



Improving the Public Service at Airport Immigration Process through Innovation

PROJECT DATA

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KDI School of Public Policy & Management

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Abstract

Since 2005, Incheon International Airport was rated the best airport worldwide by Airports Council International every year. It is also rated as the world's cleanest airport and the world's best international transit airport by Skytrax (Skytrax 2017). As such, Korea is considered an international hub. Incheon Immigration Office is responsible for the annual inspection of more than 22 million passenger arrivals and departures. The administrative service of the immigration system became a criterion by which to evaluate the overall level of administrative services performed by governmental organizations throughout Korea. At this time, customer satisfaction was lower than at other major airports, due in part to long wait times. As such, Korea began to look at innovating its immigration inspection process to improve customer satisfaction through more effective methods. An immigration inspection service has two primary requirements for delivering advanced inspection service: to promote security and efficiency, and to establish cooperation among various agencies. This case documents how the Incheon Immigration Office made large gains in efficiency at a low-cost burden.

Introduction

This case study examines innovation and reform in the Incheon International Airport Immigration Office. While Incheon International was, and is a major airport—a vital gateway between the Republic of Korea, the broader Northeast Asian community, and the world—in 2005 the airport’s immigration inspection system was often congested and inefficiently operated. Surveys showed that long wait times decreased customer satisfaction.

An immigration inspection service has two primary requirements for delivering advanced inspection service: to promote security and efficiency, and to establish cooperation among various agencies. Korea’s immigration inspection service now successfully meets these two requirements through the implementation of innovative policies in that were introduced in 2005. Thus, Korea has been recognized for having one of the best systems in the immigration inspection sector.¹ In many cases, countries are reluctant to implement innovative policies because of the requirement for additional human resources and budgets. This case study documents how the Incheon Immigration Service could make substantial gains at relatively low cost.

Development Challenge: Improving Public Service Delivery

As airline deregulation in Northeast Asia expanded, competition around the world grew. Countries worked tirelessly to maintain or secure hub status. Thus, developing a strategy for becoming the air logistic hub was urgently needed to respond to a changing airline industry and to position Incheon International as an international hub. Furthermore, due to economic growth and globalization, travelling abroad became more accessible and so the number of leisure travelers

increased. The competition for logistical hubs in Northeast Asia grew fierce among major countries as increases in economic wealth boosted the number of passengers travelling throughout the region.

In 2004, the total number of passengers using Incheon Airport reached more than 22.4 million annually, a combination of 11.21 million outbound and 11.19 million inbound. The Incheon Airport Immigration Office was in charge of the immigration inspection service for all arrivals and departures. Thus, immigration officials were among the first and last interactions that travelers would have with the Korean state. Considering this high-profile role, these officials played an essential role, and it was important to set standards for this administration and to measure customer satisfaction. However, customer satisfaction fell short of desired levels; Incheon ranked 16 of 45 airports surveyed for customer satisfaction in 2004 (see Table 1).

Delivery Challenges: Inter & Intra-Governmental Relations Coordinating Reform and Encouraging Uptake of Innovations

As airport officials and the Ministry of Justice (MOJ) worked to overhaul the immigration inspection system, they encountered delivery challenges the hindered the process of reform and innovation. In particular, a lack of coordination among the different agencies involved was

¹ Airport Service Quality (ASQ) is measured through an annual survey by the Airport Council International (ACIP), a consultative group with members of about 1,700 airports around the world. The survey categories related to immigration inspection include: a) waiting time for inspection of passports/visa; b) passport and visa inspectors’ courteousness and customer service (departure); and c) customer satisfaction toward passport and visa inspection (entry) (Incheon Immigration Office, 2013). <http://www.aci.aero/News/Releases/Archives/2004/2004/05/17/AETRA-Customer-Satisfaction-Survey>.

Table 1: AETRA Customer Satisfaction Survey (As of 4th Quarter 2004 Survey of 45 Major Airports)

Ranking	Airport	Ranking	Airport	Ranking	Airport	Ranking	Airport
1	Hong Kong (Chek Lap Kok)	2	Copenhagen	3	Bermuda	4	Minneapolis
5	Singapore (Changi)	6	Brussels	7	Dubai	8	Kuala Lumpur
9	Keflavik	10	San Diego	11	Dallas	16	Incheon

Source: Internal data from Ministry of Justice.

seen. Furthermore, difficulties were encountered during the implementation of innovation policies, as there was a lack of cooperation and coordination among the related agencies.

The problems with the immigration inspection system were identified based on environmental and Strength, Weakness, Opportunity, and Threat (SWOT) analyses of the situation. First, it was determined that staffing should be dependent on the level of passenger traffic, and so staff members were to be positioned at congested areas. However, manpower schedules were not able to support this. Secondly, the human resources management system was not efficient. Third, immigration inspection facilities were not properly allocated. Fourth, delayed security screening in immigration hampered the flow of arriving and departing passengers, which further lengthened waiting times in the immigration inspection process. Fifth, check-in counters were concentrated around specific airlines and regions, making it difficult to allocate passengers. Sixth, inspection was delayed by too many confirmation points during the immigration inspection. Seventh, the congestion caused by Chinese tour groups was a barrier to other foreign visitors. Finally, the lack of an effective system for processing flight attendants caused undue inconvenience in the immigration process and made it difficult to control flight attendants.

