JAPAN PUBLIC WORKS CONSTRUCTION CONTRACTING METHODS: AND THE REBUILDING OF JAPAN AFTER THE MARCH 2011 EARTHQUAKE AND TSUNAMI

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ABSTRACT. This research focuses on the traditional Japanese construction contracting methods, and if any alternative contracting methods were used to re-build their infrastructure, and public works after the devastating earthquake and tsunami of March 2011, other than the traditional design-bid-build. In these re-building efforts, were any provisions made to promote sustainability and eco-friendly procurement in these contracts? And finally, is that transparent and ethical non-biased professional procurement practices and contract management are essential to evaluate and substantiate the Request for Proposal process. This is necessary to assure fairness and promote trust in the contracting, and the good stewardship of public funds. The subjective nature of the Request for Proposal requires a well-trained procurement professional that can stand up to scrutiny and demonstrate fairness and trust, and maximize efficiency to meet the needs of the people in emergency situations.

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INTRODUCTION

On March 11, 2011 Japan experienced a catastrophic 8.9 magnitude earthquake and subsequent tsunami with 30 foot high waves. This was one of the largest earthquakes ever recorded. The northeastern part of Japan was hardest hit. Thousands of buildings, roads, rail lines, and communication lines were destroyed and 4 million buildings were without electricity. Damage was originally estimated at over $300 billion (US).

Many countries in the world have utilized a traditional Design-Bid-Build structure when contracting to build public improvement construction and public works projects, although sparingly. The last two decades have seen an increase in the use of alternative contracting methods such as Design-Build, and Construction Manager/General Contractor; called CM/GC or (Construction Manager at Risk). These alternative methods are thought to reduce the time frame of a project, be more efficient, and save money. They are not solicited to the lowest bid, but to the most qualified, who can do the best job within the desired time frame, most efficiently. In a situation like the disaster in Japan, would the emergency situation make these alternative contracting methods more viable? Or would governments still choose to rely on the traditional Design-Bid-Build solicitation and contracting method?

Japan is a country that is steeped in tradition. This applies to the contracting methods that government agencies carry out as well. Since World War II the traditional design-bid-build method has been the predominant contracting method. In Japan, the Open and Competitive Bidding procedure is employed for large-scale public works, and the WTO Agreement on Government Procurement applies to most of these works. For other public works, Designated Competitive Bidding (Shimei-Kyosou Nyusatsu) procedure is widely employed.

PART I

This text explains an overview on the solicitation and contracting procedures, focusing on the Open and Competitive Bidding system in Japan.

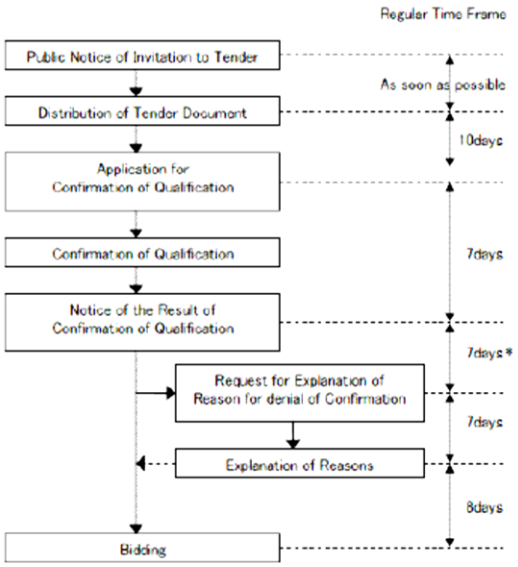
Open and Competitive Bidding

As specified by the Action Plan on Reform of Bidding and Contracting Procedures for Public Works (approved by the Japanese Cabinet on January 18, 1994) and the Agreement on Government Procurement (Effective date: January 1, 1996) of the World Trade Organization (WTO), Open and Competitive Bidding procedures shall be employed for procurement/contracts.

The Open and Competitive Bidding procedure includes the "Standard Type"(Hyoujun-Gata) and the "Implementation Plan Evaluation Type." (Seko-Keikaku Shinsa-Gata). In the case of the Implementation Plan Evaluation Type, which is applied for particularly difficult projects, potential bidders are required to submit in advance their implementation plans for the project so that their technical qualification can be examined. The number of projects executed under this type of procedure has been limited.

In Japan, in order to participate in bidding procedures for public works, registration with each commissioning entity is required. A registered firm is enabled to participate in a bidding procedure through prequalification.

1-2 Flowchart of the Open and Competitive Bidding (Standard Type)



* excluding holidays for the administrative agencies

A construction company is required to register on a list at each commissioning entity in order to participate in public works projects. Also, a single entity often has several regional bureaus or subordinate agencies that independently order construction works and have their own registration lists.

Registration is necessary not only to participate in bidding under the Open and Competitive Bidding system, but also in the other bidding systems mentioned below. Applications for registration are received at any time of the year, although several weeks for processing should be allowed. Each applicant firm is registered with the commissioning entity based on its score on the entities' evaluation. The ability of each firm is almost always evaluated using the results of the "Business Evaluation."

(Keiei-Jikou Shinsa)

The Business Evaluation is a system for evaluating technical, financial, and other abilities of a construction company. A company that plans to participate in public works is required by the Construction Business Act to go through the Evaluation annually. The licenser that granted the Construction License is in charge of the Evaluation. For example, if the Tokyo Metropolitan Governor issued the License, an application for the Business Evaluation must be submitted to the Tokyo Metropolitan Governor.

(Evaluation Criteria of the Business Evaluation)

Annual value of completed construction works by License classification:

- Net worth
- Number of staff
- Business condition (financial statement analysis)
- Number of technical staff
- Number of years in business
- Record of labor welfare conditions
- Record of safety performance
- Number of qualified accounting clerks

Japan typically over the last few decades has utilized a supplier prequalification process where contractors/architect-engineers are ranked or qualified as to what type of project they are qualified. The

agency will determine a ceiling price for the project, and then will compete amongst appropriately ranked suppliers for the services required for that project. This creates a very competitive situation for Japanese architect/engineers and contractors to keep their ranking at the highest possible level. In the late 1990s and into the 21st century public works projects decreased. This put an unhealthy competitive pressure on some companies. In some situations faltering companies would bid at little to no profit on a Public Works job, just to receive the advanced payment to keep their company afloat, causing several defaults, or subpar performance.

Central government entities or quasi-governmental agencies publish procurement notices in Kanpo, the national gazette. Prefectures and designated cities publish notices in their own gazettes (Kenpo or Shiho respectively). The procurement notice includes the location, outline and time frame, a contact point for detailed inquiries, and other information. With the Implementation Plan Evaluation Type, a potential bidder is requested to submit an implementation plan in order to demonstrate the capability to perform the project.

A tender document, which contains all information necessary for proper bidding, shall be available to potential bidders at the place indicated in the procurement notice. Any potential bidder may obtain a tender document.

After receiving a tender document, an interested potential bidder is requested to submit an application and other relevant documentation for confirmation of qualification. Requirements for qualification include a minimum score on the Business Evaluation, past records of performance in a similar type of project, and availability of a qualified and experienced engineer. A commissioning entity notifies applicants of the results of the confirmation of qualification within seven days (with the Implementation Plan Evaluation Type, 14 days) of the deadline for application. If disqualified, the reasons for disqualification must be specified.

A contract is awarded to the lowest priced bidder below a ceiling price. The commissioning entity publishes the results of the bidding, including the name of a winner and the amount of the contract. When a bid price is exceedingly low, it may be subject to examination to ensure its propriety.

Dango:

A traditional and contemporary issue in Japanese Public Works bidding is Dango (or bid rigging). Dango is a negotiation (collusion) among bidders for a Japanese public-works contract in which it is decided which firm will get the job. The designated firm submits a high bid and its "rivals" bid still higher, maintaining the illusion of competition. For the firms this is a congenial way to do business. