectors in Ulsan (oil, automobile, etc.)

② Customer customized type service provided: customized consulting and administrative support provided by business model

Classification	Difficulties of occupant	Major actions in support
S Co. manufacturing	Exceeds the maximum lease area per single enterprise (150,000m2) under government policy Large scale industrial water leading-in required	• Persuasion and obtaining government approval by quantifying ripple effects such as value added from cargo & job, regional large scale investment, social value, etc. • New leading-in of industrial water to be agreed with Ulsan city and Korea Water Resources Corporation
J Co. manufacturing	liquid cargo pier required for importing bio diesel resources (palm oil, etc.)	• Review on support to liquid cargo processing by functional adjustment of Yongyeon pier • (long term) functional adjustment of pier (short term) support to liquid cargo unloading at Yongyeon pier
P Co. manufacturing	Stable procurement of steam in production process	• Business matching with a waste heat supplier linking Ulsan Steam Highway under cooperation with Korea Industrial Complex Corporation
U Co., D Co. Logistics	Regular container route required due to increasing transport to Russia	• Regular container route to Russia matching with 3 domestic carrier and 1 Chinese carrier, and incentive provided for new route

Zone 1 & 3 lease status



Enhancing port competitiveness for the future

New project promotion 1: LNG bunkering

Discussion on LNG bunkering infrastructure establishment

International Maritime Organization (IMO), in order to respond to climate change and to prevent contamination of marine environment caused by vessels, announced the environmental regulation measures forcing vessels voyaging in all global seas to reduce emission of maritime contaminants such as exhausts comprised of sulfur oxides (SOx), nitrogen oxide (NOx), carbon dioxide(CO²) and ballaster water, etc, from 2020,

As the potential of LNG to be the alternative fuel to existing fuel oil is highlighted as the means to reduce exhausts and hazardous substances in response to such regulation, global demand for LNG bunkering is anticipated to grow. Especially when IMO enforces the regulation on use of vessel fuel in 2020, demand for LNG bunkering is anticipated to increase rapidly mainly based on newly built vessels, and major global ports are aggressively pursuing infrastructure construction and enhancing safety to preoccupy the LNG bunkering market,

Ulsan Port Authority also selected bunkering infrastructure establishment for LNG fuel that is emerging as the responding measures to relevant regulation, as the future growth engine project for Ulsan port, and preparation is underway. However, for Ulsan port to establish LNG bunkering infrastructure, enormous initial investment costs must be borne. For this purpose, in addition to government's support, cooperation from shipping companies and LNG producers is indispensable. Ulsan Port Authority, together with Korea Gas corporation and Ulsan metropolitan city, and Hyundai Heavy Industries composed and operates 'Ulsan port LNG bunkering promotion TF teams' comprised of both the public and private sectors. As a result, we prepared phased action plans, including TTS(Truck To Ship) method where LNG is supplied to vessel through tank lorry as short term means, and STS(Ship To Ship) method where supply is carried out through LNG supplying vessel as mid term means. In the long term, we will promote the establishment of large scale LNG bunkering base.

Expanded eco-friendly bunkering incentive system

Concurrently with establishing LNG bunkering infrastructure, Ulsan Port Authority expanded the incentive system to achieve the national task #58 'Creation of pleasant atmosphere environment without concerns on fine dust'. The bunkering vitalization incentive system operated since 2016 where exempting port facility user fee up to 12 hours to any outer port tanker vessel is for any additional use of port facility before and after unloading, and is expanded in 2018 by the introduction of 'eco-friendly bunkering expanded type.' By introducing such further sophisticated incentive system, we are preparing for IMO's stricter regulation on vessel emission and participating in government's eco-friendly policy trend.

From LNG bunkering to LNG cluster

In order to prepare for LNG fuel vitalization, Ulsan Port Authority is sparing no efforts on introducing LNG processing infrastructure within Ulsan port. The corporation set up the introduction roadmap from TTS(Truck To Ship) to PTS(Pipe To Ship) to STS(Ship To Ship) to FLBT(Floating LNG Bunkering Terminal) in mid to long term targeting the creation of 'Ulsan port LNG complex cluster.' As the initial stage, we joined International LNG bunkering consultative group sponsored by 9 global ports, leading the activities to establish LNG bunkering related International rules and standards. We also promote the development of internal demand within Ulsan port such as exploring LGC demand from service vessel (tug, etc.) in cooperation with the government(Ministry of Maritime Affairs and Fisheries) and municipality(Ulsan metropolitan city).

In the long term, Ulsan Port Authority has a plan to establish Ulsan port as the 'energy hub' by 2026 in connection with oil hub project through attracting LNG warehousing facility into Ulsan new port and through creating added value to the industry. At the same time, we will complete the establishment of LNG bunkering infrastructure to enhance the competitiveness of Ulsan port as an eco-friendly port.

New project promotion 2: development of Arctic Ocean route and logistics hub

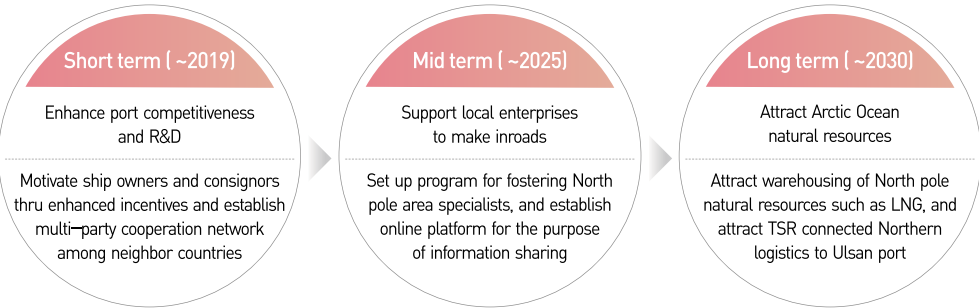
Interest in development of Arctic Ocean route

Arctic Ocean route is the sea route with the shortest distance connecting East Asia and North Atlantic shore area, as the new maritime transportation route passing Russian Chukchi Sea, East Siberia Sea, More Laptevkh, Kara Sea, and Barents Sea linking Europe to Asia. Arctic Ocean route, called the 3rd sea route after Suez canal and Panama canal, reduces the existing transportation distance via Suez canal between Korea and Europe by 7,000km, enabling the reduction of distance by 40%, and voyage period by about 10 days in comparison with the Suez route. Thanks to such reduction in the sailing distance, this route is receiving attention as a highly competitive sea route due to fuel and freight charge savings, and transportation cost savings. Furthermore, recent expedited development of abundant mineral resources including oil and gas under the Arctic Ocean shores attracts further expectations and attention.

Promotion of Northern logistics & Arctic Ocean route

Ulsan Port Authority is exerting various efforts to vitalize Ulsan port Arctic Ocean route. First of all, in order to establish a mid to long term plan for vitalizing the Arctic Ocean route, we have completed 'Establishment of Ulsan port development strategy in connection with Arctic Ocean and Far Eastern Russian logistics' research service in 2015, and is promoting the strategy step by step based on the mid to long term roadmap established by gathering advice from academic circles and research institutions, workshops and internal & external opinions.

Mid to long term plan for Northern logistics & Arctic Ocean route project



Enhancing specialized capacity for vitalization of Arctic Ocean route

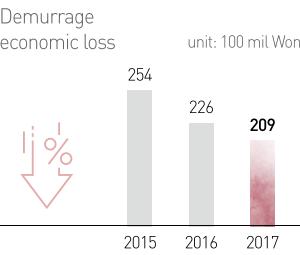
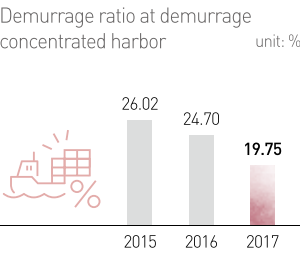
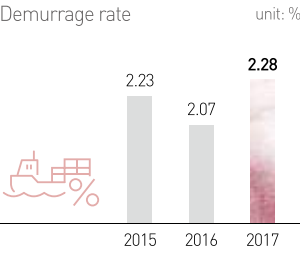
Ulsan Port Authority signed an MOU with North Pole logistics research laboratory of Youngsan university according to the mid to long term plan of Arctic Ocean route project for the growth of the industry by industrial-academic cooperation and for the internal stability of university education. Moreover, in the year 2015 and 2016, we have hosted 'International seminar on Arctic Ocean route' with the largest scale in the country for 2 consecutive years under joint sponsorship of the Ministry of Maritime Affairs and Fisheries and Ulsan metropolitan city, and shared methods for vitalizing Arctic Ocean route and information related to promising cargoes with world class experts.

Incentive system for vitalizing Arctic Ocean route

Ulsan Port Authority operates an incentive system to secure a foothold for the vitalization of Arctic Ocean route. Through consultation with the Ministry of Maritime Affairs and Fisheries, we reduce port facility user fee by 50% to vessels entering/departing Ulsan port using North Pole route since 2014. The 'volume incentive system for import shippers using Arctic Ocean route' implemented since 2015 introduced gradual volume incentive according to the transport volume during the relevant year, which is paid to the domestic shippers who imported cargoes via Arctic Ocean route to Ulsan port. The corporation is paying incentives of at least 10 million Won and 50 million Won at the most through this system.

Enhancing port competitiveness for the future

Demurrage management performances



Enhancing port competitiveness

Management of demurrage rate by enhanced port operation efficiency

Demurrage means any vessel that is on standby for more than 12 hours due to unavailability of berth facility. Such demurrage functions as the factor for increased logistics cost for shippers and reduced productivity of Ulsan port arising from inefficiency in port operation and insufficient port facilities. Ulsan Port Authority tries to enhance efficiency in port operation by improving harbor operation and expansion of port facilities and cooperation with port users. Especially, we are actively managing demurrage rate to achieve efficient port entry and shipping. In piers in which demurrage is concentrated, monthly monitoring, unification of pier operator, introduction of unloading equipment, unloading facility maintenance, berth management are implemented, and we are inducing the investment from unloaders in high efficiency unloading equipment that is indispensable for reduction of demurrage rate. Through such efforts, logistics cost burden of users due to demurrage has been reduced, and this is contributing to enhanced service quality for users.

Performance of Ulsan port port operation efficiency promotion

Port operation improvement

- deregulation of restriction in processible cargo by pier
 - Onsan pier 4 cement → multi-purpose terminal
- condition for simultaneous berthing created by connected operation
- alternative pier operated in case of disruption in using pier

Port facility improvement

- dredging of berth and route to improve vessel operating conditions
 - Expansion of collective berth at Ulsan port(2015)
- Developed new port and oil hub, expanded unloading facility, etc.

Port users' cooperation

- planned operation of pier thru cooperation
 - autonomous operation of berth for optimized turnover ratio of berth
 - enhancement of berth operation support system
 - support to management of vessel schedule optimization

Enhanced harbor productivity

As port logistics environment and port operation paradigm changed such as vessel enlargement, diversification of port demands and request for reestablishment of port function, Ulsan Port Authority prepared roadmap for specialized operation by zone in order to enhance logistics competitiveness of Ulsan port. Furthermore, we set up the optimal adjustment direction for terminal function for the purpose of more efficient operation.

Direction for Improvement of Ulsan port

	Main port	Onsan port	North new port	South new port
Speciali zation operation roadmap	Speciali zation	petrochemical, shipbuilding, automobiles	petrochemical, minerals	hinterland, container, oil hub(1), energy
	Needs	deterioration, reduced transport volume	limitation in sustainable growth	Creation of Infrastructure>vitalization
	Direction	recovery of transport volume, enhanced water-familiar function	enhanced efficiency in operation	complex multi-function port
		function recovery	maintenance of the status quo	vitalization
	Projects	<ul style="list-style-type: none">• Readjustment of main port vitalization function• Induce RO-RO new cargo• Seek method to use waterfront facilities• Foster port related industries	<ul style="list-style-type: none">• more efficient operation of harbor• Enhance shipment productivity• Support M&A	<ul style="list-style-type: none">• Link container-hinterland• Vitalize oil hub (1)• Make port into LNG bunkering base• Early development of north port 3 berths
Pier function adjust- ment direction	Environ- ment change	reduced transport volume due to more production by competing countries and recession	demand & supply unstable due to ban on collecting sea sand	change of use required at wood pier, demand occurred for hinterland pier
	Status	transport volume down by 24% compared with economic boom times, port added value down by 33 bil. Won	Severe competition on sand among pier operators	pier use mismatched due to reduced cargo volume of wood
	Re- sponding mea- sures	<ul style="list-style-type: none">• staged function adjustment considering expected new demand (6.6 mil ton)• Recover pier productivity : 86% in 2017 ~ 110% in 2020	<ul style="list-style-type: none">• additional designation of sand pier• Expand eco-friendly facility• reflect on port basic plan	<ul style="list-style-type: none">• discussion on port demand forecast (KMI)• change use from wood to general merchandise• reflect on port basic plan

Before & after 3J 5S introduction comparison



Before

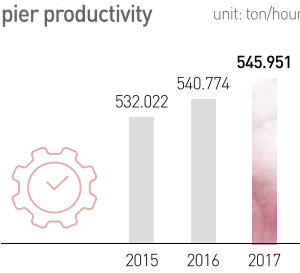


1st improvement (2016)



2nd improvement (2017)

Ulsan port pier productivity



Unloading standardization by introduction of 'Ulsan port 3J 5S'

Contrary to container pier, pier(berth) productivity of general pier is inferior, due to inefficient port facility operation and non-standardized unloading and subsequently deteriorated work efficiency. As such, improvement of unloading system was an urgent task, Ulsan Port Authority introduced right item, right location, right quantity(3J) and sort, set in order, shine, standardize, sustain(5S) that have been implemented in the manufacturing industry into the port unloading system under cooperation with Ulsan port users(unloaders) to standardize unloading work, reinforce unloading competitiveness through innovative activities and to establish sound ecosystem in the industry at the same time. In 2016, we supported 3J 5S consulting to unloaders. In 2017, we provided infrastructure improvement and training for specialized institutions for unloading site standardization by urging them to participate in 'industry innovation movement' sponsored by the Korea Chamber of Commerce. Furthermore, in order to remove safety hazardous factors at unloading site, we installed safety road signboard and inserting warnings within high accident risk areas, and laid special pavement. Meanwhile, we let unloading laborers participate in 3J 5S at unloading site, organizing the first safety team from within the port labor union, internalizing 3J 5S. Through these efforts, unloading productivity at Ulsan port improved. In 2017, 3J 5S activities showed tangible results such as unloading productivity increased by 8.2% (130.8 ton/hour), transport volume increased by 3.4% (total general cargo transport volume decreased by 7.1%) in Ulsan port.

Port competitiveness enhanced by improved entry condition for large vessels

In tandem with the enlargement trend of global vessels, Ulsan port improved entry conditions to raise the percentage of entry by large vessels. To accommodate large vessels, we opened Yongyeon pier that accommodates 50,000 t level berthing earlier in 2016. In 2017, we opened liquid cargo T/S pier, expanding the berth facility for large vessels. Berth condition was further improved to accommodate even larger vessels by marking the sea depth in 1~3m intervals from the quay based on the observation that the lower part of a vessel is in a U shape, while the sea depth directly under the quay was measured and reflected on the marine chart and was used as the standard for maximum size for berthing vessel.

Pier infrastructure improvement through promotion of private investment

Ulsan port pier is using unloading facilities that were initially installed and mostly been deteriorating after two decades, hence pier productivity has been deteriorating. Moreover, this works as a hindering factor to the expansion of transport volume. Ulsan Port Authority operates 'unloading equipment modernization fund support' system to induce facility investment for the modernization of unloading equipment and infrastructure from pier operators. The total amount of subsidy through this system increased from 17 mil. Won in 2016 to 32 mil. Won in 2017 showing a growth rate of 87.2%. In 2017, private investment for the improvement of port infrastructure amounted to 106,441 mil. Won in total, showing a growth rate of 843% from the previous year.

New liquid cargo attracted through vitalizing commercial tank terminal

We are endeavoring to attract liquid cargo by new-shipper targeted marketing through sharing roles with private tank terminal. Moreover, we enhanced our status as Northeast Asia liquid logistics center port and diversifying mid to long term cargo creation route through PR and marketing activities to overseas media (Tank story magazine, etc.) as well as through giving a presentation at the liquid cargo warehousing conference sponsored by one of the world's top 3 oil price assessment institution(S&P Global Platts).

Pier vitalization thru attracting high value added automobile transshipment cargo

We improved port infrastructure and promoted omnidirectional new cargo attracting activities through cooperation with related institutions and associations in order to attract automobile cargo from the automobile manufacturing company located in Ulsan port that would have deviated to other ports due to chronic shortage of open storage yard. Ulsan Port Authority injected strategic incentives amounting to 400 mil Won and cut the cargo handling charge and union's freight charge by 30%. Through this, new automobile transshipment cargoes attracted in 2017 was 61,587 units on record(automobile 710,000 tons, heavy equipment 290,000 tons).

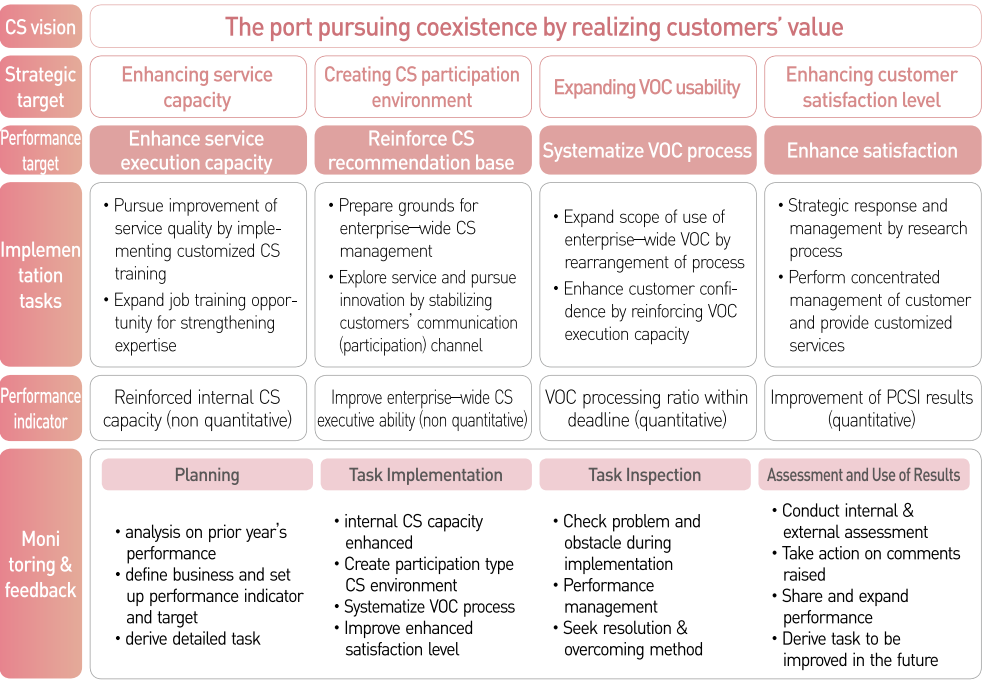
Customer oriented service

Promotion system for customer satisfaction management

Customer satisfaction management strategy

Ulsan Port Authority set the vision in customer satisfaction management as ‘the port pursuing coexistence by realizing customers’ value’, and is promoting this vision based on 4 major strategic targets: enhancing service capacity, creating CS participation environment, expanding VOC usability and enhancing customer satisfaction level. Ulsan Port Authority’s customer satisfaction management will not just be content with satisfying customers using Ulsan port but will aim to make sure the customers and the corporation expedite the growth of Ulsan port.

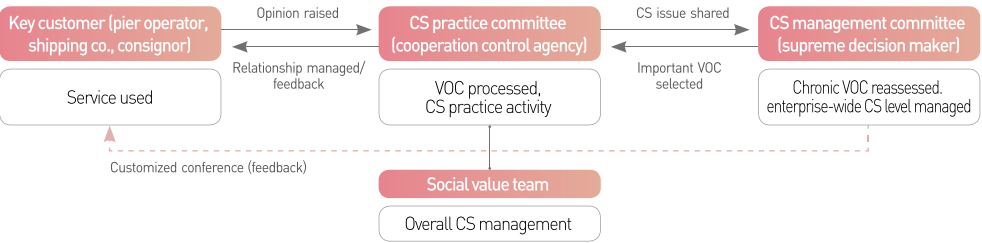
Customer satisfaction management strategy system



Promoting organization

CS practice committee is composed of working-level staff facing customers, As the cooperation management body, this committee processes complaints presented by key customers, and promotes substantial CS activities at the customer touch point, so as to realize our customer-centered management, CS Management committee is the highest decision making body composed of our executives (president, division heads) and heads of department facing customers, who manages enterprise-wide CS level, The social value team in charge of CS supports the corporation to keep smooth relationship with key customers, exploring points to improve on by analyzing monitoring results from enterprise-wide CS activities and by sharing internal and external information, etc. Meanwhile, for chronic VOC, we select important VOC by re-assessment of resolution method, required period and budget with key customers, and CS working staff prepares the policies that can be carried out for the VOC.

Organization and operation process of CS promoting organization



Major VOC channel

Inbound
Home page (civil complaint)
Customer support center
Public contest
Customer discussion session
Ulsan port tour
Clean reporting center
Outbound
PCSI research by year
CSI research
CEO visit to customers
Marketing activity
Academic session, conference
Win-win activities

VOC management performance

Section	unit	2015	2016	2017
VOC received	case	34	13	9
VOC processed	case	28	13	9
Process ratio	%	83	100	100

Hearing and processing customer opinion(VOC)

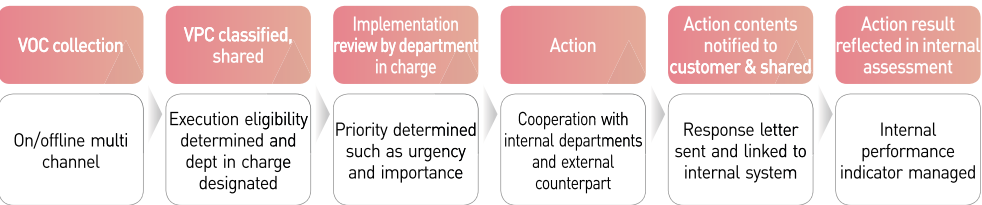
VOC collection channel

Ulsan Port Authority operates VOC process optimized for port service, and enhances operational service quality using such process. In order to accurately find out customers’ needs, we listen to and manage customers’ voices through various channels. We classify the direct users of Ulsan port as ‘key customer’. By collecting and analyzing VOC related to business, we reflect it on enhancing service quality and improvement of the service system. Especially, in order to derive CS improvement tasks and to expand the opportunity for key customers to directly participate in the corporation’s decision making, we have composed a customer participating CS policy decision organization to discuss service improvement issues regularly, and actively reflect it on decision making. Furthermore, in order to explore and improve specialized service by detailed customer group, we hold ‘Customer discussion on visit’ where our CEO personally visits customers, and expand opinion convergence through two-way communication. Meanwhile, we gather opinions from customers with indirect influence such as the local community, citizens, and government using channels comprised of local community coexistence committee, contact room between government-Ulsan Port Authority, press conference, advice on specialized areas, etc.

VOC response procedure

Various opinions raised by customers are systematized for management within a series of procedures from collection stage until feedback and internal assessment, and feedback is made to the management department through regular VOC collection and analysis.

VOC processing procedure



Customer complaint management

In order to quickly identify and respond to customer complaints, we manage with the goal of processing VOC within 7 days from acceptance (in case 7 days are exceeded, processing plan or progress is notified). Regarding the activities of accepting and processing of customer complaints, we implement quarterly inspection based on service implementation standard in the customer service charter to measure service quality at the customer touch point and derive points to improve on. Accumulated VOC processing results are analyzed quarterly and annually to establish related measures while in order to resolve repeated complaints proactively, we update complaints & inquiry cases (FAQ) and post them on the homepage for management every quarter. Furthermore, for any complaint accepted repeatedly but are determined as unsolvable by the department in charge, we classify as chronic VOC, and respond on a enterprise-wide level by re-assessing the processing method and required budget jointly by improvement committee composed of executives, practitioners and customers.

Customer satisfaction level studied and improvements enforced

Annual study on public institutions’ customer satisfaction level (PCSI) and internal investigation on customer satisfaction level are implemented to enhance service quality. In 2016, in order to establish systemic measures based on PCSI study results, the investigation on internal satisfaction level was expanded and implemented, and various improvement tasks were derived. Subsequently, in 2017, employees’ service capacity was reinforced such as relocation of civil affairs center, change in civil affairs center’s shift pattern of duties and distribution of service manual.

Customer satisfaction level(PCSI)

2015	2016	2017
91.4	90.1	89.0

unit: points

Customer oriented service



Ulsan main port crew Welfare center



Ulsan main port laborer lounge

Activities for promoting customer satisfaction activities

Neighborhood living facility operated for convenience of Port users

In order to enhance customer satisfaction level by providing a resting place to outer port crews using Ulsan port, and to prevent substantial maritime safety accident, we have reconstructed the Ulsan main port crew welfare center. In June 2015, Ulsan Port Authority was selected as a superior port in crew welfare assessment held by International Seafarers Welfare and Assistance Network (ISWAN) for the first time among domestic ports, and we did not settle for the status quo and implemented renovation work on the existing crew welfare center to provide better welfare services. In the crew welfare center that reopened in Sept. 2016, international phone, international video chatting, free barber service and various amusement facilities (ping pong table, pocket ball table, movie room, etc.) are provided. We are working hard to derive socially shared values and to realize customer satisfaction through the operation of social enterprise.

Customers' voice reflected on service and business practice

Based on voices of customers, Ulsan Port Authority is continuously exploring services customized for users, and is enhancing customer satisfaction by improving services and through carrying out convenience promotion activities.

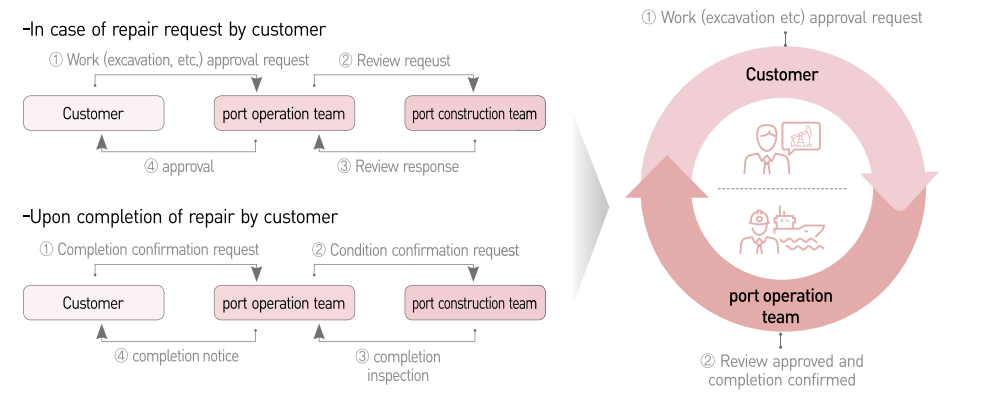
Cases of port service improved for customers and citizens

Target	Improved service	Major improvement cases
Port laborers	Labor conditions in port improved	<ul style="list-style-type: none">• 5 safe lounges for labors additionally installed in main port and new Yongyeon port• Garden installed in port, to improve environment and support local flower farms• hinterland fire hydrant facility improved for safety of pedestrians and cyclers (13 safety devices preventing collision)
	Berth expanded	<ul style="list-style-type: none">• W1 berth provided and VTS guide extended to vessels using the port for refueling
Shipping co, pier operator	Enhanced specialty for staffs serving customers	<ul style="list-style-type: none">• standardization of counter response according to journey of incoming customers and standardization of services• implementation of specialized position by department
	Port observatory contents diversified	<ul style="list-style-type: none">• observatory) KIOSK contents supplemented in relation to vessel specification, and facility supplemented for visitor safety• mini PR hall) vessel entry/departure process contents supplemented, and photo zone installed
Citizen	Easy explanation of Ulsan port	<ul style="list-style-type: none">• comprehensive guidebook on Ulsan port) targeted to related institutions as tenants and users• Ulsan port magazine, 'Blue wave' news on port use posted (how to use road within port, etc.)
	Enhanced convenience during tour	<ul style="list-style-type: none">• tour request procedure shortened, and improved online request (SMS confirmation)

One stop administrative service provided

When pier operator is performing internal works for port facility maintenance, repair and facility recovery such as excavation and pavement for inspection of buried plumbing, there was an appeal about inconvenience to Ulsan Port Authority that prompt response cannot be taken due to the dualization of civil affairs department (port operation teams) and response department (port construction teams). Therefore, we have assigned construction-specialized manpower(civil engineering) in civil affairs department to provide one stop administrative service, contributing to the reduction of harbor work period of the operator,

One stop administrative service process



Disclosure of port service information

Ulsan Port Authority discloses the information related to Ulsan port kept and managed and the related business plan and budget execution transparently through the homepage to enhance convenience to users and improve transparency of administrative operation.

List of port related information disclosure

Section	List of port related information disclosure
Port development, facilities	11 items comprised of Ulsan port development plan, Ulsan port project, facility safety inspection result, etc.
Port logisitics, oil hub	12 items comprised of port operation statistics, Ulsan port facilities status, world oil market analysis, etc.
Port operation	10 items comprised of facility user fee type and rate, Port-MIS use information, port terminologies, etc.

CS competitiveness enhanced

CS mileage operation

Ulsan Port Authority operates CS mileage system to enhance employees' interest in CS Management, so that they learn about customers' inconveniences and difficulties in diverse aspects and to internalize CS awareness,

CS idea public contest held

We held public idea contest to actual users and internal employees to facilitate use of port and to improve the environment. Moreover, we held idea public contest to the entire citizens, in order to attract interest to the port and to explore the service improvement that can derive practical consensus,

Public idea contest and promotion performance

Target	Idea adopted	Progress performance
Internal, external customers	Install Lounge within port	Lounge installed within the main port to check safety accident and improved service to port laborers
Citizens	Provide vessel information service	Vessel information material provided by renewal of observatory KIOSK

Enterprise-wide CS workshop held

Ulsan Port Authority held enterprise-wide CS workshop in 2017, so that internal employees could sympathize on occurrence of customers' voice(VOC) and to discuss the internal occurrence factors. The employees had the time to share opinions on occurrence factors of VOC and the cause by group, and derived 'slowed processing speed for customer service due to ERP disruption', 'customer service deterioration due to difficulty in internal communication', 'lack of employees' understanding on customer demands due to lack of expertise of the staff' as the major element and problem phenomenon to be improved on. The results derived from the workshop was delivered to relevant department so that substantial action would be planned and carried out.

2017 CS workshop result and action performance

Improvement factor	Current status (problem)	Cause	Improving measures	Action performance
ERP disruption	Processing slowed	Lack of interest, insufficient response	Budget allocation, recruit specialized developer	ERP TFT operation (logistics information team)
Difficulty in internal communication	Customer service deteriorated	Lack of communication and atmosphere	Diversify communication channels	Discussion group bulletin board/meeting session between departments, autonomous department workshop, employee's birthday party meeting (management support team)
Lack of expertise of the staff	Low understanding of customers demand	Lack of experts, frequent job transfer	Fostering and recruiting experts	Special position system implemented by department (human resource development team)

Customer oriented service

Customer information protection and information security

Information security management system

Protecting port logistics information network as the National base facility and managing customers’ personal information safely and implementing National security policy proactively as the public port enterprise against rapidly increasing internal, external cyber threat and cyber–attack according to the rapid changes in management environment and information technology environment became the important issues for sustainability,. Ulsan Port Authority has established and is implementing information security management strategy in order to comprehensively and systemically implement a series of security activities such as establishing information security policy and mid to long term plan, information security education and training, and internal security vulnerability inspection and audit activities.

Information security management strategy

Project vision	U-Port established by sophisticated information security level		
Strategy	Reinforcing information security system	Establishing information security culture	Reinforcing cyber security system
Target	Optimization in information security operation	Enhancement of internal awareness on information security	Achieving of no cyber breach accident
Tasks	<ul style="list-style-type: none">• Rearrange information security duty system• enhance executives and employees’ awareness on information security• contractors’ security management and inspection• carry out information security audit activities	<ul style="list-style-type: none">• Exert efforts to enhance information security management status assessment, and perform monitoring of improvement• protection of major information communication infrastructure and implementation inspection• reinforce capacity for cyber crisis response	<ul style="list-style-type: none">• replacement of obsoleted security system• improvement in vulnerable system security and regular implementation inspection• Maintain availability of information security system and update

Information protection system infrastructure established

We are shutting off any external cyber–attack at the source by operating a major information communication base facility(Port–MIS) that directly influences port operation, which is a separate network separated from the Internet. Furthermore, by separating the business network from the Internet, we minimize security threat to the system, and secure safety by establishing unidirectional transmission system, and data linked system that are highly secure at the networking zone that is limitedly necessary for business implementation.

Personal information protection and blocking information leakage

For the personal information stored in information system, protective action is taken such as encryption, etc. To support activities for protecting organization members’ personal information, we have introduced and operate ‘PC personal information protection system.’ Furthermore, we took technical security action on all personal information held by Ulsan Port Authority according to the Personal Information Protection Act to ensure personal information safety. The officer responsible for information security and personal information protection in the Ulsan Port Authority was originally team leader grade, but was replaced by executive level in 2017, reinforcing the management’s role and responsibility. We prepared detailed standard for the officer responsible for infrastructure protection in the major information communication infrastructure protection guideline to reinforce the enterprise–wide information security management system.

Furthermore, we have introduced enterprise–wide physical sealing of USB port in PC and servers, and a document security system, preventing any information leakage at the source. We always inspect the risk factor for general information and personal information leakage accident by operating ‘cyber security and personal information protection week.’



Information security management status assessment			unit: points
2015	2016	2017	
74,90	81,58	88,46	



Cyber crisis prevention and inspection

Since 2013, Ulsan Port Authority signed a cooperation agreement with the Ministry of Maritime Affairs and Fisheries, and participated in establishing cyber safety center while maintaining a high defensive posture on changes in information security environment and cyber threat by 24/7 365 days real–time security control and cooperation with the National cyber safety center. Moreover, by operating cyber crisis response emergency response team at all times, we are equipped with the capacity to respond to domestic and international cyber crisis. The corporation reinforces information system security every year by information security infrastructure expansion project or information security consulting project, and enhanced cyber security level by timely follow–up action based on security diagnosis and improved management activities.

Hacking mail response system

Ulsan Port Authority simplified the reporting procedure for any suspicious email to allow reporting by one click. Furthermore, in order to enable analysis on hacking mail, we improved the system to analyze original text code and whether malignant code is enclosed in the attached files of the mail. In order to reinforce responding capacity of executive/employees to hacking mails, we hold hacking mail response training every quarter, and we established and operate response system against cyber–attack, by major cyber–attack response training on information communication infrastructure (semi–annual), real game training on response to information system cyber–attack (annual) etc. Our capacity enhancement was proven by receiving ‘good’ grade from hacking mail response system assessment sponsored by the Ministry of Maritime Affairs and Fisheries in 2017 in comparison to the previous year (normal grade). In addition, we were selected as ‘superior’ institution for 2 consecutive years in 2017 Eulji Exercise cyber–attack response training. Moreover, we were the only participant in the hacking defense competition representing the Ministry of Maritime Affairs and Fisheries among public port enterprises.

Information security capacity reinforced and culture established

In order to reinforce cyber security capacity and to establish information security culture, Ulsan Port Authority provides regular information security training to executives/employees, we induced members’ voluntary participation in security policy and lead the way in the early establishment of cyber security culture by implementing ‘security point system’ where we manage related activities such as information security inspection and improvement action, participation in information security PR activities, and reporting suspicious hacking mail by giving points.

Information security training (2017)

Training classification	Contents	Frequency	Remarks
UPA executives and employees	Training on information security and personal information protection for executives and employees	3 times	
	Training for staff in charge of information security and personal information protection	6 times	
	Training for department staff in charge of information security and personal information protection	2 times	
	Training for security workers (private police, special guard)	3 times	
	Information security training on new recruits and experiential interns	Occasional	14 people
Informatization contractors	Information security training for informatization service business	Regular	5 Companies
Port customers	Ransomware response briefing session (information security training)	10 Companies	July

External assessment

In the information security management status assessment by the National Intelligence Service in 2017, Ulsan Port Authority recorded 88,46 points, showing an increase by 6,88 points from the previous year. This is above the public enterprise average by 1,03 points. Furthermore, our efforts and performances such as response to cyber terror and establishing information security culture for preventing infringement accident were well acknowledged that in 2017, we were selected as the superior institution and received an institutional commendation in the information security area from the Ministry of Maritime Affairs and Fisheries.

Implementation of institution’s social responsibility

Creation of good jobs

Achieve social integration by providing equal opportunity

Realization of Ulsan port emphasizing safety and environment

Contribution to local community development by coexistence and cooperation

Cultivating ethical & upright corporate culture



Creation of good jobs

Job creation promotion system

Due to employment instability and youth unemployment, the need to expand good jobs are emerging as a social issue. In this regard, the government presented ‘job creation’ as the national political agenda with the highest priority. Ulsan Port Authority, as a public enterprise, discovered the direction and task for job creation through establishing a job creation strategy in response to the government’s policy in order to resolve this social problem. Ulsan Port Authority created a job promotion group(TF) in 2017, and made it play the role of a control tower for job creation and changing a temporary position to a permanent position. In February 2018, when there was a restructuring of the organization, this Task Force was expanded and restructured as a regular department named ‘social value team’, establishing a system where an enterprise-wide active response is made possible.

Job creation strategy

Project Goal	Implementation system established and performance created for realization of public institution's social responsibility and values		
Detailed Project	public-private sector good job creation	undiscriminated workplace and coexistence of job and family through improvement of job quality	customized job support to groups vulnerable to job finding
Performance Target	Establish job creation implementation base and enhance capacity	Improvement of job quality by employment stability-non-discrimination-reduction in labor hours	job finding support system established in consideration of the socially vulnerable
Implementation task	<ul style="list-style-type: none">• (private) Explore job creation task by new technology development and concentrate implementation capacity• (public) job creation by changing indirect employment to direct employment• (regional) job creation by cooperation with social enterprise and regional development support	<ul style="list-style-type: none">• (employment stability) safety measure established for protecting people excluded from converting to permanent position• (leasing polarization) ban on labor discrimination and establish reasonable compensation system (functional wage, etc.)• (quality improved) system vitalized to clear long labor hours	<ul style="list-style-type: none">• (youth) job finding activities to clear difficulties of young job finder• (new middle age) support retirees' job matching and business incubation training support• (female) explore suitable job and establish system permitting childbirth & childcare activities

Good job creation and job sharing

For conversion of nonregular employee’s laborers to permanent position, Ulsan Port Authority reviewed whether to convert nonregular employees’ (dispatched and contracted service) 3 duty categories comprised of special security, facility management, informatization to a permanent position based on the government guideline. According to the review results, 82 nonregular employees in total were confirmed as eligible to change their job to a permanent position, excluding exceptional cases due to the nature of the duty. In this regard, Ulsan Port Authority incorporated a subsidiary to promote such job conversion to a permanent position. Meanwhile, by close management of the difference between the prescribed and actual number of manpower, and by fostering manpower replacement on any vacancy, we continuously reduce such differences and participate in job sharing. Furthermore, in case of port security duties, we changed the shift work system from 2 shift by 3 groups to 3 shifts by 4 groups to prevent deterioration in quality of life due to long labor hours and to create new jobs.

Private job creation

In order to create new private jobs through key businesses, we exchanged opinions with interested parties such as executive/employees, port related enterprises, port industry practitioners in various ways such as workshop, discussion session, and survey to discover job creation tasks. According to the results, we strategically attracted manufacturing focused enterprises to Ulsan port hinterland so as to induce employment and production. Furthermore, using the strength of Ulsan port, we attracted automobile transshipment cargo and created port related jobs such as unloading work, etc. Moreover, in order to create jobs through procurement and consignment business, we improved unfair subcontracting practices of vendors and consignment contractors. When signing a service contract, we implement ‘job-creating enterprise preferential system’ to induce the creation of private jobs.



Achieve social integration by providing equal opportunity

Equal opportunity in human resource system

Expansion of socially equitable recruitment

By operating a system to favor the youth, regional talent, and females upon recruitment, Ulsan Port Authority responds to government policy and at the same time, contributes to solving the social problem of job expansion, implementing the social responsibility of a public institution. Upon recruitment, we operate a system that expands the recruiting percentage of high school graduates, that is considerate of socially vulnerable group including the disabled, and that recruits career interrupted females and the elderly, and that runs a system which add points for regional talent in order to expand socially equitable recruitment. Especially, through discovering jobs suitable for high school graduates, as of 2018, 10 employees who are 10% of the prescribed number of employees are high school graduates. We established a system where a high school graduate employee may be promoted to the grade of a new college graduate employee after 4 years of service. Meanwhile, new employee recruitment system that add points to regional manpower adopted by the public institution due to the relocation of Seoul area public institutions to a regional location was not applied to Ulsan Port Authority which had been located at Ulsan region from the beginning. However, we applied this system by implementing limited competition among regional manpower to recruit regional manpower. Furthermore, by signing a collaboration agreement with Ulsan-based Ulsan university and Ulsan National Institute of Science and Technology(UNIST), we are implementing enrolled students' experiential intern system for the purpose of fostering regional talent. Interns selected for enrolled students' experiential internship gets an opportunity to experience job culture and expand their job capacity during the internship period. Additionally, Ulsan Port Authority exercises open employment by continuously offering short term jobs to the socially vulnerable group, and provides local community jobs to the socially disadvantaged such as the disabled, veterans, retired elderly aged 60 or more in order to fulfill the public corporation's social responsibility.

Efforts to expand female managers

Ulsan Port Authority has continuously raised the female recruitment ratio during the past 3 years, and endeavors to raise the female ratio in human resource management such as recruiting new manager level female manpower. To foster female managers, we opened and operate courses on 'strengthening female leadership,' and 'strengthening female middle manager capacity.' When notifying open type contract officer (logistics information team leader) recruitment, we reflected favorable conditions for females. Moreover, we expanded female member participation to various committees including personnel committee, external interviewer for new employees, executive recommendation committee for presidential election, in order to realize equality between both sexes,

Current status of recruitment performance and manpower operation

unit: person			
Section	2015	2016	2017
prescribed number (private police excluded)	93	93	101
actual number (private police included)	116.75	118.5	120.5
regular retirement	4	1	2
Early retirement	1	2	0
actual number of undated contract worker	11	8	8
actual number of (direct employment) non-regular employees	0	0	0
actual number of indirect employment	83	95	86
female	2	5	4.5
disabled	—	—	1
new recruitment of permanent position	regional talent(non capital area)	8 (private police 3, undated 1)	4
	High school graduate	2 (undated 1)	1
	Total	15 (private police 6, undated 1)	6.5
among actual number of employees	Number and percentage of females (private police excluded)	23(26.8%)	27.5(30.7%)
	Number and percentage of female managers	1(4%)	1(3.5%)
among full time worker	Disabled percentage	6(4.0%)	5(4.0%)
			5(3.9%)

public procurement implementation performances

unit : %			
Section	2015	2016	2017
SME product	82.8	76	74
Technology developmentproduct	7.5	8.8	27
Female enter-prise product*	goods	1.9	17.7
	service	4.9	1.9
	con-struction	3.3	1.7
Social enterprise product and service	0.6	2.3	3.1
Social cooperative product	0.1	0.2	0.2
Seriously disabled's product	0.9	1.6	1.1
Product by men of national merit	15.1	8.6	7
Green product	97	99.8	98.8

Creation of fair trade culture

Public procurement reflecting social values

Ulsan Port Authority reflects social values in public procurement policy, considering the various social, economic, and environmental influence of procurement on the society. We consider socially weaker enterprises who seldom got the opportunity for procurement within the existing competitive structure of the regional market, and disclose all the process of contracting to improve unreasonable contracting practices. For the establishment of this public procurement system, in 2016, we published the public procurement duty manual. We also regularly provide procurement staffs with contracting staff's public procurement training.

Fair contracting culture established by improved system

When composing external assessment committee for bidding, external members shall occupy 50% or more of all seats. Regarding assessment of negotiated contracting, we improved the contracting assessment system by fully disclosing individual scores of external members via Public Procurement Service system. To vitalize new participation of socially weaker enterprises, we relaxed the requirement on past performances. By rationalizing the assessment standard for tenant's qualification in occupying Ulsan port hinterland, we removed the entry barrier to manufacturing enterprises who are disadvantaged in contrast to logistics enterprises to induce fair competition.

Contract administration reflecting social values

In order to expand the social responsibility of contractors, we include their social value expansion activities when signing a contract. We implement 'job creating enterprise favoring system' where we qualitatively value the efforts on new recruitment on the services that is eligible for a new recruitment of a regular worker for 3 month or longer. By forcing the contract counterparty to submit implementation affidavit on protecting laborers' human rights upon contract execution, we force contractors to bear their responsibility on protecting laborers' human rights. In case of simple labor services such as cleaning and security, we apply market unit wage when calculating the estimated price, and enforce the guideline to protect service laborer by the condition to guarantee proper wage level to service laborer and the condition for employment buyout. Moreover, we prevent any unfair acts of the original contractor by forcing the use of a standard contract.

Major performances of fair trades

Indicator	unit	2015	2016	2017
number of unfair trade violations	case	0	0	0
subcontractor direct payment ratio	%	97	51.6	71
electronic bid ratio	%	100	100	100
electronic contracting execution ratio	%	92	98	98

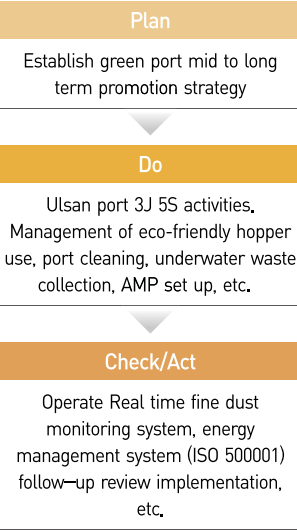
Unfair trade reporting center

The unfair trade reporting center is the reporting channel operated at all times to prevent any problem occurring in the relationship between original contractor and subcontractor such as unfair contracting (special provision) by abusing the superior status of the original contractor, etc. Any behavior of unfair trade in violation of subcontract related regulations including "Fair Transactions in Subcontracting Act" arising in any goods, services, construction work contracted by Ulsan Port Authority can be reported. Ulsan Port Authority expanded unfair trade reporting center that used be operated offline to enable online reporting since May 2016. From now on, we will endeavor to remove unfair practices to create a fair and transparent trade environment, and lead the way in joint growth and a culture of win-win cooperation by protecting the rights of the economically weak group such as subcontractors.



Realization of Ulsan port emphasizing safety and environment

Port environment management process

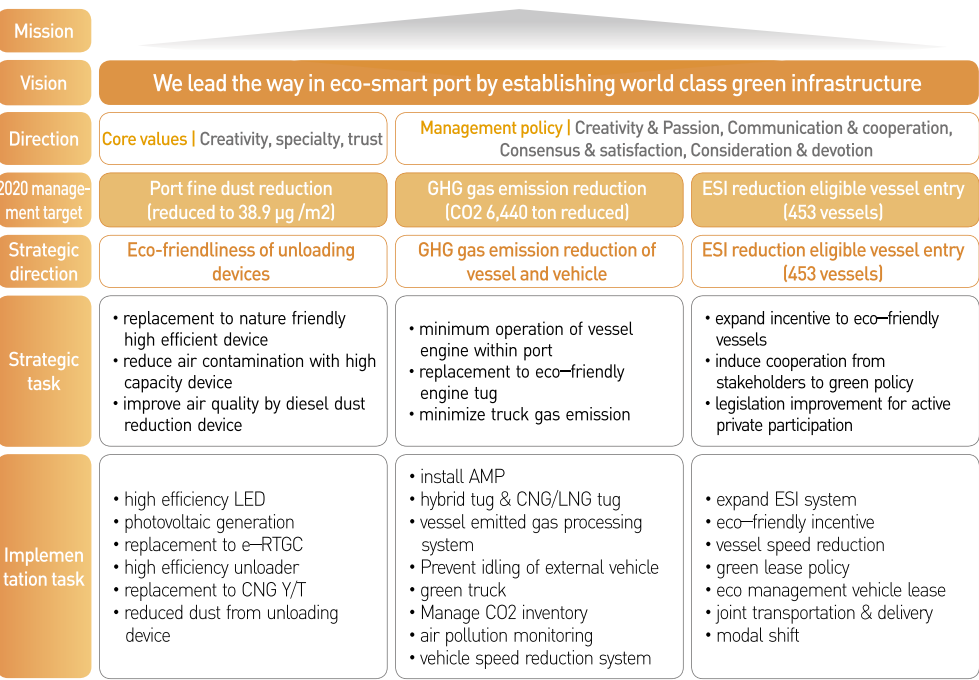


Establishment of Eco-friendly port

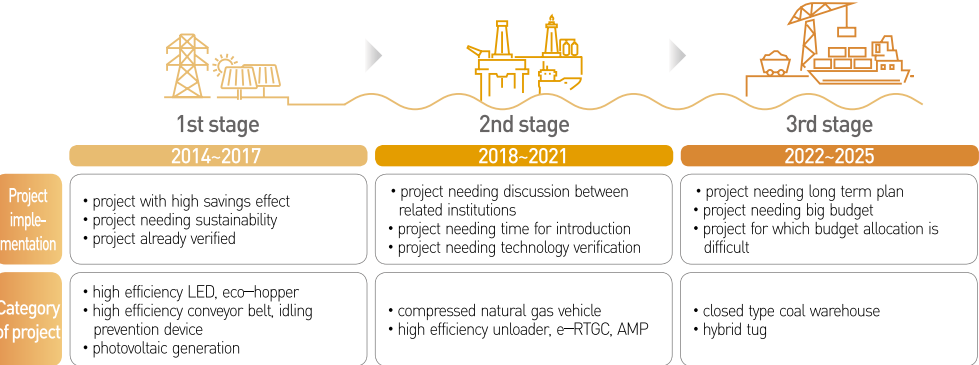
Establishment of Green port

The Ministry of Maritime Affairs and Fisheries is carrying out green port policy that realizes low carbon green growth port in order to enhance the efficiency of resources and energy on the overall port development and operation and to have the economy and environment grow harmoniously. In this regard, Ulsan Port Authority, as an enterprise citizen, established and is operating the green port development plan to further develop Ulsan port as an environmentally sustainable port, and at the same time, responding to international environmental regulations as well as satisfying the government's climate change response policy basis. In 2017, in order to realize a more effective low carbon green port, we have carried out and reestablished a mid to long term strategy for developing Ulsan port into a green port, and established countermeasures for adapting to climate change. The mid to long term plan for developing Ulsan port into a green port aims to respond to air and water contamination issues, reduce greenhouse gas, and realize a low carbon green port. Especially, this plan includes the details for carrying out port environment management activities to resolve the problem of cargo dust arising within the port such as coal, and sub material from feed, and air contamination due to gases emitted from vessels.

Mid to long term green port promotion strategy



Green port implementation roadmap



Ulsan port fine dust reduction performances

Section	2015	2016	2017
Measurement point near main port	46.83	43.33	44.75
City average	45.17	43.17	42.67
6 major piers within port*	—	—	43.20

* Measurement device location: adjacent to Ulsan port station within 2km from Ulsan main port

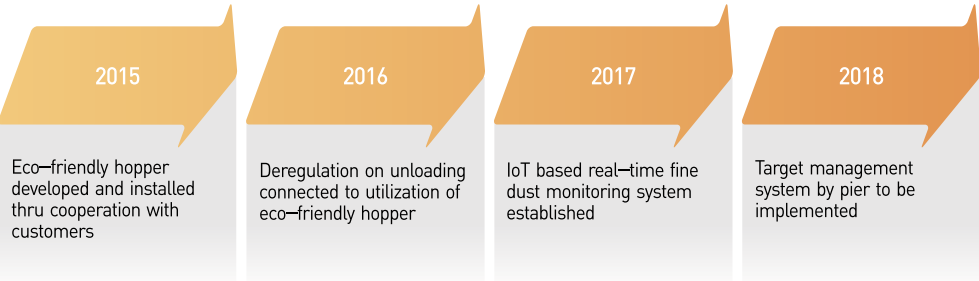
** Source: Ulsan Institute of Health & Environment, Ulsan Port Authority

Fine dust management activities

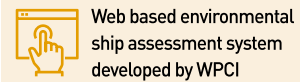
Due to the dusts arising in the course of unloading, and storage of sub-material for feeds, Ulsan port has been exposed to numerous civil complaints from port laborers and neighboring residents on the worsening labor and living environment. First of all, we restricted open storage and unloading of dust emitting cargoes, but this led to the deterioration of business of Ulsan port's feed industry and unloaders. Ulsan Port Authority devised the resolution method by which customers' economic burden may be lessened, while dust could be reduced at the same time, and we successfully developed and commercialized eco-friendly hopper through joint R&D with developers and unloaders. This eco-friendly hopper can reduce dust by 80% or more in comparison with existing traditional hopper, and we completed patent application and registration as the hopper restraining dust occurrence. In 2015, Ulsan Port Authority approved unloading of sub-material for feeds, conditionally upon use of relevant eco-friendly hopper. Subsequently, we established a repair plan by continuously collecting complaints from customers on the difficulty in using the hopper and opinions on improvement measures for the use of eco-friendly hopper. As a result, 230,000 tons of sub-material for feeds were attracted to be processed, whereas non was processed in 2016. By this performance we mitigated customers' economic burden while creating the performance in reducing the density of dusts.

Ulsan Port Authority has been seeking the resolution method for improving air quality. In 2017, we installed fine dust measurement devices using IoT technology as the 4th industrial innovative technology at 6 places for the first time among domestic Port Authorities. We measure and monitor 6 items comprised of fine dust, fine particulate matter, noise VOCs (volatile organic compounds) in real time. In case measurement result in any excess to environmental standard (Fine dust(PM10) 100μg/m³, fine particulate matter (PM2.5 50μg/m³)) within the port, action is taken to suspend unloading. We plan to continue exerting efforts to create a pleasant air environment in Ulsan port in the future.

Port fine dust reduction efforts



What is environmental ship Index (ESI)?



Web based environmental ship assessment system developed by WPCI

- Contaminants nitroxide cargo, sulfur oxide cargo, greenhouse gas emitted by vessel is calculated as 0~100 points, and higher grade is given to higher score
- The voluntary system where port authority induces entry of eco-friendly vessels and reduces air contaminants by providing incentives to ESI vessels



Introduction of user fee exemption system for eco-friendly vessels

In Ulsan port, carbon emission due to vessels takes up more than 60% of total emission. As such, in order to participate in national greenhouse gas emission reduction, Ulsan Port Authority recognized the necessity for reduction of carbon emission from vessels, and adopted Environmental Ship Index(ESI) system developed by the World Ports Climate Initiative(WPCI) under the International Association of Ports and Harbors. By designing ESI user fee exemption system suitable to Ulsan port conditions, we implement 10% exemption on vessel entry and departure fee on the vessel entering Ulsan port with 31 or higher ESI points, and 121 million Won in total was supported to 267 vessels in 2017.

AMP(alternative maritime power supply facility) established

Ulsan Port Authority has established mid to long term plan on establishing AMP (ground electricity supply facility) to induce entry of eco-friendly vessels. AMP facility is the direct supply of electricity from land rather than power generation from vessel engine using fuels such as bunker C oil to supply the electricity required by a vessel at a berth in a pier, and is closely related to greenhouse gas reduction of the port. Ulsan Port Authority commenced work on installing 5 AMPs within main port pier 1 and 2 in dual use as harbor crane in 2017. We will expand installation to Yongyeon pier, and plan to install 10 AMPs at 4 harbors by 2021.

Realization of Ulsan port emphasizing safety and environment



photovoltaic generator installation

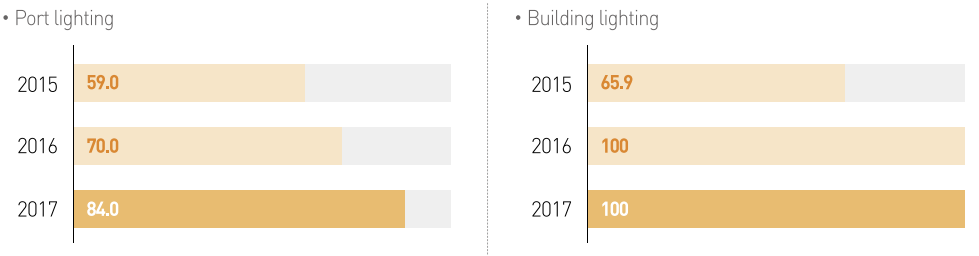
Promotion of photovoltaic power generation project

Ulsan Port Authority is carrying out GHG gas reduction through expanding new & renewable energy production and facilities within the port to respond to new climate system and accommodate the national 'New & Renewable Energy 3020 Policy.' For this purpose, to install photovoltaic generation facilities utilizing idle spaces such as warehouse roof in the port, we implemented private investment attraction activities. In November 2017, a MOU was signed between Ulsan Port Authority, Dongbu Express Co., Ltd, and Youngnam energy service Co., Ltd., to proceed with the installation of photovoltaic power generation facilities using the roof of Dongbu's warehouse at the back of the main port 3rd pier. In this project, Youngnam energy service invested 2 billion Won as project cost, under the condition to donate the facility to UPA after 20 years. With the approval by Dongbu Express as the warehouse owner, the photovoltaic generation facility installation was completed after 3 months since its commencement. The size of the facility is 1.1MW on the warehouse area of 13,410m², which can be used by 400 general households for one year. This project is meaningful as the first private invested photovoltaic development business carried out in Ulsan port, Ulsan Port Authority will spare no efforts on expanding the dissemination of renewable energy including photovoltaic power generation.

LED floodlighting development and installation

To create an eco-friendly port, we have replaced lighting within the pier with LED lighting which is superior in energy efficiency. Especially, in 2009, we signed a development and installation agreement on LED floodlighting for ports for the first time among domestic ports to implement the development of LED floodlighting for ports jointly with a private enterprise and started replacing the lights. By 2017, we supplied 96.1% of all lightings with LED lights, reducing CO₂ emission by 397,45tCO₂e per year in comparison to existing floodlighting.

LED distribution rate



Small photovoltaic sensor light installation

For the port facilities where electricity supply is impossible such as a seawall far from land, installation of energy independent sensor light is essential. Ulsan Port Authority has been cooperating with small photovoltaic sensor light developing enterprise since 2016 to develop sensor light in consideration of port conditions. In 2017, we installed test product at Maeam pier, South cargo, etc. Small photovoltaic sensor light is capable of internal power generation without the need of lead-in of external electricity. With additional merit of introducing battery charge/discharge method and IP68 waterproof function, this light is a suitable product for ports. According to study results on opinions from pier users regarding pilot installation section, it appeared that visibility is satisfactory. In the future, Ulsan Port Authority will expand installation of energy independent sensor lights to establish a green port.



Photovoltaic sensor light

Eco-friendly port hinterland constructed by processing of eco-friendly dredge soils

As Ulsan port is geographically located on the lower Taehwa river, and earth and sand flow in continuously. Therefore, dredging to maintain Ulsan port is required in 3 to 4 year intervals. However, as dredged soil are dumped at particular outer sea area, numerous problems occur such as destruction of marine environment, civil complaints, high disposal costs for transporting to remote places, etc. To solve this problem, Ulsan Port Authority changed the landfill plan for port hinterland (Zone 2) from sea sands (80%) and ground soil (20%) under the original plan to Ulsan port maintenance dredge soils, and constructed eco-friendly port hinterland without destroying the sea.

Safe port establishment 1: Land & maritime safety

Land & maritime safety management

As Ulsan port has domestically largest petrochemical complex located at hinterland and is world's third ranking liquid cargo handling port, any occurrence of an accident is highly likely to lead to large scale accident and hence special attention to safety management is required. Ulsan Port Authority broadly classifies safety risk issues of the port as ground and maritime issues.

Port safety management process



Integrated safety management system cooperated between private, government and public sectors

By establishing and operating safety cooperation system with Ulsan port related institutions, we are enhancing the system to proactively prevent safety accidents. In order to share safety policy, to establish joint response system for any occurrence of disaster situation, and to prevent marine safety accident and disaster through cooperated safety publicity network education, 13 institutions and industry associations including Ulsan Regional Maritime Affairs & Fisheries Office are carrying out cooperation. The heads of 8 port related institutions discuss important issues on marine safety and decide on policies through regular meetings. Hands-on workers at 13 institutions including industry and associations are engaging in comprehensive and systemic marine safety accident prevention activities through practical discussions. As such, the performance of Ulsan port to extend safety culture and to contribute to enhancing safety consciousness was acknowledged, and we have received Prime Minister's award at 2017 'Safety Culture Grand Awards' sponsored by the Ministry of Public Administration and Security .



2017 Safety culture grand awards

Operational status of Ulsan port related institutions' safety consultative group

Classification	Major contents
Ulsan port maritime safety belt	Safety related policies and projects are developed and promoted with Ulsan port related institutions and heads of corporations, and associations to prepare safety accident reduction measures for the port
Ulsan port safety manager association	Unloading safety accident reduction efforts such as removing safety hazardous factors, regular safety inspection etc.
Safety & health association	Analysis on accident and disaster type & status and to prepare safe accident reduction measures for the port

Strengthening the specialty of unloading practitioners

As the largest domestic processor of liquid and hazardous cargoes and world's top 3 port, Ulsan port is well prepared for prevention of safety accident in unloading hazardous cargoes. We implement customized tour training where a world-class specialized inspector visits each pier reflecting the characteristics of 24 hour-operated hazardous pier, working hard to enhance specialties on treating dangerous substances. Furthermore, through hazard learning club activities comprised of Ulsan Regional Maritime Affairs & Fisheries Office and corporate groups, we are regularly engaged in research and discussion on advancement of relevant cargo safety management. Meanwhile, due to outsourcing of unloading facilities, blind spots occurred in the training of outsourced laborers who are private entrepreneurs. In order to achieve consensus and to reduce safety accidents, we implemented mandatory safety training to unloading facility laborers, and we implement strong safety policy such as withdrawing passes from laborers who failed to complete the mandatory safety training.



Ulsan port loading masters' specialized safety training

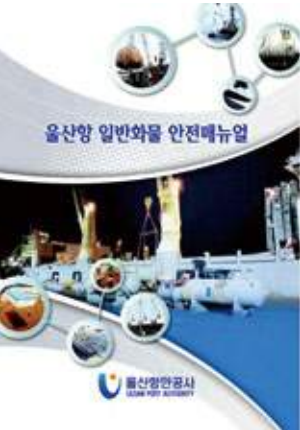
Realization of Ulsan port emphasizing safety and environment

Number of ground safety accident occurrences unit: case

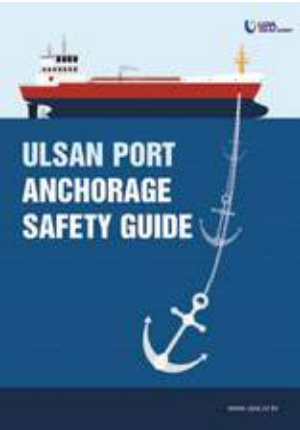
2015	2016	2017
12	10	13

Number of maritime safety accident occurrences unit: case

2015	2016	2017
20	9	15



General cargo safety manual



Anchorage Safety Guide

Ground unloading safety culture established

In order to reduce ground unloading safety accidents, we published and distributed customized safety manual (general cargo, bulk, Ro-Ro cargo, etc.) by cargo type, and implement continuous safety education and consulting activities so that port laborers would comply with the safety manual as a way of life. By designating and operating the 4th day of each month as ‘safety inspection day’, we continuously improve safety facilities, unloading procedure through various safety inspection activities such as joint safety patrol operation with Korea Occupational Safety & Health Agency. Moreover, we endeavor to establish unloading safety culture by safety related R&D investment activities, incentive system operation such as safety ladder development by internal R&D and awarding superior safety managed place of business.

Safe resting facility secured

Most of the land and maritime safety accidents in 2016 were due to laborers’ human factors. We received the opinion from Ulsan port transportation union and pier operators that laborers’ concentration on duty is deteriorated due to insufficient and obsolete rest spaces within the new harbor and main port. Ulsan Port Authority held discussions with interested parties on resting facility installation, necessities and operating method, and installed 5 safe resting facilities using containers in the places where resting space is lacking. Moreover, we have expanded obsolete port laborer lounge and restaurant to provide sufficient resting area, helping to prevent deterioration in concentration on duty due to fatigue.

Sophistication of marine climate information provided

Ulsan Port Authority, in order to prevent accident due to bad weather, provides customized local marine climate information service for the first time among domestic ports. By receiving local marine climate information (climate information such as wind direction, wind speed, wave height, and sea water circulation observation data) specialized to Ulsan port from private weather forecast services, we provide forecasts twice a day to vessels in the port via broadcasting from control room, and induce evacuation of vessels in case of bad weather. Furthermore, in case of bad weather, we provide maritime climate information to port users through SMS and SNS. In 2017, we opened a homepage dedicated to the climate of Ulsan port to provide wind direction and wind speed of Ulsan port in real-time. We provide inner and outer port climate information using a professional weather forecaster. Meanwhile, in case of bad weather, we actively hold a vessel evacuation association meeting to ensure port safety, operating 24 hours in emergency.

Safe entry of vessels ensured

As there is a potential for safety problem from expanded port duty, increasing navigating vessels, and subsequent berth shortage due to the gradual opening of Ulsan new port, we expanded a collective berth (E1~E2 section) to mitigate vessel density and prevent collision accidents. Moreover, by discussion on safety actions following the collective berth expansion with related institutions, we operate by clarifying berthing limit and establishing utilization plan for evacuation waters in case of an emergency. Furthermore, we published and distributed safety manual on berth use and ship traffic to vessels entering Ulsan port to analyze berth vulnerability level due to bad weather and to prevent vessel stranding accident, etc.

Facility improvement to prevent marine safety accident

In order to prevent marine safety accident, Ulsan Port Authority continuously endeavors to identify and prevent factors of accident risk in advance. As the North sea wall in the new port raised threat to ship traffic due to poor visibility at night, we installed sensor lights and repaired defective lighting facilities. Furthermore, we installed LED night sensor lights at major curved points, and ensured safety by expanded installation of vessel control CCTV to clear shadowed area from control. Meanwhile, vessel block transportation barge without dedicated pier may anchor at a berth place while off duty, and we provide dedicated floating dock pier to prevent any accident due to berthing of barges. We established tug harbor near the main sea route with the most complex port traffic to operate with timely supporting system in case of an emergency.



construction site

no casualties achieved

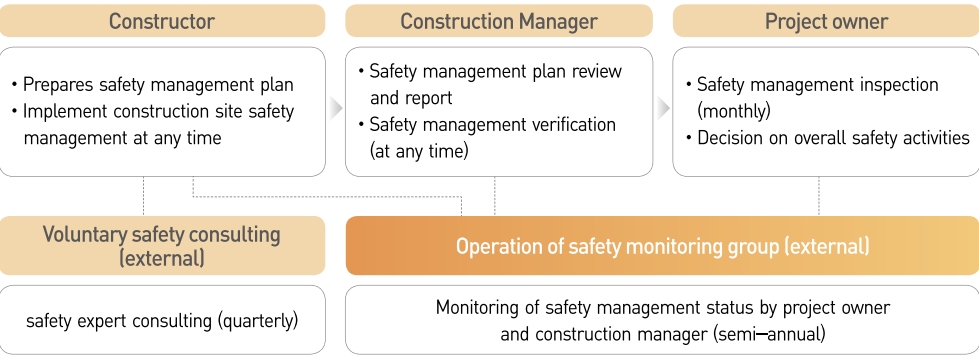
for 3 consecutive years

Safe port establishment 2: Safety in port construction & facility

No casualties achieved at construction site for 3 consecutive years

For safety management of construction site, we established regular safety management system where outside experts monitors the project owner who is comprehensively responsible for the construction site safety management. Furthermore, we have organized the construction site safety management CoP under participation by project owner, constructor, construction project management engineer to publish Ulsan port–specialized safety management manual, installed experiential safety education site, and developed VR safety education contents in which an accident can be experienced. Through these, prompt finding of site condition and experiential safety education to day laborers are now possible. We have been achieving no casualties at the construction site for 3 consecutive years.

Operation system of safety monitoring group



Ulsan port safe from earthquake

The seismic retrofit plan on pier facility commenced from 2014 with facility seismic performance evaluation and design, and full-fledged retrofit work was implemented in 2015. Originally the retrofit was scheduled to be completed by March 2017. However, Ulsan Port Authority shortened the work period by 8 months through designating and operating alternative pier, changing work method from land to maritime as well as allocating additional workbenches (1 set→2 set), and was able to respond proactively before the Gyeongju Earthquake in Sept. 2016. We planned seismic retrofit of buildings and implemented it since 2016. When designing seismic retrofit of buildings, we upgraded design level from seismic grade 2 to grade 1 level in consideration of putting safety of port laborer as the highest priority. Seismic retrofit was completed in 2017.

Thorough inspection and repair & reinforcement of facility

Among the 37 facilities under management, the percentage of facilities aged 20 years or longer is 67.9%. Hence, Ulsan port is rather obsolete, and we systemically manage it every year by establishing the port facility safety and maintenance plan. Ulsan Port Authority implements regular inspection, and repair and reinforcement on facilities to be managed. Especially, in order to verify underwater repair and reinforcement results, supervisors directly perform underwater inspection, contributing to maintaining facility grade B or higher for 5 consecutive years.



Repair & reinforcement underwater inspection

Inspection and repair & reinforcement of facilities under management

Classification		2015	2016	2017
Safety inspection	Internal	3 times	6 times	6 times
	Out-sourced	Precision inspection (1,2 class): 12 points	Precision inspection(1,2 class): 5 points, Regular inspection(other): 8 points	Precision safety diagnosis & inspection(1,2 class): 11 points Precision inspection(other): 1 point
Repair & Reinforcement		10 points 2,410 mil Won	12 points 1,666 mil Won	19 points 1,260 mil Won

Realization of Ulsan port emphasizing safety and environment

Interested parties cooperation

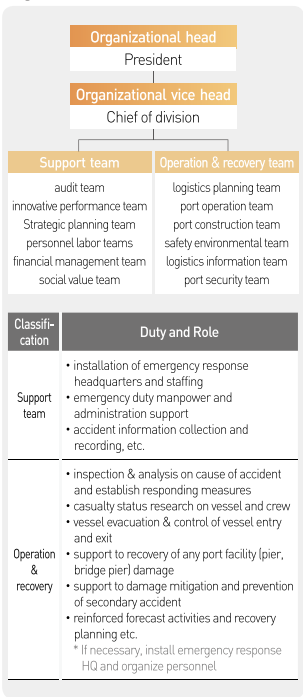
Maritime safety , disaster

- Ulsan Port Marine Safety Belt
- Marine Safety Campaign Program

Ground safety

- Ulsan Port Safety Manager Association
- Port Safety & Health Association

Emergency response organization and duties



Safe port establishment 3: disaster safety

Operation enterprise-wide disaster management system

Ulsan Port Authority established and operates disaster management system for the purpose of managing health and safety of port industry laborers and Ulsan citizens. The disasters managed by the corporation in priority are natural disaster such as typhoon, earthquake (earthquake tsunami), social disasters such as marine vessel accident, large scale marine contamination accident, radioactive leakage accident, etc. For disaster prevention and prompt and effective response upon occurrence and recovery, we have established and is operating an emergency response manual on each disaster. Moreover, we established and operate disaster response system under cooperation with members of Ulsan Port Marine Safety Belt consisting of Marine Safety Campaign Program, Ulsan Port Safety Manager Association, Port Safety & Health Association and Ulsan Port Authority as the group of interested parties related to disasters.

Integrated Disaster Management System

Vision	Proactive prevention of disasters and timely response to provide customer oriented port service		
Target	Port policy putting safety first		Provide non-stop port operation service
3 Strategic Tasks	Establish disaster management control tower	Enhanced disaster management, prevention function	Reinforced capacity for disaster response and recovery
Imple- Men- tion tasks	<ul style="list-style-type: none">• role and responsibility rearranged by institution• Reinforce disaster management network• Establish standardized disaster response	<ul style="list-style-type: none">• Reinforce safety management inspection & supervision• Reinforce disaster prevention training and PR• Enhanced expertise of manpower in charge	<ul style="list-style-type: none">• speedy collection and dissemination of disaster information• timely response in budget, manpower and equipment• Establish system for research and feedback of cause of accident

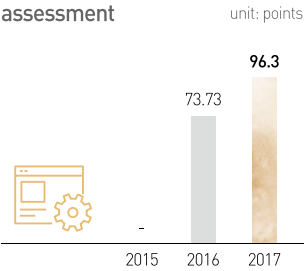
Response Manual by Type of Disaster

Section	Related situation	Response manual
Natural disaster	Hurricane	In case hurricane passes 28.0N, 132.E or hurricane warning is issued
	Earthquake (tsunami)	<ul style="list-style-type: none">• occurrence of Mw 4.0 (sea 4.5) or higher near Ulsan port• Ulsan earthquake tsunami warning(expected wave height 0.5~1.0m)
Social disaster	Ship accident (general Vessel)	<ul style="list-style-type: none">• in case of collision, fender-bender, capsizes, sink, fire, explosion of vessel causing numerous casualties or occurrence thereof is anticipated,• in case any explosion or fire of cargo loaded on hazard carrying vessel such as oil tanker etc caused serious damage to vessel or occurrence thereof is anticipated
	Sea contamination accident	<ul style="list-style-type: none">• in case of spill of sustainable oil by 100kl or non-sustainable oil by 300 kl, or occurrence thereof is anticipated
	Radioactive leakage accident in adjacent country	<ul style="list-style-type: none">• in case of potential entry of any person exposed to radioactivity or import of contaminated goods via ship• in case of any vessel calls at a port in a neighboring country where radioactive leakage accident occurred

Emergency response process

Ulsan Port Authority responds to crisis situation, by identifying emergency signs by categories of attention, caution, warning and critical. If emergency is determined at the circumstantial judgement meeting, the system switches over to crisis management mode, organizing an emergency action team as non-permanent organization or responding on a department level. We implement response activities, identifying situation overview and sharing collected information through systematic cooperation with related institutions until crisis situation ends. Moreover, upon the end of crisis situation, we are establishing an emergency response process to study the damage to facilities to be reflected in future planning.

Disaster management assessment



Joint training on disaster response



Operate Emergency Response Headquarters

Emergency response training & activities

In order to minimize human and facility damage due to large scale disasters, we are periodically conducting various disaster response training. The disaster response training is implemented as war-game training assuming real situation and site training, jointly by Ulsan port related institutions, companies and associations. In 2017, we participated in joint private, public, and military training in response to major accident at anchored vessels, inspection training on site action manual in case of marine vessel accident, and '2017 disaster response safety Korea training.' Through these training, we reinforced disaster response, management, and recovery capacity such as role and responsibility allocation to each institution.

Operation of emergency information system

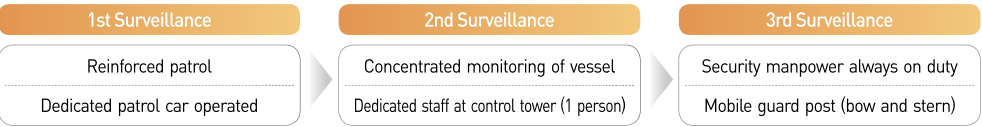
In order to establish efficient management and prompt reporting system for disaster, we have established and operate Ulsan port integrated disaster safety homepage. The integrated disaster management system posts disaster status guide, harbor damage status monitoring, disaster related manual and network of emergency contacts of related institutions in real-time, and manage with the capacity of immediate disaster response. Meanwhile, in consideration of the characteristics of Ulsan port which is sensitive to marine climate change due to narrow water area and direct exposure to outer sea, we have established a unique customized marine climate information system to provide information to port users in order to efficiently respond to disasters due to bad maritime weather..

Safe port establishment 4: port security

Active security management to prevent illegal entry

As attempted illegal entry is increasing steadily at nationwide ports, concentrated surveillance is implemented on suspicious vessels such as vessels with regulated entry to the country or entry to North Korea etc. Especially, since the distance from vessel berthplace to pier gate is short in case of Ulsan port, establishment of a security system that is capable of effective response to illegal entry is important. As such, Ulsan Port Authority have established and operates Ulsan port security operation plan to ensure the quality of security service. In 2017, Ulsan Port Authority, to prevent illegal entry that is becoming more sophisticated recently, expanded the scope of designation on priority controlled vessel from 160 in 2016 to 491 in 2017, reinforcing security management. Furthermore, we completely prevented unauthorized disembarking at the source by establishing a multiple surveillance system linking site manpower and remote surveillance.

Multiple surveillance system



Internal security review reinforced

As domestic and overseas terror threat intensified and required port security level is heightened at the same time, Ulsan Port Authority reinforced internal security review and identified vulnerable points in security to take proper action. In relation to access to port, we inspected the user status of entry pass for all users, and reinforced port entrance management. From the security infrastructure aspect, we reinforced facilities by identifying vulnerable points in security such as security wall, etc. We set up a checklist by facility and areas reflecting comments from external security review to supplement internal security review items. Due to these efforts, there were zero port security accidents consecutively from 2016 to 2017. The number of comments in the 2017 external security review also decreased by 60% (15 in 2016, 6 in 2017) in comparison with the previous year.

Port security accident

	unit	2015	2016	2017
security accident occurrence	cases	3	0	0
Unauthorized disembarkation	cases(person)	8(11)	9(24)	1(2)

Contribution to community development by coexistence and cooperation

Contribution to community development

Establishment of Jangsaengpo waterfront

Ulsan city where Ulsan Port Authority is located, has the characteristics of an industrial city, with insufficient resting place and tourism contents in the region for citizens. Moreover, low interest and any negative perception by local citizens on Ulsan port where we operate may become an obstacle to Ulsan Port Authority’s social responsibility management activities as we aim to grow together with the local community. In this regard, Ulsan Port Authority enhanced the image of Ulsan port by opening up the port facilities and developing contents for citizens to use the port, and is working hard to establish Ulsan port as a place where local citizens prefer to visit frequently for resting. Even though Ulsan port south seawall waterfront facility has already been operating, perception by local citizens was low with weak activity due to a lack of diverse contents and limitations in the facilities. In this regard, we have been carrying out contents development in cooperation with the local community and municipality to enhance the impact through contents linked to municipality and Jangsaengpo Special Tourist Zone. As the result in 2017, we established Jangsaengpo waterfront comprised of waterfront spaces such as Jangsaengpo area port facility remodeling, food truck and walking trail etc, as well as children’s theme park, tourism infrastructure and contents, in cooperation with Ulsan Regional Maritime Affairs & Fisheries Office and Ulsan Nam-gu borough. In 2018, operation commenced full-fledged to create regional jobs and contribute to vitalization of the local economy by securing tourism contents. The anticipated effect* is estimated to create 1,400 indirect jobs and economic profit of around 68,2 billion won (2020) due to increased employment at service facilities such as neighboring restaurants, etc.

* Job finding inducement effect was calculated by applying the Ulsan metropolitan city tourism industry sector inducement coefficient announced by “Sustainable whale industry development method research (”2014, Whale research institute of National Institute of Fisheries Science)



Jangsaengpo waterfront



Jangsaengpo children's Theme park



Jangsaengpo monorail



Jangsaengpo water play park

Establishment of Ulsan port celebrating with festival and literature

Ulsan Port Authority operates citizen participation program linked to Ulsan whale festival which is the representative regional tourism content. In 2017, we ran 5 programs such as Ulsan port education program, street parade, etc., and the number of participants was 2,148, a 29.1% increase from the previous year. Furthermore, we held a public contest for the 5th lighthouse literary award as a literature-linked project. We invited artworks of poems, short stories, and essays with lighthouse as its theme, 914 artworks in total entered this event, and we held an exhibition of illustrated poems for prize-winning artworks. These efforts of Ulsan Port Authority were acknowledged even from outside and we received an appreciation plaque from Ulsan Nam-gu borough office, and we got the evaluation that local patriotism of citizens has been enhanced along with the strengthened status of Ulsan port.



Ulsan Whale Festival



Street Parade

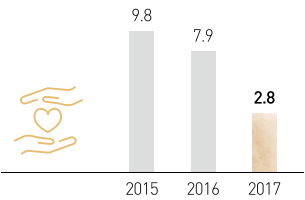


Event booth : instant photo printing



Lighthouse literary award

Per capital service hour unit: hour



Social contribution activities satisfaction level unit: score

Section	2015	2016	2017
Participant satisfaction level	82.17	80.68	74.76
beneficiary satisfaction level	94.5	n.a.	98.33

Social contribution activities: promotion system

Operation system

Ulsan Port Authority is engaged in social contribution activities to resolve social problems and to help neighbors alienated from the local community based on the social contribution brand of ‘the sea full of laughter.’ We introduced shared value creation (CSV) concept on social contribution. We established the goal of social contribution activities as ‘Realizing social value by creating shared value of the local community.

Promotion Strategy for social contribution activities

Goal	Realization of social values by creating shared value of the local community, culture, and marine industry		
Direction	Fostering & support to marine industry	Practice sharing with the local community	Vitalize culture, art, and sports
Strategic Task	Create shared values in connection to marine industry	By sharing within community, realize the economy where people lead good life together	Contribute to realization of cultural city with abundant freedom and creativity
Practical Task	<ul style="list-style-type: none">carry out project for fostering future manpower in marine areadiscover new item to resolve social problem related to marine industry	<ul style="list-style-type: none">continued support to alienated group in local communityPromote effective social contribution project by cooperation with municipality and regional corporations	<ul style="list-style-type: none">vitalization through sponsoring local traditional culture and artrealize balanced development by sponsoring non-popular sports
Performance indicator	Quantitative	<ul style="list-style-type: none">(common) highest beneficiary satisfaction level (84 points) maintained (2015(94.5)–2016(n.a.)–2017(98.33))(common) budget execution ratio by direction 90% achieved(2015(29.26%) – 2016(66.34%) – 2017(83.57%))	
	Non-quantitative	Marine industry value created and raised awareness	Improved quality of life for alienated group
Monitoring & feedback	Regional cultural, art sport even vitalized		
	Planning	Task implementation	Task inspection
Monitoring & feedback	<ul style="list-style-type: none">definition of projectperformance index, target setdetailed task derivedresource distributed	<ul style="list-style-type: none">detailed action per project planned and executedsocial contribution consultative group & conference operated and participated	<ul style="list-style-type: none">management environment change and problem, obstacle checkedresolution, measures to overcome sought outperformance managed
	Assessment and use of results		
Monitoring & feedback	<ul style="list-style-type: none">internal, external assessmentaction on commentsperformance shared and expandedfuture improvement task derived		

Ulsan Port Authority, to achieve the goal of social contribution activities as ‘Realization of social values by creating shared value of the local community, culture, and marine industry,’ is carrying out social contribution project focusing on the 3 directions according to social contribution activities promotion system as a above. Especially, since these social contribution activities performance is linked to ‘social value index(KSI)’ assessment that is set as our management goal, we are institutionalizing so that the sustainability of enterprise-wide social contribution activities can be reinforced.

Fund Preparation

Budget compilation

Our social contribution budget is increasing every year. Every year, we allocate 0.5% of sales from the previous year to social contribution budget for social contribution activities. 2018 budget is 440 mil Won. By securing social contribution budget amounting to 0.53% of sales and 1.13% of pre-tax profit.

Matching grant system

We operate the matching grant system where Ulsan Port Authority donates an amount identical to donations by executive/employees if they donate some amount from their monthly wage. The funds raised are donated to the treatment of child patients with leukemia or cancer, support to soldiers and vulnerable social groups, and support to typhoon victims etc.

Social contribution activities fund

Section	unit	2015	2016	2017
matching grant	10,000 Won	2,432	1,970	2,633
social contribution amount and various donations	10,000 Won	8,971	19,042	31,792
Total	10,000 Won	11,403	21,012	34,425

Contribution to community development by coexistence and cooperation

Specialized program in free-semester system(2017)

Section	school (open)	Number (person)
UPA type	15	464
Specialized type	5	170
Cooperation type	2	52

Education donation program operation status

Section	unit	2015	2016	2017
No of operation	times	27	41	68
No of beneficiary	persons	1,202	2,069	2,460

Social contribution activities: performances

Fostering & Support to Marine Industry

Ulsan Port Authority diversified the programs providing opportunity for marine and port area focused experience and career path exploration to local schools. We expanded the scope of beneficiaries to programs such as U-Tour, open port, and hope Job Go, continuously participating in fostering future manpower in the marine port area. The number of beneficiaries to educational donation program in the marine port area is growing every year. In 2017, we received certification as ‘Education donation career path experience institution’ from the Ministry of Education.

Last year we held ‘Marine port school type career path experience camp’ which is our internal career path experience program. Our programs which consisted of special lectures by port professionals, marine history and culture experience, marine industry education and marine leisure sports experience were positively evaluated by participating teachers and students. Especially, we expanded the scope of camp participants from youth in Ulsan region to youth in Gyeongju and Yangsan area to remove the blind area in the career path experience program in the marine port area within Gyeongsang Provinces.

Furthermore, we support manpower fostering in marine port area, including sponsoring of Korean Marine Boy Scouts, sponsoring the education fee for Korea Port Training Institute’s port area manpower education, and support to UNIST energy manpower fostering project, leading the creation of social values. In the future, we will invite local students from Ulsan and ordinary people as members to operate UPA education donation activities group, substantializing our education donation and career path experience programs to enhance the citizen’s level of awareness in the area of maritime and port.

Operation of marine port linked education program (2017)

Section	unit	U-Tour	Open port	Hope Job Go	other cooperation	Sum
No. of operation	times	33	6	4	25	68
No. of beneficiary	persons	1,169	136	102	1,053	2,460

Practice sharing with the local community

Community education support

We have provided support to Jangsaengpo elementary school in education activities and experience learning since entering into company-school collaboration agreement in 2012. We supported the children at Jangsaengpo elementary school who live further away from downtown so that they can take after school education program in the classroom in English, mathematics, computer, and institution and customs free of charge. Since 2016, we promoted the so-called triangular cooperation project * where we replaced the cash paid to Jangsaengpo elementary school for after school education subsidies with the after school education service provided by Ulsan University’s after school project group named ‘Teach for Ulsan’ under cooperation agreement with Ulsan University.

* The service providing method through contracting among Ulsan Port Authority, social cooperative, and the school, introduced as the new model to achieve dual targets of social enterprise vitalization and fostering regional future manpower at the same time.

Customized Local Community Support

Since 2016, Ulsan Port Authority communicates closely with the local community through ‘Ulsan Port Local Community Coexistence Association’ composed of representatives of residents at 4 administrative towns adjacent to Ulsan port(Yaeum Jangsaengpo-dong, Seonam-dong, Cheongryang-myeon, Onsan-eup). Through this association, we promote customized social contribution activities by regional residents and local community such as delivery of donation to local children’s center for the holidays, wall painting with Seonam-dong residents, support culturally disadvantaged group to view opera, support residents to watch PyeongChang Winter Olympics and Paralympic Games, etc.

Support to Disadvantaged Groups and Veterans

Every new year and thanksgiving holidays, we deliver gifts to army units within the region who are defending the country and the region. We sponsor spring picnic events by 1 to 1 matching with seriously disabled children who can seldom engage in outdoor activities. In the month of June for rewarding patriotism to veterans, we engage in volunteer activities to make young radish watery Kimchi and deliver it to veterans' families within the region in collaboration with Ulsan Regional Office for Patriots Affairs.

Social Enterprise Support

To support vitalization of social enterprises, we hold education and procurement discussion session on promoting procurement of products from social enterprises. Due to the activities such as contribution to regional social enterprise vitalization by signing collaboration contract with related institutions, and presenting superior cases at the National social enterprise public procurement workshop, we received ‘achievement award for the 3rd Superior Social Enterprise Awards’ held by the Social Enterprise Vitalization National Network in 2016 for the first time among public institutions. In April 2018, we participated in the establishment of ‘Dreaming value creation factory’ which is the business incubation space for local enterprises in Ulsan, and at the same time, signed a collaboration agreement for social economic vitalization with Korea Social Enterprise Promotion Agency, Korea Occupational Safety & Health Agency, and Ulsan Social Economic Support Center.

Vitalization of Culture, Art, and Sports

Ulsan Port Authority participated in Ulsan Mecenat movement to support culture & arts development through the sisterhood relationship with the local culture & arts community, and set up sisterhood relationship with the Korean traditional music orchestra to continue sponsoring activities such as annual regular concerts. In 2017, we supported the local elementary school to introduce Korean harp and Korean bamboo flute lectures into the after school program. In 2017, we held the second public contest for the vitalization of local traditional performances. By sponsoring the selected local traditional culture performance group, we supported the vitalization of the local traditional culture performances. Additionally, we held the public contest on Ulsan and Ulsan port related handicraft souvenirs, promoting the sponsorship for the development of local culture & arts through the PR of local handicraft work such as market pioneering and marketing, commercialization support, etc. Meanwhile, we are interested in not only culture & arts area but also in the vitalization of sports, promoting related social contribution projects. Especially, for the successful hosting of the 2018 PyeongChang Winter Olympics and Paralympics as a national event, we entered into a donation agreement. We signed a support agreement with the marine sports division of the Disabled sports council to support costs for the training of the national team and the selection and fostering of rising stars until the 2020 Tokyo Paralympics.



Career experience program



Education donation certification



Marine port school camp



Jangsaengpo Elementary School after school program



Seonam-dong mural painting



Radish kimchi sharing event



Social economic business compact



Disabled athlete sponsorship compact

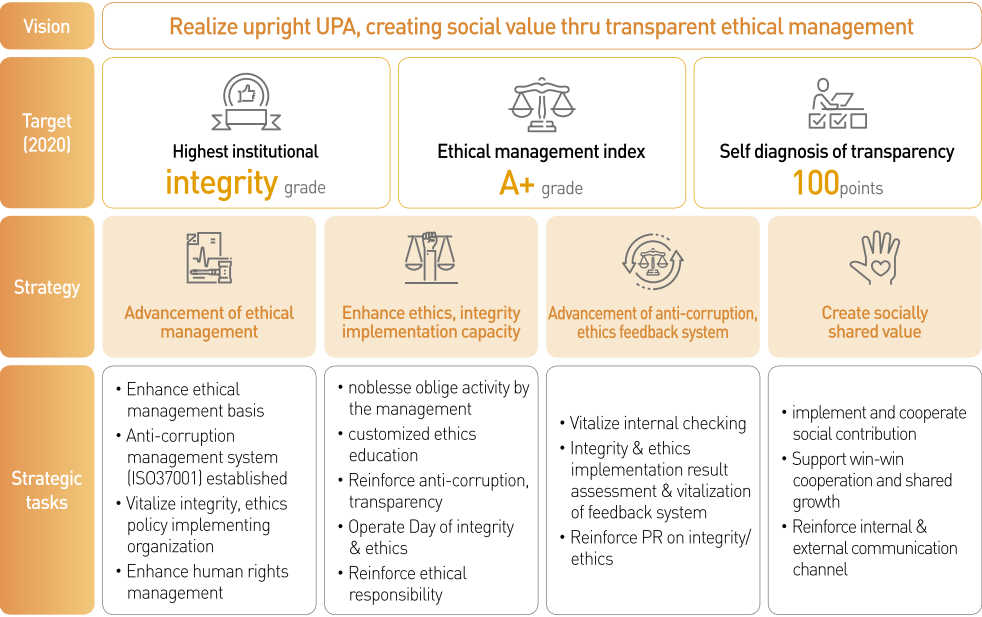
Cultivating ethical & upright corporate culture

Ethical management system

Vision and Strategy of Ethical Management

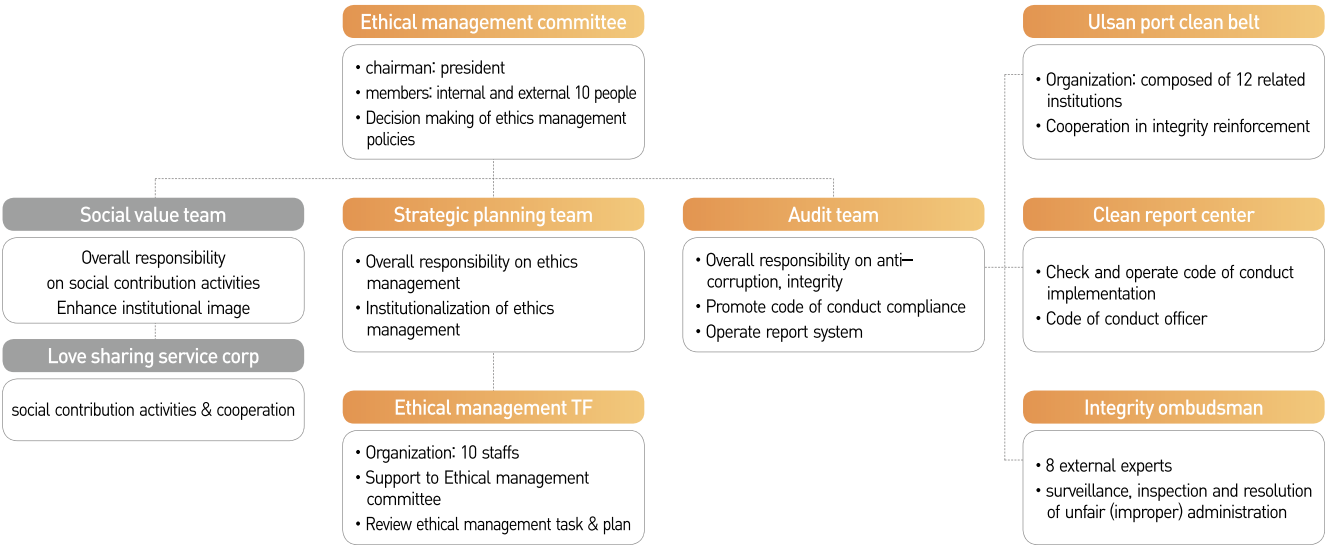
Ulsan Port Authority established ‘Realization of upright UPA creating social value through transparent ethical management’ as our ethical management vision, and is expanding ethics and culture of integrity through 4 major strategy directions and subsequent strategy tasks and execution task implementation. Furthermore, we do not just limit the expansion of ethics culture internally, but we established cooperative and collaborative system with Ulsan port related institutions to spread the ethics and culture of integrity to Ulsan port and the local community.

Mid to Long Term Ethical Management Strategy



Promoting organization

Ethical management business of Ulsan Port Authority is generally promoted by the strategic planning team. According to staged promotion plan, ethical management performance is checked and fed back. By reporting promotion status to ethical management committee, promotion status by department is reviewed and managed.



Ethical management code

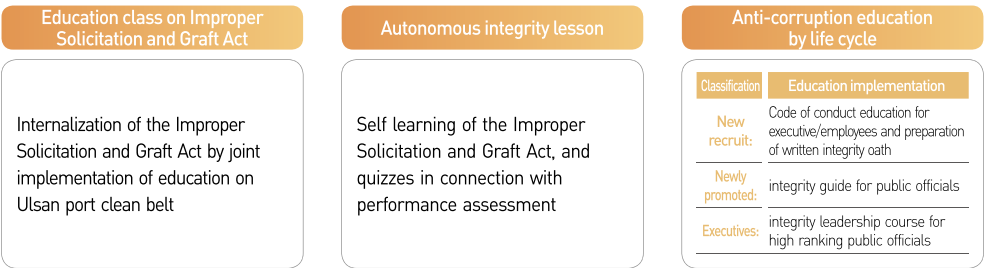


Efforts to embody ethical culture

Internalization and spread of ethical culture

Ulsan Port Authority is running various programs and education for the internalization of members' ethical culture and expansion within the organization. Our executive/employees took autonomous lessons on the Improper Solicitation and Graft Act and it was implemented using internal business portal site, and then problem solving and activities linked to performances assessment were carried out to induce them to take self-initiated integrity learning. Additionally, we enhanced integrity consciousness and preventive ethical activities, through integrity education by life cycle such as education on executive/employees' code of conduct and collecting written integrity oath for new recruits, implementation of integrity guide education on public official to the newly promoted, and high ranking official integrity leadership education for executives,

Ethics education program



Anti-corruption & integrity culture expansion : Operation of Ulsan port clean belt

Ulsan port clean belt is consultative group launched in 2013 by 6 Ulsan port related public institutions initiated by UPA (Ulsan Regional Office of Oceans and Fisheries, Ulsan Customs, Ulsan Coast Guard, Korea Marine Environment Management Corporation Ulsan branch, Ulsan immigration office, Ulsan quarantine station) in order to lead anti-corruption and integrity culture and to realize ethical management. Subsequently, membership was open to private enterprise and associations, for two-way communication with Ulsan port customers. Currently, 16 private institutions have participated. In 2017, association of institution heads of Ulsan port clean belt adopted 'NEW integrity resolution' announcing 19 institution heads' commitment to integrity. Furthermore, Ulsan port clean belt implemented full-fledged joint 'face-to-face education on the Improper Solicitation and Graft Act,' and in 2017 achieved zero violation case of the Improper Solicitation and Graft Act. These performances were externally acknowledged and we were selected as superior integrity institution ranking 1st among related public entities (v type) in the '2017 Public institution integrity level measurement' sponsored by the Anti-Corruption & Civil Rights Commission. Moreover, in January 2017, our superiority in institutional ethics and integrity management was well acknowledged externally such as receiving an award of private-public cooperation for corruption prevention by the Minister of Public Safety and Security, and in December, receiving an award of superior institution in public duty management by the Minister of Maritime Affairs and Fisheries.

Cultivating ethical & upright corporate culture

Ethical management monitoring

By annual measurement of ethical management index (U-BEX), Ulsan Port Authority is researching the implementation of integrity and ethics by executive/employees and their level of awareness, Research results are used in deriving ethical management improvement direction and in the implementation of internal feedback activities. Meanwhile, we monitor site implementation of ethical management by conducting spot check on unfair practice and despotism using superior status, excessive work instructions other than contracted provisions, etc. Furthermore, we implement internal ethical management guidance and inspection activities semi-annually in connection to feedback activities such as urging implementation of ethical management and presenting improvement plans, etc.

Ethical management index(U-BEX) survey items(55 items in 12 areas)

	Survey area	Measured contents
Item	Management philosophy	Whether ethics management is established in management philosophy of UPA
	CEO	CEO's will to implement ethical management
	Governance	Whether governance works (BoD, information disclosure)
	Labor-management relations	Activities of labor-management conference such as frequency of meeting
	Recruitment and fostering	Indiscriminated recruiting and education (disabled, female, etc.)
	Business environment	Human Resource affairs satisfaction & level of anti-corrupt integrity
	Systemization of ethical management	Ethics management system and level of awareness
	Fair trade	Fair contracting and mutual cooperation level
	Customer satisfaction	Customers' satisfaction on individual/group
	Local community	Contribution activities for coexistence with the local community
	Sustainable management	Social contribution activities and efforts for environmental protection
	Separate (subtract points) item	Number of cases in violations of Improper Solicitation and graft Act such as bribery, entertainment, subsidy to event cost, etc.

Reporting system reinforced

Ulsan Port Authority operates various internal and external reporting system to prevent corrupt behaviors through the reinforced reporting system. Reporting is possible through various channels, such as anonymous corruption reporting system, whistleblower reporting system, despotism reporting and counseling window, etc., and identity of whistle blower is thoroughly protected. We verify factual relationships and discover unreasonable elements based on the reporting details, and is continuously endeavoring to improve the system.

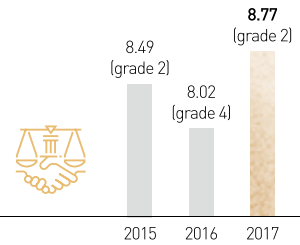
Internal & external reporting channel operation and performances

Classification	Major contents	Performance
Anonymous reporting (red whistle)	• report induced by activation plan for counseling on grievance for internal integrity, and playing role as communication window	• Initial 8 cases in 2017, after operation commenced in 2014 • inspection and action completed on 6 simple complaint cases
Whistle blower system	• Whistle blower center opened and publicized	• Whistle blower activation base prepared
Report/counseling desk on overuse of power	• (2016) report system for overuse of power operated for 100 days • (2017) police officer dedicated to overuse of power designated, Year round operation of visiting counseling, mail, home page etc	• Access enhanced by report center with no restriction on age, informatization capacity • Enhanced caution on behavior of overuse of power

External assessment


The comprehensive integrity level by the Anti-Corruption & Civil Rights Commission is composed of external integrity level and internal integrity level. In 2016, our comprehensive integrity level fell to grade 4 due to a drop in external integrity level, but we returned to grade 2 in 2017 thanks to self-efforts such as customer contact point management and improvement of unfair practices, etc. From now on, Ulsan Port Authority will continue implementation of not only legal responsibility but also ethical responsibility anticipated by conventional wisdom to become an institution with integrity.

Comprehensive integrity level by Anti-Corruption & Civil Rights Commission



Human Rights Management

Ulsan Port Authority rearranged systems such as promotion base for human rights management through adopting 'human rights management implementation guideline.' By developing human right management guideline (checklist), we implemented diagnosis on 9 areas, 38 points of human rights management status. According to the results, we discovered human right infringement elements and implemented preventive activities. Additionally, Ulsan Port Authority declared the commitment to promotion of human rights management by confirming and announcing human rights management charter all over the enterprise and externally.



Ulsan Port Authority human right management charter

We, as the institution performing Ulsan port development and operation related business efficiently, will positively implement human right management emphasizing human dignity and value in all management activities, and will fulfil our social responsibility, and pursue sustainable development together with the interested parties.

For this purpose, we hereby announce the 'Ulsan Port Authority human right management charter as the standard for behaviors and values to be observed by all executive/employees as follows and hereby commit to the implementation the reof.

One, we respect and support the International standard and code supporting the values such as human rights, labor, environment, anti-corruption, etc.

One, we will not discriminate any interested party including executive/employees due to cause of race, religion, disability, sex, birthplace or political opinion, and will provide a work environment of mutual respect and consideration.

One, we will guarantee freedom on forming a labor union and collective negotiation, to protect employees' rights and interest, and aim for mutual prosperity based on confidence between labor-management.

One, we will not permit any form of forced labor or child labor.

One, we will establish a safe and sanitary labor environment to promote industrial safety and health.

One, we will endeavor to achieve win-win growth with business partners, and will support and cooperate with businesses so that human rights management would be implemented.

One, we will respect the human rights of local residents at the location of our institution, and will pursue win-win growth with local residents.

One, we will protect the environment and endeavor to prevent environmental disaster.

One, in providing our service, we will serve our customers with convenience and honesty, and emphasize customer values by protecting customer's personal information collected in the course of business.

We will endeavor to protect the human rights of all interested parties including our executive/employees, and commit to do our best to establish and expand human rights management.

Ulsan Port Authority, all executive/employees

UPA realizing social values

Expanding transparent & fair corporate culture

Transparent Governance structure

Risk and opportunity management

Workplace where members are happy



Transparent governance structure

Organization and Operation of the Board of Directors

Organization and Role of Port Committee

The highest decision-making body of Ulsan Port Authority is the Port Committee established in accordance with the Port Authority Act. The Port Committee consists of 7 non-standing directors in accordance with article 11 of the Port Authority Act and article 5 of the enforcement decree of the same act. The committee plays the role of checking and observing the management, and plays an additional role of the non-standing director giving managerial advice on matters requiring improvement regarding management activities by each specialized area. The matters to be resolved by and reported to the committee are stipulated in article 7 of the articles of incorporation, and the committee deliberates and resolves issues such as management target, budget, funding plan, business plan and operation plan; use of reserve fund and budget carryover, financial closing; acquisition and disposal of basic properties, borrowing long term loan and issuance/redemption of bonds; establishing standard for rent and use fee for port facility; amendment of the article of incorporation and adoption/revision of bylaws, etc. Furthermore, the committee is actively contributing to the value creation of the corporation through business consulting using expertise.

Operation of Port Committee

The committee meeting is classified into ordinary and extraordinary meeting. Ordinary meeting is in principle held quarterly(February, June, October, December) and extraordinary meeting is convened when the chairman or president deems it necessary or upon request from one third of the committee members. The resolution of the port committee shall be adopted by the affirmative vote of the majority of committee members in office. To ensure fairness in decision making, we strictly apply the exclusion rule that any chairman or member who is a special related party to the agenda submitted to the committee shall not participate in the vote, and in this case any member banned from participation in vote is excluded from the number of votes required for the quorum. For the purpose of transparent operation of the board of directors, we disclose the minutes of the port committee meeting on Ulsan Port Authority's homepage and government's public institution management information disclosure system named 'Alio (<http://www.alio.go.kr>)', and the results of processed agenda for the resolution and report are immediately notified to the corporation so as to be reflected on management activities.

Port Committee Member Election Procedure and Term of Office

Recommendation and election procedure for the port committee members is operated in a transparent and reasonable manner. The Act on the Management of Public Institutions and Port Authority Act stipulates that any person recommended by the executive recommendation committee shall be reviewed and resolved by the public institution operation committee, and shall be appointed as a member by the Minister of Economy and Finance. In order to ensure the diversity and representative nature of port committee members, we broadened the scope of the institutions that will recommend our committee members comprised of Ulsan metropolitan city, and the Ministry of Oceans and Fisheries. Based on this, we are expanding the objectivity and transparency of our election. The term of office for the port committee member is 2 years, subject to the consecutive term of 1 year based on the duty performance assessment results by the government department in charge. Furthermore, the chairman is elected by the committee among its members with the term of office for 1 year.

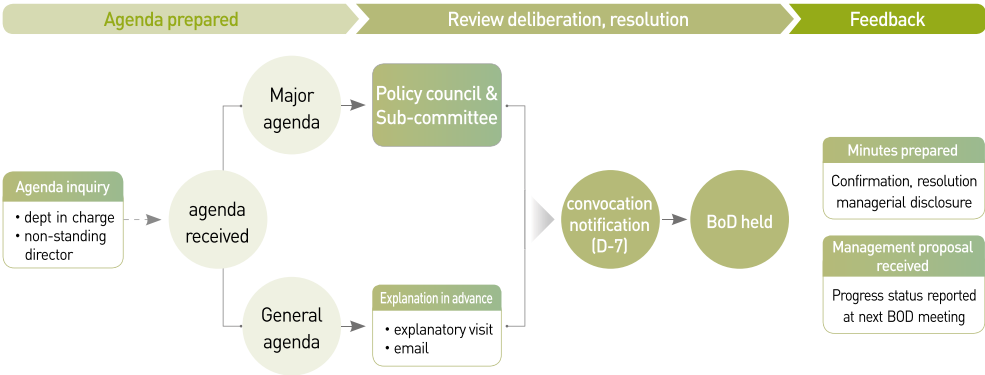
Port committee members

as of June 2018

Name	Major career	Gender
Choi Gye-yeol (port committee chairman)	• Korean Maritime Pilot's Association, Ulsan branch chairman • Korean Maritime Pilot's Association, Ulsan branch, Pilot (incumbent)	male
Kim Su-deuk	• Ulsan Port Shipping Company Association chairman • Eukor Car Carriers Inc, Ulsan Representative	male
Kim Ok-hyeon	• Korea Port Logistics Association vice chairman • Sebang Express Co., Ltd, vice president, advisor	male
Park Jin-hee	• Korean Maritime and Ocean University, Dept. of Logistics System Engineering, dean	female
Lee Eun-gyu	• Ulsan Development Institute, Strategic Planning Office, Future Strategic Planning team leader	male
Jeong Se-Yong	• Ulsan Bar Association, lawyer	male

* 1 seat vacant

Port committee operation process



Sub-committee and participation in internal & external meeting

UPA established and operate sub-committees, in order to implement a deeper review in advance on the specific agenda for resolution by the committee or any particular issue related to the corporation's development. The sub-committees are comprised of budget review sub-committee, investment review sub-committee, etc. Additionally, for the purpose of vitalizing port committee members' management advices, we have our committee members participate in various internal and external meeting etc., and established a system to utilize their specialties.

Internal-external consultative group	Contents
Innovative case competitive exhibition assessment	assessment on enterprise-wide innovative case competitive exhibition
Suggestion review committee	assessment on employees' suggestion
Performances management committee	committee to operate performances assessment such as internal performances assessment handbook
Executive recommendation committee	recommendation committee for election of executives & port committee members
Ethical management committee	induces establishment and expansion of ethical management, and to efficiently observe and implement regulations such as ethics code, etc.
10 years' history publishing committee	advisory committee to publish 10 years' history booklet

Operation Performance of Board of Directors

The port committee's operation performances is assessed by port committee attendance rate ratio, advance deliberation ratio for agendas, number of management advice, etc. Performances assessment for port committee members is implemented by the Minister of Economy and Finance pursuant to the the Act on the Management of Public Institutions. In order to enhance performance by efficient operation of port committee, UPA enhances committee members' understanding of our corporation status by regularized reporting of corporation's issues and always providing management information, etc. We are endeavoring to reinforce expertise by expanding opportunity for port committee members to participate and at the same time expand site participation through the implementation of each member's dedicated responsibility on particular division as well as site briefing session, etc.

Support activities for performance of port committee

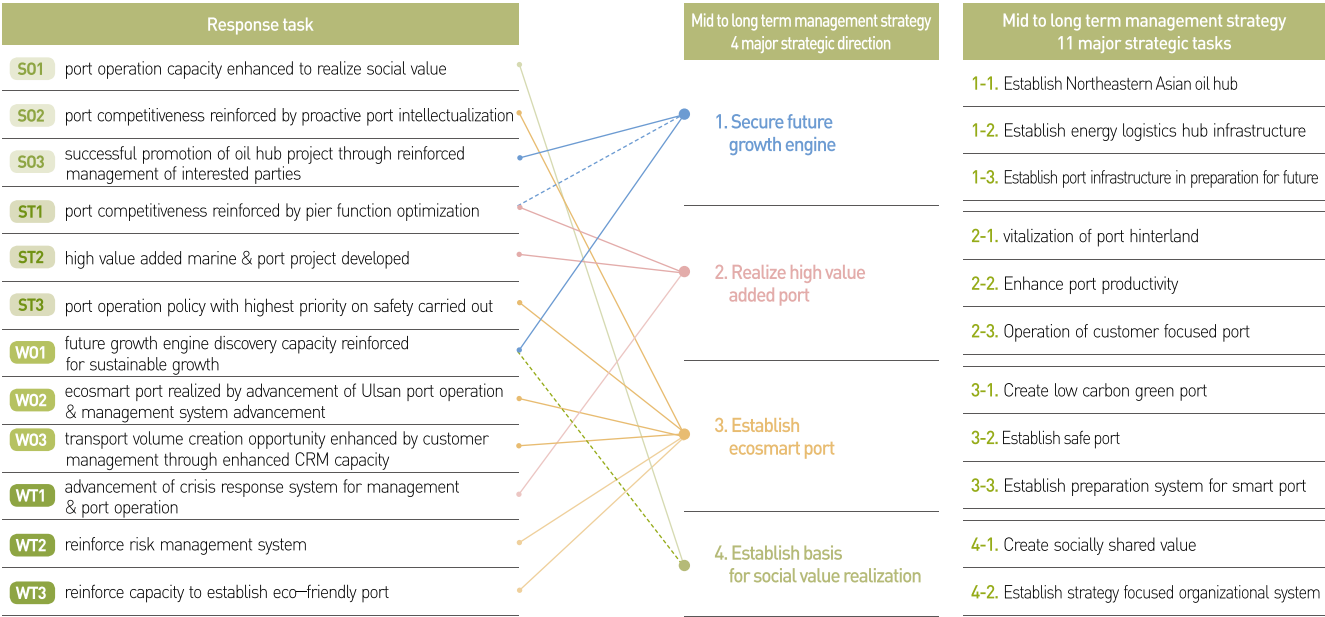
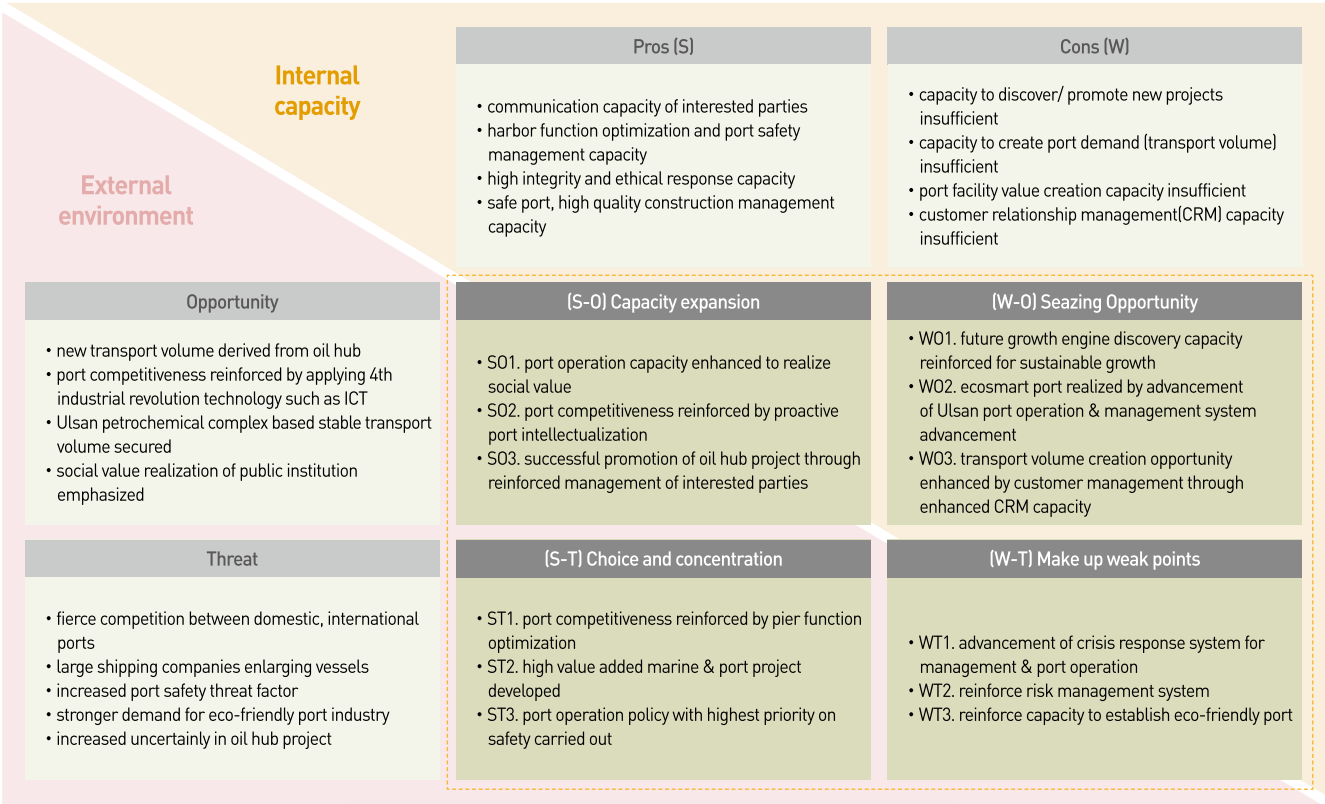
Classification	Contents
Reinforce expertise of port committee member	• regular report on progress status of agendas adopted by port committee • regularization of report on major issues (business report material, government project, issue task, etc.) • deliberation of agenda by port committee reinforced by timely provision of agenda • management information provided such as major project status, major project performance, press release, etc.
Expand site management	• site briefing session held at site on management and major project • advisory activities under exclusive responsibility to particular division
Vitalize management proposal	• participate in various internal committee as external member • seminar held utilizing committee members' specialty

Risk and opportunity management

Recognition and Response of Risk and Opportunity Factors

Ulsan Port Authority implements timely analysis and early responses to any changes in management condition or government policy direction that arise in the course of our management activities to prevent future uncertainty and maintain sustainable management activities of UPA. UPA comprehensively analyzes internal and external management environment and our capacity and reflecting them on our mid to long term strategy and manages crisis and opportunity systemically and proactively so that Ulsan port would become the energy hub port.

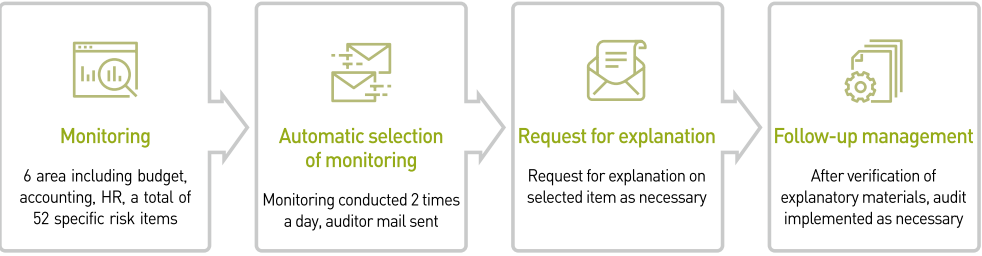
SWOT Analysis and Strategic Task Management Strategy connection



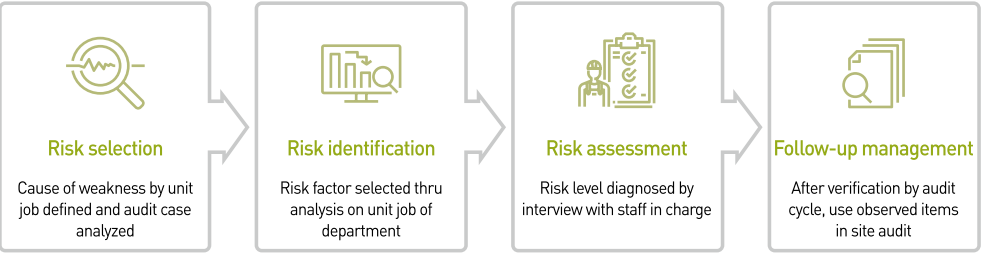
Operation Risk Management

Ulsan Port Authority manages the risks that could arise from an operation aspect with an internal audit system through regular monitoring process under the e-audit system. Everyday we analyze the data on regular monitoring items to derive risks automatically and resolve the risk through explanatory procedure. Furthermore, we selected 123 risks according to risk potential and influence level by work process, and established a self-inspection system where checklist by risk factor is developed and utilized. By this, we switched over to prevention-oriented auditor system, and induced work improvement so as to reduce residual risk through conducting inspections by cycle.

Regular monitoring process



Audit system process



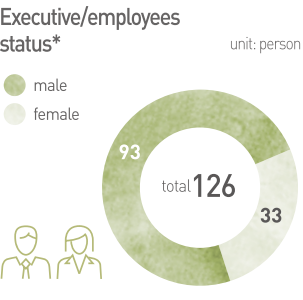
Financial risk management

In order to link mid to long term management strategy to financial strategy, we established and operate the process to analysis and respond to mid to long term financial income and expenditure by scenario reflecting changes in key drivers such as transport volume, tonnage of entry/exit vessels, producer price index, interest rate, sales amount, etc. Furthermore, through financial risk monitoring, we established and is implementing enterprise-wide response measures to any crisis according to the stage of crisis recognized.

Response direction by financial risk monitoring stage

Stage	Crisis response actions	Crisis response organizations
1-2 (Normal, concern)	<ul style="list-style-type: none">sales and operating profit monitoring once a monthcost saving by continued cost management	Cooperation system by all departments initiated by finance management team leader
3 (Caution)	<ul style="list-style-type: none">executives/employees share situation approaching 'caution' stagecheck whether target sales and operating profit is achieved by dept.Set cost saving target and implement action	Crisis response measures implemented by finance management team leader
4 (Warning)	<ul style="list-style-type: none">operate risk management TFTcheck whether target operating profit is achieved by departmentreinforce cost saving target and take actionaggressive marketing and provide incentive to achieve sales target	Control on financing and operation under supervision by management division head
5 (Serious)	<ul style="list-style-type: none">Continue holding financial strategy meetingOperate risk management TFT of related depts.take response measures such as implementing adjustment in investment priority in core project	Regular meeting on financing strategy under supervision of CEO

Workplace where members are happy



Human Resource Principle

Concept of Talent

Ulsan Port Authority observes the HR principle of job focus, human respect, meritocracy, performance focus and fairness based on the HR management targets comprised of aim for meritocracy, enhancement and sustainability of productivity and enhanced quality of labor life. A talent suitable to UPA is defined as ‘a person who devotes oneself to the development of the country and the corporation,’ ‘a person who fulfills one’s responsibility with a sense of ownership,’ ‘a person who contributes to organizational performances with passion and a challenging spirit,’ ‘a person who always thinks and behaves from the standpoint of a customer’. Ulsan Port Authority actively utilizes 4 major concept of talent in the target of recruiting and education & training.

Human Rights and Labor Principle

Ulsan Port Authority pursues no discrimination in employment such as gender, age, birthplace, religion, academic background, and disability in human resource management. We prevent any child labor and forced labor by complying with related law such as Labor Standards Act. Based on our recruitment rules and HR regulations, we carry out HR management by providing equal opportunities to all executives/employees and conducting fair evaluation.

Fair Recruiting System

In order to ensure transparency and fairness in recruitment, we introduced and operate blind recruitment system, where we do not refer to the personal information of applicants such as photo, gender, academic background, place of birth, affiliated school, academic scores, etc. We operate applicant selection, and written test by entrusting them to an external specialized institution. We organize half of the interviewers who participate in the qualification interview with external specialists, and the interviewers keep strict confidence. Furthermore, we introduced NCS (National job capacity standard) based recruiting process, operating ability oriented recruiting system.

Reasonable Assessment and Compensation System

Ulsan Port Authority implements performance assessment through integrated performance management system linking BSC based organization assessment and MBO based personal assessment. The work promoted through the duty implementation system arranged within the mid to long term strategy, management plan and annual business plan are rearranged based on BSC by department on enterprise-wide BSC perspective, and then are managed by performance management system such as selection of key performance indicator, target setting by indicator, process monitoring, assessment, feedback and compensation, etc. Compensation on performance is implemented mainly in 2 categories; wage compensation and reflection in promotion assessment. Wage compensation maintains the compensation comprised of the corporation’s incentive where the government determines the incentive payment ratio according to the result of assessment result management performance, discriminated personal bonus determined based on performance of internal department and personal performance assessment, and the increase of basic annual salary in discrimination according to personal performance and the result of personal capacity assessment. Furthermore, promotion assessment is used as a means of motivation by reflecting personal performance and personal ability assessment.

Performances management and compensation system

Classification		Personal assessment		Organizational assessment	
		Personal performance	Personal capacity	Dept. performance	UPA management results
Assessment	Assessment indicator	MBO (Personal target) (quantitative/qualitative)	Capacity model (qualitative)	Dept BSC (quantitative/ qualitative)	UPA assessment indicator (quantitative/qualitative)
	Assessment method	Target/performance	Level comparison	Target/performance level comparison	Target/performance level comparison
	Assessor	Manager (1–2 stage)	Manager (1–2 stage)	Internal, external assessment group	Govt. management assessment group
Use of results		Promotion, differentiated raise in basic wage & personal bonus	Promotion, differentiated raise in basic wage	differentiated raise in personal bonus	differentiated raise in organizational bonus

Mid to Long Term Talent Fostering Roadmap

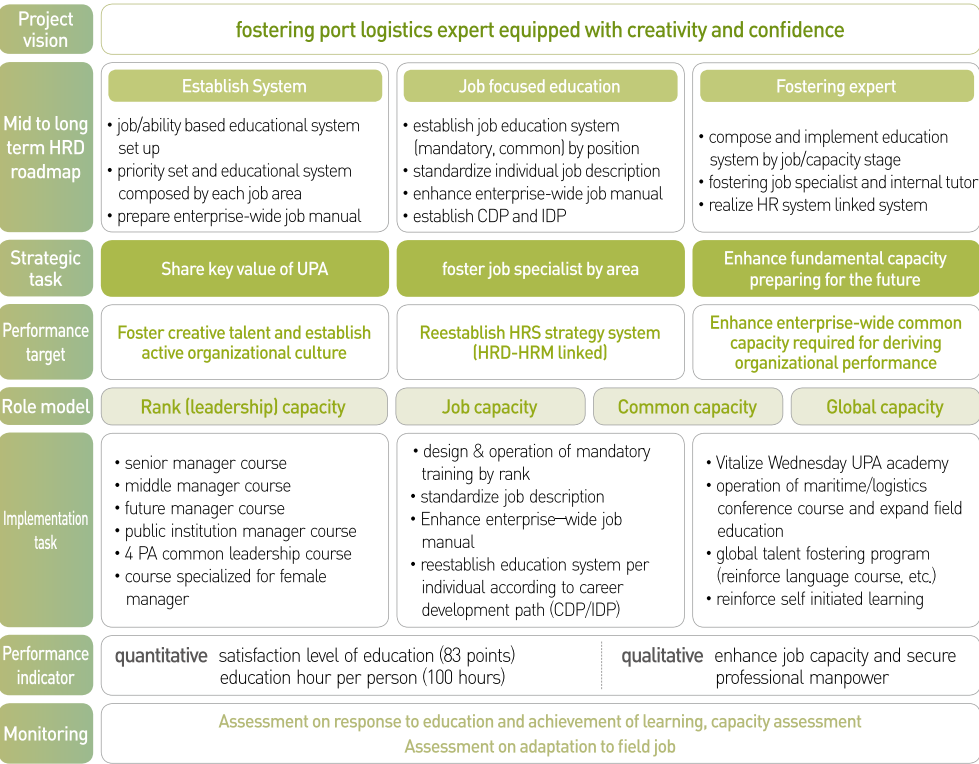


Reinforcing Talent Capacity

Human Resource Development Strategy

Ulsan Port Authority established the strategy for human resource development with ‘fostering port logistics expert equipped with creativity and confidence’ as the talent fostering goal in order to enhance ability and specialty by continuous development of a member’s ability.

Strategic System for Human Resource Development



Fostering Future Managers and Leaders

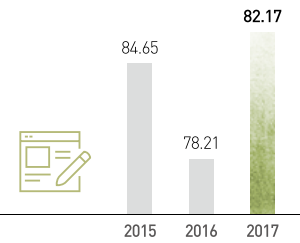
Ulsan Port Authority introduced CDP(career development program)-based future leader fostering system to be engaged in response to policy changes, in leading the changes in environment and in promoting future project, etc. In order to foster port specialists to define the role and capacity required by growth path based on an established system and to develop leadership capacity and job capacity required by staged ranks, we operate leadership training course by rank. Furthermore, we are implementing reinforcement of specialty of not only high ranking leaders but also middle ranking leaders as the future manager by establishing a customized career development system. We expand their capacity development opportunity as a leader by providing an education network created with leaders of other institutions through the manager course for public institutions, etc.

Field-focused Customized Education

Ulsan Port Authority’s education and training is based on leadership course which is initiated by the department in charge of education and training according to the direction of talent fostering and the common ability course, and is composed of technology ability reinforcement course implemented according to the human resource level based on the contents identified and analyzed through the demand study for departments and personnel. Accordingly, we run the leadership training course by rank to develop leadership from each rank, standardize job description for the advancement of job competency, enhance enterprise-wide job manual, establish CDP and IDP system, expand maritime logistics related field education, and run the global talent fostering program to strengthen global ability.

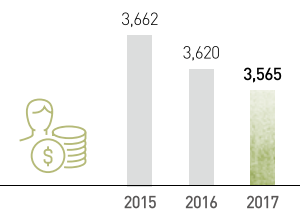
Workplace where members are happy

Welfare satisfaction level unit: points



* permanent position, undated contract worker average

Welfare benefit per person* unit: thousand Won



* permanent position, undated contract worker average

Use of maternity leave and labor hour reduction unit: person

Section	2015	2016	2017
maternity leave	4	6	6
paternity leave	1	2	2
labor hour reduction	0	0	2

* excluding the staff not eligible for using labor hour reduction system due to maternity leave

Balance between Job and Life

Diverse welfare system

Ulsan Port Authority is providing welfare services such as education support, housing support, health management, autonomous welfare, family familiarization support according to 3 dimensional welfare model comprised of economic, mental and environmental aspects for the purpose of inspiring the will to work and enhancing productivity through improved quality of living for the executives/employees. UPA is improving the welfare system in the direction of reducing monetary welfare, expanding non-monetary welfare benefits and avoiding redundant support as we adapt to the policy that requires the improvement of an excessive welfare system.

Welfare program

Classification	Support item	Major contents
Budget support	Wage nature welfare	High school expense support Customized welfare expense
	Non-wage nature welfare	Free support for expense of staffs' children who are high school students Paid to support health and leisure life
		Medical check-up expense support Annual comprehensive medical examination
		In-company hobby club support Partial support for operating expense of 8 clubs within company
	Staff lending	College expense loan Free loan for staffs' children's tuition fee Housing expense loan Long term low interest loan (purchase, lease)
Employee Welfare Fund		Childcare expense for babies, infants Childcare expense support for staffs' preschooler
		Funeral service support Funeral service support in case of death of staff or staff's family
		Anniversary souvenir Souvenir given on labor day or company foundation day
		Recreational facility support Support for using facility through securing ticket for using company's condominium

Employee Satisfaction Level Enhanced by Creating Happy Workplace

UPA operates various programs to enhance employee's immersion to the organization and to create a work atmosphere where employees want to continue working for the organization by fostering a healthy organizational culture. 8 in-company hobby clubs show a participation ratio of 1.5 person from the average of all employees, showing that mutual exchange among employees after work is very much vitalized. In order to encourage these activities further, from 2017, UPA established a system where UPA evaluates the clubs' activities and grant additional monetary support to clubs with excellent performance. Furthermore, UPA opened an internal culture center, and operates after-work culture classes such as investment technique class, Barista class, etc. In order to expand reading culture and enhance humanities knowledge of employees, we run a 'book review relay' system, granting a small prize to the writers of outstanding book reviews. We grant monthly monetary support for language education expenses to employees who endeavor to enhance their language ability after work. Meanwhile, in order to prevent and treat stress of employees, we run a counseling system with a professional outside counselor.

Vitalization of Coexistence of Job and Family

UPA designated every Wednesday as 'Loving day' to get together with family members, urging employees to leave the office on time. We introduced automatic maternity leave system so that pregnant employees may directly connect any leave before baby delivery with maternity leave. We apply paternity leave period to even male employees identically with female employees' maternity leave, and the period is extended from 1 year to 3 years. During infant care period, we permit employees to use labor hour reduction system, vitalizing flexible workplace system and supporting the balance between work and family.

Non-discriminatory Welfare System Implemented

Ulsan Port Authority pays attention to not only employment stability but also improving the treatment of contract employees. In all welfare system comprised of housing loan, student loan and application of employee welfare fund in the enterprise, UPA grants contract employees with benefits identical to permanent employees. However, only in case of flextime workers, customized welfare expense points are granted under deduction in proportion to the actual working hours.

Labor-Management Communication Channel

Communication for work management	
Purpose	work inspection, management and enhance cooperation ability
Channel	total of 3 including management performance briefing session, etc.
Communication between labor-management	
Purpose	policy decision through discussion and negotiation between labor-management
Channel	total of 6 including labor-management conference, etc.
Communication for shared knowledge	
Purpose	vitalization of collective intelligence by sharing knowledge & information
Channel	total of 4 including learning clubs, etc.
Communication for organizational vitalization	
Purpose	enhance familiarity, sense of unity between individual or groups
Channel	total of 5 including hobby clubs, etc.
Communication for processing of difficulties	
Purpose	processing of difficulties at individual or group level
Channel	total of 6 including difficulties processing committee, etc.

Harmonious Labor-Management Culture

Labor-Management Relations Strategy

Ulsan Port Authority is sparing no efforts on leading the way in creating performance and fulfilling social responsibility through active implementation of government policy by establishing cooperation for sustainable growth and labor-management culture of coexistence.

Labor-management Relations Strategy System

Labor-management relations goal	Creative Labor-Management culture established for Sustainable Growth			
Strategy task	Realize labor condition consistent with law and principle	performance creation by labor-management cooperation	proactive conflict resolution thru active communication	establish advanced labor-management relations by enhanced labor capacity
Implementation task	<ul style="list-style-type: none">sign reasonable collective agreement reflecting policy and improve job finding rulerealize social responsibility such as removing unfair discrimination, etc.	<ul style="list-style-type: none">Establish mutually respectful and considerate organization cultureCreate internal & external performances by labor-management cooperation	<ul style="list-style-type: none">vitalize and substantialize communication systemenhanced effectiveness of complaint processing	<ul style="list-style-type: none">vitalize labor management capacity enhancement systemuse internal & external experts for enhancing specialty in labor management

Labor Union Activities

The labor union of UPA shows an organization rate of 97.3% as of end of 2017, with 73 members out of 75 employees having joined the labor union. The employees excluded from labor union membership are grade 1 employees, department heads, employee in charge of HR, labor, audit, and emergency plan, and employee in charge of information and computing/wage with grade 3 or higher, secretary, dedicated driver, non-regular worker and probation worker, etc. Moreover, private policemen are excluded from labor union membership, so that port security management would not be affected by any labor dispute or an emergency. Meanwhile, UPA enforces the obligation to provide written notice on any significant changes in a project to the labor union, and minimizes any dispute by holding a discussion beforehand and reaching an agreement between labor and management.

Labor-Management Communication

Through vitalizing two-way communication between labor and management, UPA promotes enterprise-wide unity and cooperation. Typically, we operate joint labor-management body to create smooth labor-management relations, and through this, we proactively respond to any labor-management conflict. Additionally, we operate various communication channels designed according to purpose comprised of communication for business management, communication between labor and management, communication for knowledge sharing, communication for organizational vitalization and communication for processing of difficulties, etc. We are trying to achieve active information sharing, resolve issues, form consensus and unity among hierarchies, and to establish a healthy labor-management culture.

Operation of Labor-Management joint body

	Labor-management conference	Wage and welfare improvement committee	Collective bargaining meeting
purpose	<ul style="list-style-type: none">development of the corporation and enhancing labor condition	<ul style="list-style-type: none">improve wage and welfare system	<ul style="list-style-type: none">sign collective agreement and wage agreement
operation	<ul style="list-style-type: none">quarterly meeting (legal standard) maintained and extraordinary meeting held if necessary	<ul style="list-style-type: none">working group meeting held as necessary for discussing follow-up action after removal of performance-based annual salary system	<ul style="list-style-type: none">separation of collective bargaining from wage negotiationprioritize practical negotiation, minimize main negotiation
remarks	<ul style="list-style-type: none">accepts 1 representative from private police as non union member to hear difficulties and aim to improve labor condition for that job group	<ul style="list-style-type: none">labor-management discussion body focusing on wage and welfare areadiscussion and decision on change of system related to employee wage	<ul style="list-style-type: none">sign collective agreement for improving labor conditions and vitalizing labor uniondetermine wage increase item and ratio by rank thru wage agreement

APPENDIX

Social Responsibility Management Performance

UN SDGs / UNGC implementation status

GRI Standards Index

ISO 26000 implementation level diagnosis report

Third party verification opinion

Profile of external awards and certifications received

Corporate Social Responsibility Management performance

Economic performance

Classification		unit	2015	2016	2017
Major economic performance(K-IFRS)					
Sales		mil. Won	74,405	77,748	82,812
Operating profit		mil. Won	32,057	35,144	31,136
Net profit		mil. Won	30,211	27,212	30,266
Summary statement of financial position (K-IFRS)					
Asset	Liquid asset	mil. Won	60,420	48,247	59,954
	Non-liquid asset	mil. Won	682,841	734,415	737,487
	Total assets	mil. Won	743,261	782,662	797,441
Liabilities	Liquid debt	mil. Won	29,388	22,819	17,530
	Non-liquid debt	mil. Won	105,384	135,106	134,336
	Total liabilities	mil. Won	134,772	157,925	151,866
Shareholders' equity	Paid-in capital	mil. Won	440,488	440,488	440,488
	Other	mil. Won	168,001	184,249	205,087
	Non-controlling interest	mil. Won	0	0	0
	Total shareholders' equity	mil. Won	608,489	624,737	645,575
Debt ratio		%	22.15	25.28	23.52
Distribution of economic value					
Interested parties	Calculation standard				
Government/ municipality	Corporate tax	mil. Won	9,127	8,584	8,644
Executive/ employees	Wage, sundry allowances, welfare benefit, bonus, retirement benefit, etc.	mil. Won	8,616	9,870	8,614
Shareholders	Dividend	mil. Won	10,779	9,388	11,529
Local Community	Donations (corporation's contribution, executive/employees' donation, etc.)	mil. Won	114	210	344

Environmental performances

Classification		unit	2015	2016	2017
Energy consumption	Direct energy consumption (company building, electric energy only considered)	TJ	9.7	10.44	10.63
	Indirect energy consumption	TJ	28.7	32.2	32.6
	Total	TJ	38.4	42.64	43.23
Greenhouse gas emission	Direct (scope 1) (company building, electric energy only considered)	tCO2eq	471.10	507.04	516.27
	Indirect (scope 2)	tCO2eq	1393.88	1563.86	1583.29
	Total	tCO2eq	1864.98	2070.9	2099.56
Environmental impact management	Fine dust(PM10)	ug/m³	46.83	43.33	44.75
	Water & sewage consumption	ton	5.594	4.354	4.472
	Industrial waste (general) disposal quantity	ton	0	0	0
	Construction waste disposal quantity	ton	5,293.72	828.72	4,064.28
Green product procurement	Green product procurement amount	mil. Won	703	2312	626
	Green product procurement ratio	%	97	99.8	98.8

Corporate Social Responsibility Management performance

Social performance

Classification		unit	2015	2016	2017
Executive/employees					
Employment	Total number of executive/employees	persons	122	124	126
	- permanent position	persons	122	124	126
	General position/technological position	persons	80	87	93
	private police	persons	31	29	25
	undated contract worker	persons	11	8	8
	- nonregular employees	persons	0	0	0
	Periodical contract worker	persons	0	0	0
	disabled	persons	3	3	4
	national veteran	persons	7	7	5
	general position (executive, private police included)	persons	15	8	8
	undated contract worker	persons	1	0	0
	Executive	persons	3	3	2
	Grade 1~3	persons	22	25	27
	Grade 4	persons	14	13	13
	Grade 5	persons	10	12	17
	Grade 6 or lower	persons	31	34	34
	undated contract worker	persons	11	8	8
	private police	persons	31	29	25
	19~29	persons	24	27	23
	30~39	persons	43	43	50
	40~49	persons	29	30	29
	50 or higher	persons	26	24	24
	average year in service	year	5.7	6.1	6.7
Retirement	number of retirees*	persons	8	5	6
Female manpower	number of female employee (ratio)	persons(%)	24(19.7)	29(23.4)	34(27.0)
	number of female manager (ratio)	persons(%)	1(4)	1(3.5)	1(3.4)
	female new recruitment(ratio)	persons(%)	2(12.5)	6(75)	6(75)
Maternity leave	maternity leave user	persons	3.5	5.5	6
	reinstatement ratio after maternity leave	%	100	100	100
Education	education budget	mil. Won	274	270	274
	education expense per person	1000 Won	3,248	2,351	2,833
	education hour per person	hour	93.0	97.4	101.7
Health	industrial accident ratio	%	0	0	0
Customer					
customer satisfaction level	Public institution customer satisfaction level(PCSI)	points (grade)	91.4	90.1	89.0
information security	Violation of customer personal information protection and loss of customer information	Cases	0	0	0
Local Community					
Fund establish-ment	Social contribution budget execution amount	mil. Won	90	190	318
	Matching grant	mil. Won	24	20	26
Service hour	Service hour per person	Hour	9.8	7.9	2.8
Safety					
Port con-struction	Construction project accident ratio	points (grade)	0	0	0
Port safety	Number of ground safety accident cases	Cases	12	10	13
	Number of maritime safety accident cases	cases	20	9	15

* Standard for calculation of no. of retirees : all cause of retirement such as regular retirement age included

UN SDGs / UNGC implementation status

UN SDGs support

UN SDGs (Sustainable Development Goals, SDGs) is the target to be achieved jointly by the United Nations and the International society during the period of 2016 to 2030, and is composed of 17 goals and 169 targets with subjects of universal problems of mankind, global environmental problems and socio-economic problems, Ulsan Port Authority actively supports UN SDGs, and commit to implement UN SDGs to be reflected on overall sustainable management activities. For this purpose, UPA will continuously discover the practice activities for SDGs, and will transparently disclose such activities and performances to interested parties.

1NO POVERTY

2ZERO HUNGER

3GOOD HEALTH AND WELL-BEING

4QUALITY EDUCATION

5GENDER EQUALITY

6CLEAN WATER AND SANITATION

7AFFORDABLE AND CLEAN ENERGY

8DECENT WORK AND ECONOMIC GROWTH

9INDUSTRY, INNOVATION AND INFRASTRUCTURE

10REDUCED INEQUALITIES

11SUSTAINABLE CITIES AND COMMUNITIES

12RESPONSIBLE CONSUMPTION AND PRODUCTION

13CLIMATE ACTION

14LIFE BELOW WATER

15LIFE ON LAND

16PEACE, JUSTICE AND STRONG INSTITUTIONS

17PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

Goal 1No poverty

Goal 2End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 3Ensure healthy lives and promote well-being for all at all ages

Goal 4Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 5Achieve gender equality and empower all women and girls

Goal 6Ensure availability and sustainable management of water and sanitation for all

Goal 7Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Goal 9Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 10Reduce inequality within and among countries

Goal 11Build cities and human settlements inclusive, safe, resilient and sustainable

Goal 12Ensure sustainable consumption and production patterns

Goal 13Take urgent action to combat climate change and its impacts

Goal 14Conserve and sustainably use the oceans, seas and marine resources for sustainable development





Goal 15Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17Strengthen the means of implementation and revitalize the global partnership for sustainable development

UNGC joining and support

Ulsan Port Authority joined the UN Global Compact, UNGC in 2013, committing to support and to comply with 4 items 10 principles on human rights , labor, environment, and anti-corruption.

Principle		
 Human rights	Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights
	Principle 2	make sure that they are not complicit in human rights abuses.
 Labor	Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
	Principle 4	the elimination of all forms of forced and compulsory labor,
	Principle 5	the effective abolition of child labor,
	Principle 6	the elimination of discrimination in respect of employment and occupation
 Environment	Principle 7	Businesses should support a precautionary approach to environmental challenges,
	Principle 8	undertake initiatives to promote greater environmental responsibility;
	Principle 9	encourage the development and diffusion of environmentally friendly technologies
 Anti-corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery

GRI Standards Index

Universal Standards

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ISO 26000 implementation level diagnosis report



► Diagnosis standard

Korean Standards Association developed social responsibility implementation level diagnosis checklist based on ISO 26000, the international standard for social responsibility, as part of the service rendered to Korean Agency for Technology and Standards. This diagnosis report is the result of diagnosis on Ulsan Port Authority's sustainable management process and performance by 7 major key subjects, according to the diagnosis checklist by the Korean Standards Association.

► Scope of diagnosis

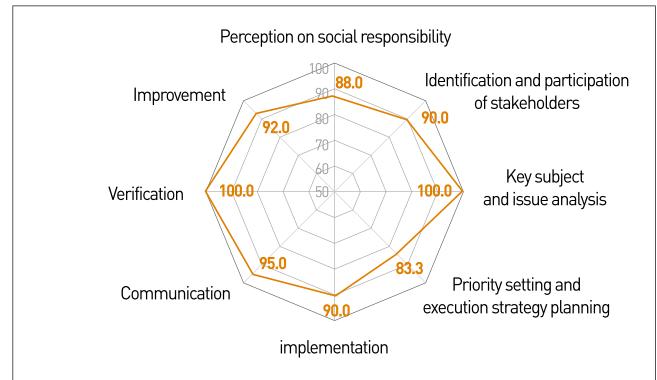
Korean Standards Association diagnosed the process and implementation performance of Ulsan Port Authority in realizing social responsibility. For this purpose, we diagnosed Ulsan Port Authority's mid to long term strategy and activities performed, participation by stakeholders, and social responsibility activities, etc.

► Diagnosis method

- Korean Standards Association performed the following activities to collect related suitable grounds according to ISO 26000 implementation level diagnosis standard.
- Review on Ulsan Port Authority's mid to long term strategy and management result report
 - Interview on staff in charge of each sustainable management area of Ulsan Port Authority and review of result documents.
 - Identifying the sustainability issues that influences and may influence Ulsan Port Authority and its stakeholders

► Diagnosis result by ISO 26000 social responsibility process

Ulsan Port Authority commenced reporting social responsibility management performance since 2012, and is preparing the 4th Sustainable Management Report this year. UPA is the only public institution that continues to publish Social Responsibility Management Report among 4 major port authorities, and promised to observe 10 major principles of social responsibility by joining UNGC in 2014. It is worth appreciating highly that UPA recognized the importance of social values through enterprise-wide management strategy rolling in 2018 and expressed the CEO's commitment to implement social values through the vision announcement ceremony. However, in comparison with steady publishing of report by UPA after introduction of social responsibility management, not much improvement has been witnessed in social responsibility management process during the past 2 years. Especially it appeared that there are more room for improvement in the areas of 'perception on social responsibility' and 'priority setting and execution strategy planning.' This is deemed as because social responsibility management is not



attracting attention within the organization, and consensus has not been formed on the fact that this is the part that should be treated significantly in management. It is necessary to find out the fundamental dynamics for the implementation of social responsibility management within the organization and conduct subsequent activities for changing perception.

Perception on social responsibility	Organizational status quo is reviewed based on the commitment of management
Identification and participation of stakeholders	Review the interests and requirements of stakeholders, and stablish participation strategy
Key subject and issue analysis	Prepare issue list through reviewing issues and internal capacity of the organization
Priority setting and execution strategy planning	Establish priority, target, and execution plan of issues to be improved and managed by considering organizational capacity
Implementation	Implement strategy, vision, target and implementation plan and periodically monitor social responsibility performance
Communication	Communication with interested party by preparing performance report
Verification	Activity and report to enhance the reliability of the performance
Improvement	Connect to continuous improvement by periodically reviewing performance

► Diagnosis result on 7 major key subjects of ISO 26000

Organizational governance | UPA satisfies the composition requirement of board of directors that suit the government's policy standard, and social responsibility principle is clearly specified in the enterprise-wide strategy system. Social issues such as ethics, environment, safety, community contribution, social value are discussed and decision is made within the board of directors. Not only that, the social value index was included in the management goal through 2018 management strategy rolling, and decision was made on the social value performance improvement and evaluation. We hope to monitor whether the social value target set by the organization is implemented for active improvement and expect UPA to encourage all employees to participate in the future.

Human rights | Ulsan Port Authority enacted and proclaimed the Human Rights Management Implementation Guidelines, enacted and proclaimed the Human Rights Management Charter, and established the Human Rights Management Guidelines and checklist to aid human rights in 2017, and human right management self-diagnosis and human right protection officer system is in operation. There is a systematic basis for human rights management, but operational performance is hardly shown. First of all, UPA need to identify the potentially vulnerable human rights groups of the UPA. Especially it is recommended to identify human rights risks such as construction site workers, office workers, and in-house female employees within the supply chain. We expect UPA to implement human rights protection policies not only internally but further to primary/secondary subcontractors, and to conduct human rights risk assessments to control potential risks.

Labor practices | While UPA do not have safety health management policy on an integrated level, safety policy for unloading site, sea and port users have been prepared. In 2016, UPA is working on expanding safety management in the supply chain by carrying out 3J 5S project. It is proposed that the safety health management system (OHSAS18001) will be established in the future from an integrated perspective. Recently, the Ulsan Port Authority is also internally carrying out the regularization of non-regular workers in line with the new government's

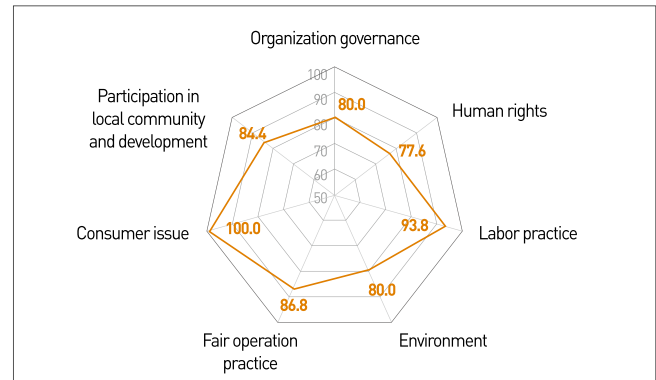
policy of reducing non-regular workers. Conflicts have arisen among various stakeholders in the process of regularizing employees by turning a contractor into a subsidiary. We expect more comprehensive stakeholder participation to help resolve the issue of regularization of non-regular workers.

Environment | The Ulsan Port Authority utilizes the tools and scenarios for assessing climate change risk after the energy management system was established to conduct the risk assessment and diagnosis of the port. UPA established the mid to long term climate change adaptation goal to strive to save energy and reduce greenhouse gas. The Ulsan Port Authority has generated a number of environmental impacts with various stakeholders in the value chain. We recommend that environmental impact assessment is conducted for the whole process through the reintroduction of environment management to identify the environmental risks, to reduce the impact on the environment, and to encourage the reporting of related performances.

Process operation practice | The Ulsan Port Authority adopted and implements the ethics charter. All employees participate in the annual integrity implementation resolution conference, and makes integrity pledges. Furthermore, according to the 'whistleblower regulation,' the information and the whistleblower is protected. Generally, in the case of UPA, the risks associated with the outside of the organization are higher than the risks of social responsibility within the organization. Especially security contractors, maintenance contractors, and construction contractors need to improve their level of implementing social responsibility management. We anticipate UPA to constantly implement various activities to promote social responsibility throughout the value chain.

Consumer issue | UPA provides accurate and fair information to the consumer about public announcements such as the disclosure of management. Recently, an obsoleted life-saving box in the pier was improved, a speed limit sign of 30km inside the peer was installed, and a shelter and a crew welfare center were established. Six safety manuals comprised of subjects such as ship fire, collision, and pollution were rearranged to ensure convenience and safety to pier users. Furthermore, ESI Ship Index was introduced to encourage customers to spend more sustainably by providing benefits to eco-friendly vessels. In the future, we expect UPA to play active roles in reducing air pollution through expanded benefits to ESI ships and constructing an eco-friendly port in addition to active education and support activities for customers' implementation of social responsibility.

Participation in local community and development | The UPA, as the representative public institution of the Ulsan region, is working hard to improve the quality of life of Ulsan citizens through improving Ulsan port facilities. In 2017, UPA worked with the Ulsan Regional Maritime Affairs & Fisheries Office and the Ulsan Southern District Office to create Jangsaengpo Waterfront by remodeling port facilities in Jangsaengpo area, creating waterscape spaces such as food trucks and walking trails, building children's theme park, securing tourism infrastructure and contents, etc.



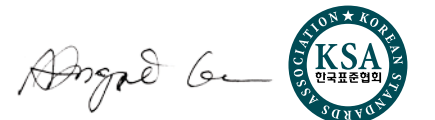
In 2018, UPA is contributing to vitalizing the local economy by launching full-fledged operations to create jobs in the region, and by securing tourism contents. Furthermore, UPA is also engaged in various social contribution activities such as running afterschool programs with Jangsaengpo Elementary School, and carrying out local children's experiential learning program in connection to the Local Community Coexistence Council. We expect UPA to take one step further from one-time social contribution and simple donation type social contribution to creating values shared between UPA and the local community through advanced social contribution activities.

Organization governance	Activities that respect social responsibility principle, and integrate this to the existing system, policy and practices
Human right	Activities to respect, protect, observe and realize the human rights within the organization and the organizational sphere of influence
Labor practice	Policies and practices that affect labor environment inside the organization and subcontractors
Environment	Activities with an integrated approach considering the meaning of the organization's activities and decisions to reduce the organizational effect to the environment
Fair operation practice	Activities paying attention to ethical behavior in trades between the organization and other organizations such as partners and vendors, etc.
Consumer issue	Activities to protect consumers' rights such as consumer education, fair and transparent marketing information and contracting, promotion of sustainable consumption, etc.
Participation in local community and development	Activities to recognize and respect the rights of local community and to maximize support and opportunities
Improvement	Regular review of performance to lead to sustained improvement

► Diagnosis conclusion

According to ISO 26000 Implementation level diagnosis result on Ulsan Port Authority, process aspect scores were 328 out of 360 points as the perfect score, and performance aspect scores were 554 out of 640 points as the perfect score. With total scores of 882, UPA is assessed as at SR IV stage. This stage implies that there is an organizational members' awareness of social responsibility and that the organization's operation system, policy and practice are in place. It can be viewed as a stage requiring UPA to promote social responsibility within the scope of organizational influence as the leading institution for sustainable management within the value chain, and continued maintenance through enhanced unity with the local community. To make a suggestion to take this step further from the current level, the Ulsan Port Authority has more room for improvement in performance than in processes. In terms of the process, UPA needs to select a sustainable management issue that needs to be focused, and manage it strategically. From the performance aspect, we expect UPA to strengthen the relatively low-rated human rights area.

August, 2018
Korean Standards Association Chairman **Lee Sang-jin**



Korean Standards Association is a special corporation incorporated in 1962 under the Korea industry standardization act that distributes and disseminates industry standardization, quality management, sustainable management, KS-ISO certification to corporations as a knowledge service institution. Especially as ISO 26000 domestic manager institution, GRI designated education institution, AA1000 verification institution, Korea sustainability index (KSI) operating institution, UN CDM operation body and greenhouse gas target management system verifying institution, the Association contributes to the sustainable development of this society.

Third party verification opinion

For the attention of Ulsan Port Authority management and interested parties

► Introduction

Korean Standards Association (hereinafter referred to as 'verifier') received the request for independent verification on '2018 Ulsan Port Authority social responsibility management report' (hereinafter referred to as 'report') from Ulsan Port Authority.

The verifier reviewed the feasibility of the data contained in the report prepared by UPA and presented an independent verification opinion. The responsibility on all arguments and performances contained in this report rests with UPA

► Independence

The verifier is an independent verification institution, and has neither any interest on overall businesses activities of Ulsan Port Authority other than the business of providing third party verification on the report, nor any association that may impede independence or has a purpose to obtain profit.

► Verification standard and level

The verifier verified whether the principles of extensivity, significance and reactivity are complied with and the confidence on the information contained in the report is at the level of moderate, according to AA1000AS (2008) verification standard, and performed verification according to GRI Standard.

► Type and scope of verification

Verifier implemented verification conforming to Type 2 according to AA1000 verification standard (AA1000AS). This means the assessment on the accuracy of the arguments of Ulsan Port Authority and the performance information contained in the report. Scope of verification is based on January 1 2017 to December 31 2017.

We implemented verification focusing on system and activities of UPA such as sustainable management policy and target, business, standard, and performance during the reporting period.

Furthermore, we verified environment, society data, and financial data on economic performance in a broad sense. Verification on the participation of interested parties was restricted to review on the significance assessment process.

► Verification method

The verifier collected the information, materials and evidences related to the scope of verification using the following methods.

- Written inquiry to the staff in charge of sustainable management at Ulsan Port Authority
- Analysis and verification on data in Ulsan Port Authority's sustainable management report draft.
- Review on consistency between financial result data, audit report on financial statements and disclosure materials
- Tracking review on internal document and basic materials

► Verification result and opinion [verification principle/process dimension]

The verifier reviewed the contents contained in the report draft, and revision of report was made accordingly.

Moreover, neither a significant error nor an improper statement was found in the contents contained in this report. The verifier presents the following opinion on the '2018 Ulsan Port Authority Social Responsibility Management Report'.

▷ Extensivity

Did Ulsan Port Authority include stakeholders in the process to respond to sustainability strategically?

We confirmed that Ulsan Port Authority recognizes the participation by key stakeholders is important and endeavors to establish a participation process in the course of promoting sustainable management.

It is confirmed that Ulsan Port Authority classifies major stakeholders as internal members(labor union, executives and employees), related institutions(academic expert, government, National assembly, port committee), customers (pier operator, unloader, port transportation trade union and subcontractors, shipper, forwarder, broker, shippers' agents), citizen(citizen, local community, press), and gathers various opinion through communication channels by stakeholder group.

▷ Significance

Is information important for wise decision by stakeholders included in the report?

We judge that Ulsan Port Authority has not omitted or excluded any information important to stakeholders. We derived 31 related issues through sustainability subject of GRI Standard, ISO26000, media analysis, benchmarking, etc. We confirmed that 15 significant issues of priority were derived by implementing significance assessment based on business impact and stakeholders' assessment and opinions.

▷ Reactivity

Does Ulsan Port Authority respond to requirements and attention from stakeholders properly?

We confirmed that Ulsan Port Authority reflects the opinions gathered from stakeholders in the report, endeavoring to respond to stakeholders' opinions and expectations. Furthermore, we have not found any evidence that response activity of Ulsan Port Authority to significant stakeholder's issue was reported improperly.

► Review on GRI Standards application level

The verifier confirmed that this report has been prepared according to Core Option of the GRI Standards, and verified that the contents related to the following universal Standards and topic-specific Standard indicator are true, based on the materials obtained from Ulsan Port Authority.

▷ Universal Standards

The verifier confirmed that the report is in compliance with universal standards requirements of core option, and verified the following indicators.

102-1 to 102-13(organizational profile), 102-14(strategy), 102-16(ethics and integrity), 102-18(governance structure), 102-40 to 102-44(stakeholders' participation), 102-45 to 102-56(reporting practice), 103(management approach)

▷ Topic-specific standard

The verifier verified the items disclosed in detail on the material topic derived through decision-making process on the items to be disclosed, and verified the following items to be disclosed.

- Economy: 201-1, 203-1~2, 205-1~2
- Environment: 305-2, 305-7
- Society: 401-1, 3, 402-1, 403-2, 404-1~2, 405-1, 412-2, 413-1, 416-1~2, 417- 1, 418-1

► Recommended improvements [implementation performance/ issue dimension]

The verifier recommends review on the following matters to Ulsan Port Authority, so as to establish sustainable management strategy at the entire organizational dimension and to respond to sustained issues.

•Economic performance

UPA, pursuing social value and growing as competitive eco smart port, regards creativity, professionalism and confidence as the key values in management, and fosters Ulsan port as a central international base of shipping and logistics contributing to the development of the national economy. Recently, economic uncertainty such as restructuring in the shipping industry, excess supply in the world shipping industry and changed international trade policy is intensified.

In the midst of such external environment, we recommend UPA to achieve innovation through integration of shipping port industry with intellectual information technologies conforming to the 4th industrial revolution trend; to continue managing financial and non-financial risks; to reinforce proactive response to change in management environment; and to continuously enhance comprehensive responses through innovation activities in order to pursue UPA's vision and values consistently.

•Environment area

Ulsan Port Authority established an implementation system to reduce air contamination that has emerged as an issue recently by establishing management task, strategy and implementation tasks, and monitoring and reduction was actually achieved through task implementation at the site. The verification team confirmed that green port policy is being implemented through reviewing documents and evidences, and these proactive efforts are worthy as a model for public institutions.

However, in case of greenhouse gas reduction target, the performance(outcome) from the implementation plan and a series of activities should be stated. But the management target and strategy as well as performance could not be confirmed clearly. We recommend UPA to reinforce measurement and performance reporting on greenhouse gas reduction implementation tasks as part of the response to climate change which is the biggest challenge mankind is facing.

•Society area

We confirmed that Ulsan Port Authority is exerting various efforts to enhance UPA's sustainability along with the development of the overall industry including the realization of high value added port, implementation of social responsibility, expanding transparent and fair corporate culture in order to realize the vision, 'Competitive eco smart port pursuing social values'.

Especially, the systemic performance management of 4 major strategic directions and 11 major strategic tasks according to the mid to long term management

strategy re-established in 2017, shows the effort of Ulsan Port Authority to create social values based on the industry fundamentals. We anticipate job creation strategy linked to social value realization would further establish an innovative job creation model in the future through communicating with internal and external stakeholders based on the performance achieved so far.

September 2018
Korean Standards Association Chairman **Lee Sang-jin**



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Profile of external awards and certifications received

2015~2018 Major Awards received

Awards	Sponsor	Date
2018 Korean safety training for disaster response, superior institution, Presidential citation	Ministry of Public Safety and Security	July 2018.
2018 The 21st Korean Logistics award, public enterprise area, Grand prize	Korean Logistics Research Association	May 2018.
2017 Ministry of Maritime Affairs and Fisheries superior institution in security duty(information security), Minister's commendation	Ministry of Maritime Affairs and Fisheries	Dec. 2017.
2017 Ministry of Maritime Affairs and Fisheries, superior institution in public duty management, Minister's commendation	Ministry of Maritime Affairs and Fisheries	Dec. 2017.
2017 Safety Culture Grand Awards, Prime minister citation	Ministry of Public Safety and Security	Dec. 2017.
2017 Korea Good Enterprise, port operation area, 1st prize	Korean Standards Association	Nov. 2017.
The 55th Firefighting day, Ulsan Metropolitan city, Institutional commendation	Ulsan metropolitan city	Nov. 2017.
The 5th Korea Supreme Management Grand Award selected by management scholars, port logistics area, Grand prize	Korean Academic society of business administration	May 2017.
2015/16 Vision Awards Sustainable Management Report area, Gold prize	LACP (U.S. communication league)	Feb. 2017.
Contribution to private-public cooperation in corruption prevention, Minister of Public Safety and Security commendation	Ministry of Public Safety and Security	Dec. 2016.
2016 year end Minister of Maritime Affairs and Fisheries' Institutional commendation	Ministry of Maritime Affairs and Fisheries	Dec. 2016.
2016 Port operation innovation competition, participation award	Ministry of Maritime Affairs and Fisheries	Dec. 2016.
2016 Social Enterprise Awards, achievement award	National network for social enterprise vitalization	Dec. 2016.
The 11th, Korea Meteorological Industry Grand Awards, Gold prize	Korea Meteorological Institute	Jun. 2016.
2015 Port Security Superior Case Competitive Exhibition, Excellence award	Ministry of Maritime Affairs and Fisheries	Dec. 2015.
The 4th Korea Education Donation Grand Award, Maritime, Port, Logistics area Grand prize	Ministry of education	Dec. 2015.
2015 Korea Sustainability Conference - Maritime & Fishery KSI 1st Place	Korean Standards Association	Sept. 2015.
2015 Korea Innovation Grand Award - Management Innovation area, Grand prize	Korean Standards Association	Jun. 2015.
2013/14 Vision Awards Sustainable Management Report area, Gold prize	LACP (U.S. communication league)	Feb. 2015.

External certifications obtained

Certifications	Sponsor	Date
Web accessibility quality certification	Ministry of Science and ICT	Dec. 2017.
ISO 50001	Korea Energy Agency, greenhouse gas verification agency	Dec. 2016.
Public sector human resource development Superior institution certification [Best HRD]	Ministry of education, Ministry of personnel management	Sept. 2016.
Family friendly enterprise certification	Ministry of Gender Equality and Family	Dec. 2015.
Education donation superior institution	Ministry of education, Korea Foundation for the Advancement of Science and Creativity	Sept. 2015.