In 2005, the Korean government's reform focused on implementation and expansion of innovation in the Korean government system. Along these lines, particularly in regard to innovation in the Incheon Airport system, the MOJ deliberated on the process and concluded that there was a need for a training program for change agents in its agencies.

Nurturing change agents in each of the MOJ's 145 agencies was not feasible. Therefore, the MOJ designated 15 financial and economic agencies, in addition to creating an Innovation Leading Team of 50 employees. In January of 2005, the MOJ established and implemented a plan for the Innovation Leading Team.

The overall process of the implementation of the innovation program was set up in five steps. The first step was theme selection based on environmental analysis, benchmarking, and the establishment of performance indicators. The second step involved problem selection and analysis, establishing goals, and selecting innovative items. The third step was the development of the innovation program. It included analysis of transformative tasks and a layout of the operation (Should-be-Map).² In

this step, action plans were established as well. The fourth step was the execution of the program, in which results of the changes were analyzed and publicized. In the fifth and final step, feedback from previous steps was evaluated.

Furthermore, the Innovation Leading Team was organized to take the lead in innovation efforts. Under the immigration offices of Incheon International Airport, the Innovation Leading Team is divided into Full-time and Part-time.

In anticipation of internal resistance to the innovation tasks, decision making was delayed. To address a delayed reporting process, one-to-one reporting lines were established between the related agencies and innovation task force teams. When finalizing tasks, the Innovation Leading Team leader would report directly to the general manager or director. Through cooperation between agency, innovation task force team, and the department executing the tasks, execution of each of the tasks was assured.

Based on the analysis, the Weakness and Opportunity strategy for the innovation of the immigration inspection system was developed, focusing on the identified weaknesses: the bureaucratic organizational structure and the problems related to the work system. The strategy aimed to innovate the inspection service, in order to take advantage of opportunities, such as the improved position of Incheon International Airport as a hub in the Northeast region and increased administrative demand due to globalization.

I. Contextual Conditions of the Case Study

Korea seeks to be a hub for Northeast Asia, with Incheon International Airport serving as the gateway. With the number of airport passengers rising, a rapidly increasing demand for flights in Northeast Asia, and the deregulation of the airline industry, a fierce competition was created among airports vying for hub positions. Many countries in Northeast Asia were accelerating efforts to offer better airport infrastructure and enhanced services. An expansion of existing airports and construction of new larger airports was underway.

² A 'Should-be-map' is created from the improvements of a project team during the improve phase of a project. This will be eventually created but at the point in the project it wants the process to look like it does in reality. (Georget Eckes. 2002. "The Six Sigma Revolution: How General Electric and Other Turned Process into Profits")

However, the Airport Service Quality (ASQ) customer satisfaction survey in 2004 ranked Incheon Airport as number 16 of 45 major airports in the world. Customer satisfaction levels were very low compared with competitors in Northeast Asia, such as Chek Lap Kok Airport in Hong Kong (ranked number one) and Changi Airport in Singapore (ranked fifth).

The specific problems of Korea's immigration inspection service were as follows. Firstly, it was determined that staffing should be positioned at congested areas depending on the level of passenger traffic, but manpower support was complicated by the segregation of arrivals and departures. That is, arrivals were processed strictly by immigration inspection officials and departures by departure immigration officials.

Secondly, the human resources management system was not efficient. There was no system in place to manage the 492 arrival and departure inspectors, which led to ineffective staffing. Employees were positioned routinely with no consideration for the levels of passenger arrival and departure traffic. Fluctuating staffing levels in response to passenger demand was not easy, as inspectors were controlled by separate departments. Furthermore, inspectors were not adequately allocated at immigration checkpoints to respond to situations.

Third, immigration inspection facilities were not properly allocated. Immigration inspection was in four separate areas, but passengers were not evenly dispersed. Therefore, inspections were congested in certain areas and so a shortage of inspectors was seen. Moreover, support offices, such as interview rooms, were remotely located. This made it difficult to provide prompt support, and to operate in general.

Fourth, delayed security screening in immigration hampered the flow of arriving and departing passengers, which further lengthened waiting time in the immigration inspection process. This was primarily due to an insufficient number of security checkpoints. There were 25 security checkpoints in all, which served 120 immigration checkpoints. Furthermore, passengers backed up in security screening lines crowded the aisles, blocking passenger thoroughfares.

Fifth, check-in counters were concentrated around specific airlines and regions, making it difficult to allocate passengers. Departing aircraft are often among the same airlines in a specific area which leads to a concentration of passengers in that area. Longer passenger waiting

times to clear immigration were seen as a result of such a configuration.

Sixth, delays were seen because of too many confirmation points throughout the immigration inspection process. During the inspection, a considerable amount of time was spent checking the submitted form. However, inspection time can be reduced by about 30% by eliminating the need for arrival and departure cards, or by simplifying the forms themselves.

Seventh, the congestion caused by Chinese tour groups was a barrier to other foreign visitors. The introduction of Chinese tour group system in 1998 contributed to an increase in Chinese visitors. It was necessary for the immigration process to be less focused on the Chinese tour groups and to strive to better serve the diverse foreign arrivals community.

Eighth, and lastly, the lack of an effective system for processing flight attendants caused undue inconvenience in the immigration process and made it difficult to control flight attendants. A barcode printed on flight attendant Certificates of Registration was difficult to rely on due to frequent barcode reading errors. When flight attendants arrived and departed, a name list check was used in place of a proper immigration record. Furthermore, flight attendants on cargo aircrafts were forced to process at immigration inspection counters in the passenger terminals because of a lack of counters in cargo terminals. This process was both inconvenient and inefficient.

II. Tracing the Implementation Process

1. Recognition of Problem

In 2004, the total number of passengers landing on Incheon Airport reached more than 22.4 million annually, a combination of 11.21 million outbound and 11.19 million inbound. The Incheon Airport Immigration Office was in charge of the immigration inspection service for all arrivals (and departures). Thus, immigration officials were among the first and last interactions that travelers would have with the Korean state when arriving and departing at Incheon. In light of this high-profile role, these officials played an essential role, and it was important to set standards for this administration and to measure customer satisfaction. However, customer satisfaction fell short of desired

levels; Incheon ranked 16 of 45 airports surveyed for customer satisfaction in 2004 (see Table 1).

An analysis of the 2004 immigration inspection system illustrated several structural weaknesses. First, many travelers experienced excessive waiting times for entering and exiting the country, of more than 20–40 minutes. Second, unlike the advanced inspection systems in use at some other major airports, internal inefficiencies of the Korean organization undermined its advantages of operating advanced inspection systems. Third, the organization structure with separate divisions for arrivals and departures reinforced passive attitude of employees, which led to inflexible staffing of inspectors.

An analysis of arrival and departure traffic showed that congestion levels differed throughout the day; the peak time for departures was from 8–10 A.M, and for arrivals from 4–7 A.M and 8–10 P.M. Despite the traffic patterns, staffing and operation systems were not flexible, so it was difficult to deploy more inspectors during peak times, which presented a problem.

2. Decisions for Change

In 2005, the Korean government's reform focused on the implementation of innovation. In line with this, the MOJ deliberated on the process and concluded that there was a need for a training program in order for change agents to “infuse new blood” in its agencies³ (in-text citation needed).

Nurturing change agents in each of the MOJ's 145 agencies was not feasible. Therefore, the MOJ designated 15 financial and economic agencies, and created an Innovation Leading Team of 50 employees to lead and carry out the reforms. In January of 2005, the MOJ established and implemented a plan for the Innovation Leading Team.

When the Incheon Immigration Office was designated as the Innovation Leading Team, on behalf of immigration offices under the Innovation Leading Agency Nurturing Plan by the Ministry of Justice, some complained about that designation due to lack of understanding of the program.

After the innovation system designation, an Innovation Education Program was implemented from February to August 2008. Initially, the team members complained about the difficult level of educational content in the program. Nevertheless, through consistent reinforcement

of the skills and tools learned, they were able to acquire systematic and professional techniques such as: 3C FAW (Company, Customer, Competitor at Work), 7S (Strategy, Structure, System, Staff, Skill, Style, Shared Value), SWOT analysis, Customer Segmentation, Biz System, Business Analysis, Logic Tree, MECE (Mutually Exclusive, Collectively Exhaustive), 4P (Product, Price, Place, Promotion) analysis, strategic thinking, fact-oriented thinking, hypothesis setting and testing, data collecting and analysis, Blank Chart, process mapping, developing methods of innovation tasks and solution, and more. They attended three two-day courses and practiced on-site innovation coaching eight times.

Consequently, innovation points were determined through a well-organized analysis of the overall process of Incheon Immigration Offices. It was an opportunity to look beyond the business-as-usual process for immigration inspection work with a new mind set and paradigm shift.

3. Selection of Innovation Strategy

a. Set-Up of Overall Process of Innovation

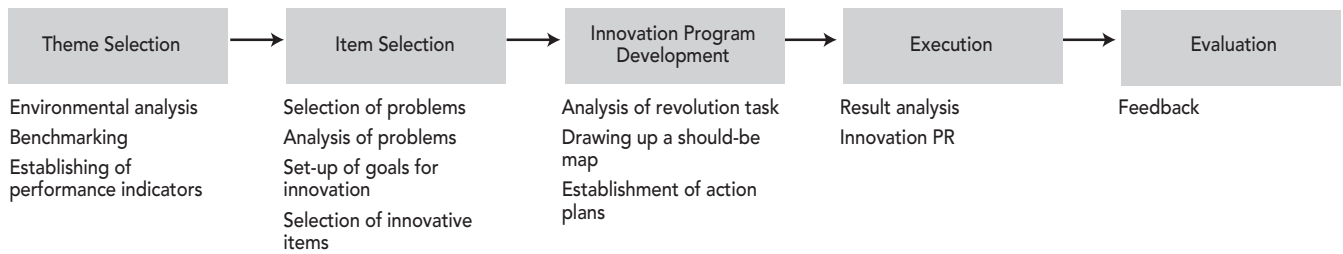
The overall process of the implementation of innovation was set up in five steps. The first step was theme selection based on environmental analysis, benchmarking, and establishment of performance indicators. The second step involved problem selection and analysis, establishing goals, and selecting items to reform. The third step was development of the innovation program. It included analysis of revolution tasks and drawing a Should-be-Map, which is a layout or blueprint of the operation. In this step, action plans were established as well. The fourth step was the execution stage, which included an analysis and reflection stage, in which results of the changes were analyzed and publicized. In the fifth and final step, feedback from previous steps was evaluated.

b. Management of Organizational Structure for Policy Implementation

Under the immigration offices of Incheon International Airport, the Innovation Leading Team consisted of a Full time team and a Part time team. In addition, there were four task execution teams. The first team consisted of arrival sections one through seven; the second team was made up of departure sections one through seven. A third team came from the computer processing office. Team four was derived of members from the Department

³ Internal data from the Ministry of Justice.

Figure 1: Solution Finding Process



Source: Internal data from Ministry of Justice.

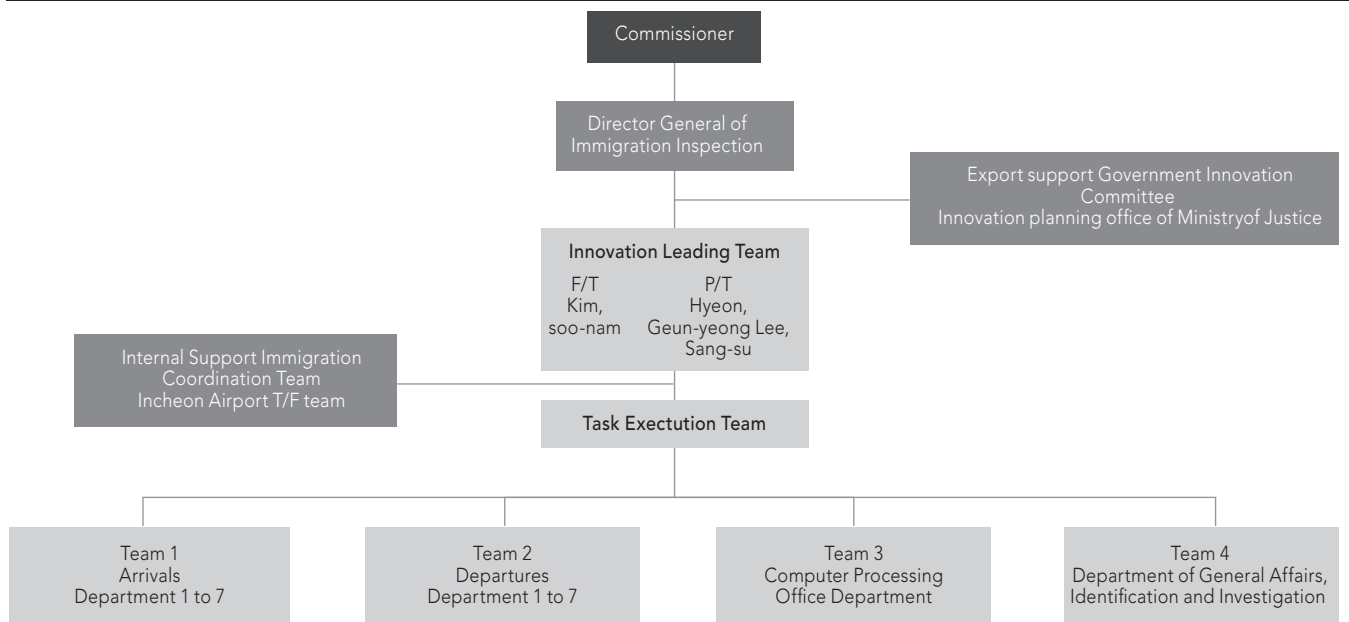
of General Affairs, Identification, and Investigation. Furthermore, to support the innovation leading team and task execution teams internally, there was an immigration coordination team and an Incheon Airport Task force team. External support was provided by the government innovation committee and the innovation planning office of MOJ.

c. Enactment and Amendment of Law in Innovation Process

For an effective innovation of immigration inspection policy, integrating arrival and departure sections, as well as reducing a large department into smaller teams, was undertaken. A restructure of the organization and work system supportive of the proposed team system was reviewed.

First, the staff who handle arrivals and departures were integrated into a single organization. A study of such integrated systems in Japan, Hong Kong, and Europe, which did not differentiate between arrivals and departures was performed. After months-long analysis of reorganization, the reorganization proposal was then submitted to the Ministry of Justice, the Ministry of Government Administration, and Home Affairs on May 25, 2005. This was expected to generate efficiencies equivalent to the hiring of 46 additional inspectors through effective management of the inspector workforce and system. It was determined that 95% of departures took place between 9 a.m. and 7 p.m. On the other hand, arriving passenger inspections took place around the clock. However, some employees were scheduled for earlier-starting or later-ending shifts, which allowed

Figure 2: Innovation Promotion Organization Chart



them to avoid the heavier traffic times. With the proposed change to integrate the departments, it was expected that employee satisfaction would increase as standardized working conditions would apply to everyone.

Second, the innovation team took large scale departments and broke them down into smaller sections, and created a team operational system for Incheon International Airport Immigration Office. Additionally, the benchmarking of manpower operation system at Kansai Airport was included in the reorganization proposal on May 25, 2005. The main focus of the reorganization was to integrate the two segregated departments and establish a total of 28 teams of about 13–14 members per team. With this new structure, a system was devised to strategically deploy inspector teams to checkpoints according to passenger traffic.

Next, the innovation team proposed a new working system that would be adapted to the reorganized staffing system. Within this new organizational structure, the team created a flexible working system that was expected to allow inspectors to be assigned to areas of higher passenger congestion. An adaptation plan for reorganization was established in July of 2005 and presented to employees for feedback. Finally, it was decided to adopt the new system as soon as a computer program for inspector management was designed.

4. Implementation: Going from Ideas to Results

After the overall process of the reform was set, innovation was gradually carried out following each step.

a. Theme Selection

Analysis of the environment and benchmarking were conducted to create a theme for the innovations. The environmental analysis had three aspects. The first is segmentation. Inbound and outbound passengers are categorized into four groups: arriving and departing passengers (both Koreans and foreigners), foreigners against national interests (entry denied and departure ordered), relevant organizations (public and private), and employees of the immigration inspection. The second is to benchmark major competitors, for example: Narita, Dubai, Chek Lap Kok, Changi, Heathrow, Charles de Gaulle, and Frankfurt Airports. The third is comprehensive analysis of the Incheon International Airport with 7S analysis: Shared Value, Strategy,

Structure, System, Staff, Skill, Style and promoting a New Culture.

The results of the integrated environmental analysis of the Incheon International Airport are as follows: a) Strategy: the need for strategies, such as continuous systemization for an effective system and a quick immigration inspection system, were recognized as essential. Support, however, was low, indicating that promotion of a more dynamic action plan was needed. b) Shared Value: Speed and accuracy of the inspection process were not easily achieved at the same time. Two values (speed and accuracy) take precedence depending on exterior circumstances or policy maker conviction. This causes delays and the inability to respond to external demand. c) Structure: In terms of organizational structure, the separation of arrivals and departures made the inspection process stable, but inflexible. Although the process for both is similar, segregation creates an inflexible operation. Moreover, then-leadership made it difficult to integrate, and it was difficult to effectively manage team members because the department as an organizational unit was quite large. d) System: Departments rotated personnel in the four areas of the arrival and departure immigration inspection process. Inspectors were allocated in the immigration area by department and, as necessary, some could support the workload by changing positions. However, under these circumstances, no single department has overall control of the inspectors. Inflexible management leads to low work productivity. Furthermore, the organizational structure and inflexible staffing resulted in low work efficiency. Inspection time was delayed due to the identification process of face-to-face inspection, check of arrival/ departure cards, and other functions. Inspectors were fully allocated into the immigration area as inspectors were needed for other non-inspection duties. e) Skill: The organizational structure was designed based on tasks and a basic organizational unit consisting of many team members. This hindered the ability to respond to changes in external environment. In addition, as the inspection process does not require cooperation among inspectors, there was weak integration of skills. f) Staff: Employees with expertise, international understanding, and foreign language fluency were well qualified as inspectors. Despite such skillsets, however, individual contribution to the organization was low. g) Style: Indifference toward the organization, lack of teamwork, and deep individualism were evident.

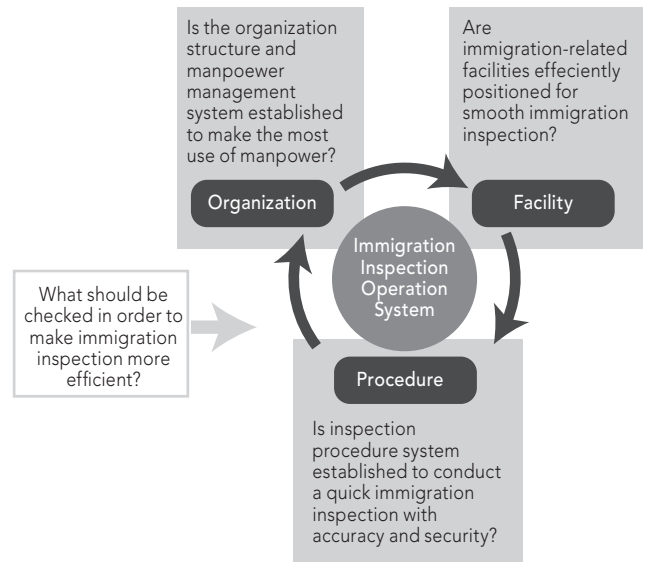
As a result, performance indicators were developed based on this environmental analysis. The Key Performance Indicators (KPI) involved areas such as the rate of operation by inspectors, passenger waiting time, customer satisfaction, and more. The operation rate of inspectors was defined as the number of total immigration inspectors per arrival and departure traffic. The waiting time for the immigration inspection was measured as the time required for a passenger to clear inspection. In the case of departures, waiting time was considered the time a passenger spent in the departure lounge. For arrivals, it was the time a passenger spent waiting for the inspection after arriving at the inspection point. The customer satisfaction rate is the Immigration Inspection Index of Passengers from major international airports, as conducted by the International Air Transport Association (IATA) and the Airports Council International (ACI).

b. Reform Item Selection Process

To ensure consistency in item selection, the selection process included an analysis of problems and a selection of possible innovative items to increase the efficiency of immigration inspection policy.

In the stage of problem analysis, a logic-tree was drawn up to find the root cause. Based on that logic-tree, a hypothesis was reached through consensus of team members following three rounds of evaluation. A validation plan was developed including the content, the methodology, and the schedule, in order to effectively test the hypothesis. Parameters were established for the collection and analysis of data. The first step to establishing parameters was to create a rough draft of content and indices, as well as a blank chart to organize possible solutions to address the problems found. Based on missing information in that chart, it could be determined what

Figure 4: Set-Up of Analysis Frame to Achieve Goals



Source: Internal data from the Ministry of Justice .

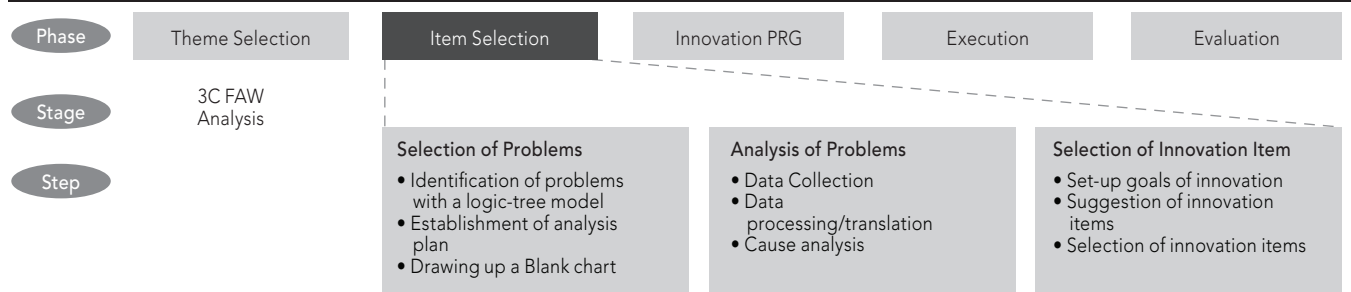
data was needed for expansion and gathering. At that point, parameters for analyzing data would be established.

As mentioned above, categorizing problems and identifying the root of the problems, using a logic-tree, were integrated into the process. The analysis criteria were determined by examining the organization, facilities, and inspection procedures from an integrated perspective.

c. Direction of Innovation Established

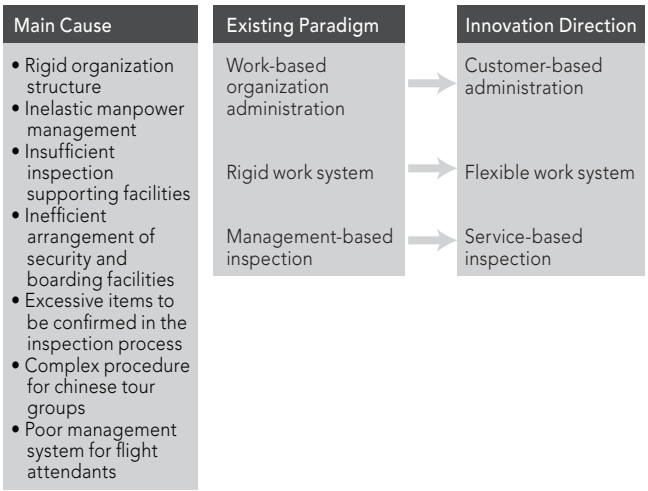
To maintain consistency in implementation, the general rules for removing the main obstacles was established. The reforms focused on innovative solutions to the seven problems identified in the problem analysis stage. Thus, the directions to revolutionize tasks were established to upgrade efficiency in the immigration inspection policy.

Figure 3: Item Selection Process



Source: Internal data from the Ministry of Justice .

Figure 5: Establishment of Innovation for a New Paradigm



Source: Internal data from the Ministry of Justice .

These causes resulted from an organizational management that focused on existing work policies, a rigid system, and a management-oriented immigration inspection policy. Consequently, the proposed direction of innovation in immigration inspection was to be a more passenger-oriented managed organization, with a flexible working system, and a service-oriented immigration policy.

d. Innovation Task Selection

Policy changes were selected based on the direction of the innovation for improving efficiency of the immigration inspection service. Establishing the direction of innovation targeted items such as a customer-based administration, a flexible work system for the immigration officers, and a service-based inspection. Each item was selected according to the overall direction of desired innovation. Customer-based administration involved the integration of arrival and departure departments into a single organization, and

Table 2: Innovation Item Selection

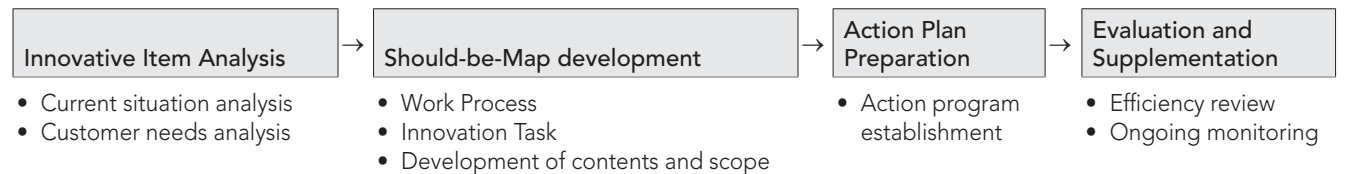
Innovation direction	Innovation Task Description (Policy change)
Customer-based Administration	Integration of arrival and departure departments into a single organization
	Breakdown of large department into smaller work teams
Flexible Working System	Establishment of integrated management center for immigration inspection
	Implementation of automated program to control inspector work
	Reorganization of the rigid work system
Service-oriented Immigration Inspection	Simplification of immigration inspection procedure for tour groups
	Elimination of immigration form submission
	Implementation of automated immigration inspection system in cargo terminals

breakdown of a large department into smaller work teams. A flexible work system meant an integrated management center for immigration inspection, an automated program to control inspector work, and a reorganization of the rigid work system. Service-based inspection simplified the immigration inspection procedure for tour groups, completely eliminated immigration form submission, and implemented an automated immigration inspection system in cargo terminals.

e. Development of Innovation Program

An analysis of situations pertaining to the designated innovation items and an analysis of each of these items included conducting a consumer needs analysis. Based on the analysis, the desired end results, an implementation process map (Should-be-Map), an overall action plan for the implementation, and a time table for each item were created.

Figure 6: Development of Innovation Program



Source: Internal data from the Ministry of Justice.

f. *Implementation*

A task force of 10 people was formed to support the innovation implementation. In addition, a task force of five was established to build the e-Gate immigration inspection system in cargo terminals. The cargo terminal operation council, made up of 17 officials, was established. It comprised of nine organizations, such as customs, quarantine services, and NIS. After 10 consultation meetings among institutions, an agreement on a cargo terminal immigration check-in service was reached. The agreement went into effect on September 1, 2005.

To promote these policy changes, the ideas driving these innovations were publicized and discussed, and beneficial expectations were enthusiastically broadcast on the radio and in newspapers. Employee participation in innovation activities was encouraged through staff conferences, training, surveys, and a letter from directors.

5. Addressing the Delivery Challenges

a. *Solutions for Lack of Professional Knowledge to Manage an Organized and Systemic Innovation*

It was decided that related agencies were to make the fundamental transition from existing practices and inefficient system, despite the fact that some were resistant to change. Therefore, in order to bring about this change—which was based on the credible expertise, systematic analysis, and convincing theories – innovation experts were to be recruited and nurtured.

As such, a leading innovation team was organized, with members who had a wealth of hands-on experience, were innovation-pursuing, had goal-oriented mindsets, and had planning capabilities. The team was required to participate in three MOJ-organized training sessions, which fostered innovation leadership, and to participate in eight intensive training sessions on implementation processes and methods, which was conducted by external experts.

b. *Solutions for Lack of Cooperation and Coordination among Related Agencies*

Firstly, most of the innovation tasks had to run through a wide range of agencies: the Ministry of Security and Public Administration; the Ministry of Strategy, Planning, and Budget; Customs; Quarantine Stations; Incheon International Corporation; the National Intelligence Service; the Ministry of Foreign Affairs; and the Ministry

of Culture, Sports, and Tourism. These government agencies, while understanding the need for change and innovation, were reluctant to participate in the innovation process due to insufficient human resources and a lack of internal guidelines for policy changes.

Serious dialogue among related agencies and the establishment of consultative meetings allowed them to establish an information-sharing system among national security and other organizations, such as the National Intelligence Service, Military Manpower Administration, Police Agency, National Tax Service, and Korea Customs Service. The collaboration has continued to ensure communication and interoperability among related organizations for building shared technology database called, the INBS .

While in theory a wide range of agencies worked together at the airport, each organization had its own perspectives and interests, and this was particularly true for Incheon Airport's multi-faceted layers of related agencies. Primarily, the airport organizations and businesses have specific goals and cultures, and they did not view themselves as part of the big picture of Incheon Airport. These exclusive organizational cultures made interactions difficult with their airport neighbors. In addition, there were no structured opportunities to jointly discuss and exchange opinions. While each organization and business might be individually successful, customers who considered the airport in its totality did not feel its tenants to be efficiently integrated.

Secondly, the airport also lacked operational expertise, causing it to fall behind. This was in part due to the fatigue that had been accumulated during the preparation for the airport's launch. In fact, during the preparation of the launch of airport, it became clear that agencies involved all pursued a common goal: the successful launch of the airport. This made collaboration possible between the agencies. However, stakeholders lost sight of the shared goal after the successful launch of the airport. This was coupled with a lack of experience on the part of personnel working at the airport, which resulted in inefficient management and poor customer service after its launch.

Third, an absence of service-mindedness among airport employees was another stumbling block. Airport operations are 24 hours a day, seven days a week. Therefore, employees are required to work day and night shifts. As airport facilities were mainly designed around servicing customers around the clock, employees were not satisfied with their working conditions. A high level

of customer service could not be expected from the discontented employees. Therefore, efforts were made to find the solution to these problems. The first step was to formulate shared goals to present to all airport organizations and businesses at a consultative meeting and the second was to solicit active cooperation among the stakeholders.

In December 2003, before the innovation plan, meetings with airport organizations and airlines led to the foundation of Service Improvement Committee for the Incheon airport. The CEO of the Incheon Airport Corporation was at the helm, with the heads of 10 government institutions and partners as members. The committee, led by the Incheon Airport Authority that owns the airport, was a new type of committee with deliberation and voting rights (JiSeung Jang et al., 2011).

To encourage and persuade, the MOJ actively utilized the support and coordination between internal agencies, including the Planning Division of Immigration Service and Innovative Human Resource Office, as well as external organizations such as Incheon Airport Security Measures Council, Working Group Meeting for Security Measures, Korean Government's Innovation Council, private airlines, Incheon Airport, and more. Additionally, they organized a consultative group for collaborative implementation of innovations, in an effort to address resistance from the above organizations.

c. Solutions for Difficulties Moving from a Complex Chain of Command to Strong and Systematic Innovation

In anticipation of internal resistance to the innovation tasks, decision making was delayed. The reporting process for related agencies was lengthy and complex. To address this while in the process of task selection, one-to-one reporting lines were established between the related agencies and the innovation task force teams. Until innovation tasks were finalized, they were kept confidential while the MOJ's agents discussed options. To address difficulties in the process, the Innovation Leading Team's community of practice (CoP), which was an exclusive membership program for the innovation training, was organized and managed internally, allowing access to team members only.

Furthermore, in order for employees in charge of the innovation tasks to be treated fairly in their Human

Resources (HR) performance evaluations, strict and fair evaluation criteria were applied. When finalizing tasks, the Innovation Leading Team leader would report directly to the general manager or director of the Incheon Airport. Through cooperation between agencies, the innovation task force teams and the department accomplishing the tasks, execution of each of the tasks was assured.

d. Solutions to Overcome Implementing Policies in Reform

It was a lengthy and intricate process to revise laws and guidelines as a prerequisite to changing existing practices. The need for these written revisions was often perceived as cumbersome and some agencies were reluctant to actively implement the changes. To address this, higher level agencies were asked to actively take on the task of rewriting the new guidelines, thus relieving some of the workload. In the process, other inefficiencies were uncovered and improved upon in the review of existing laws and guidelines. Also, the expected outcomes of the revision were promoted to persuade the relevant agencies to actively participate in the innovation process.

e. Solutions for Employee Cynicism about Innovation

Employees who were cynical of innovation tasks had perceived the innovation policy as a formality for evaluation. Hence, anxiety and complaints among employees were widespread, as it was believed that a poorer working environment would result from the organization's efforts to improve customer service, restructure the work system, and change immigration inspection policies.

To address this, innovation tasks were carried out through coherent plans by the Innovation Leading Team. This resolved much of the employee angst. Furthermore, employees were informed that environmental analysis indicated that such innovation was the only means to increase customer satisfaction and improve operations of the Immigration office. This, too, helped to persuade employees and to increase positivity. With consistent training to develop skills and tools, employees were able to adopt a new and different perspective. Inspectors received systematic and professional innovation training that pertained to the real-world inspection process, and thus acceptance of the innovation was more rapidly established.

III. Lessons from the Case Study

The innovations at the Immigration Office of Incheon Airport were successfully completed. For example, the airport saw a significant increase in outbound Koreans passengers and inbound foreign passengers after innovation. The number of resident foreigners reached over one million in 2007, and the number of foreigners entering Korea has dramatically increased.

Second, Korea’s advanced Information and Commination Technology (ICT) concurrently enabled innovation in policies and an improvement in the inspection system. The policy to establish a customer service-oriented system in governmental organizations, such as the immigration inspection system, proceeded quickly and systematically as the part of the policy to promote electronic-government. Efforts to computerize administration began in the 1980s, followed by projects for an administrative network and a communications network, both of which became fully operational in the 1990s. The public service system was operable from the early 2000s, and Korea ranked first for e-government for three consecutive years, as stated by the UN. As a result of the success of those program upgrades, immigration inspection was easily innovated.

In this way, science and availability of information are of utmost importance in advancing security and speed, elements which are seemingly in conflict and therefore not easily improved upon in the inspection process. Both contribute to a more accurate and secure inspection, but also to quicker and simpler innovations through the automation of the inspection process.

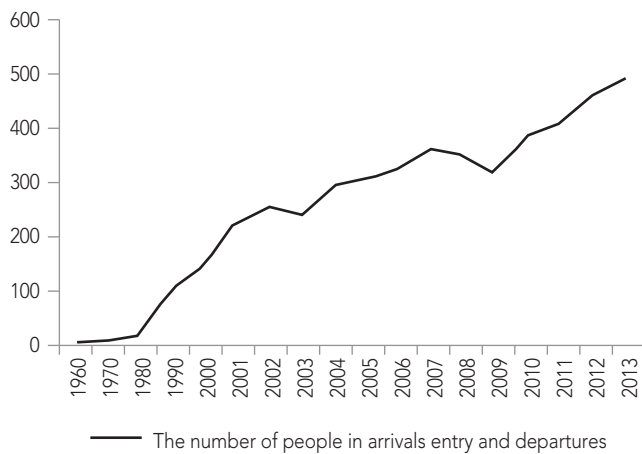
Lessons for Innovation in Developing Countries

The first lesson is that the commitment of the top policy decision maker is vital to the success of innovation. It is paramount to ensure the top decision maker supports and understands the innovation. In this regard, it is also important to understand the environment, culture, and institutions of countries that might wish to duplicate Korea’s innovation.

The secondly lesson key to the immigration inspection service is that many organizations in airport operations are interrelated. Therefore, in the process of implementing innovation, it is essential to obtain the cooperation of related organizations. Moreover, from start to finish, cooperation is necessary for consistency in the governance system. The inspection policy was built through establishing a system, one that needed to be collaborative, so that related organizations could share information and ensure all factors would be considered in the first step in innovation.

Lastly, based on information technology, a number of systems built into the immigration inspection process are concerned with safety and security first and foremost. In this regard, creating an environment in which the system can be built and maintained is necessary. Rather than introduce expensive high-tech devices for the inspection from the start, countries must first build the basic environment. As there are many countries without basic inspection policies, sometimes having such a policy itself is required as the first phase in considering integrated system architecture, based on Business Process Re-engineering (BPR) and Information Server Platform (ISP). Such countries may need a strategy to develop the system which embodies the spirit of “Government 3.0” in Korea: openness, sharing, collaboration, and communication.

Figure 7: Change in Number of Arrivals and Departure



Source: Ministry of Justice, Statistics Yearbook of arrivals and departure.

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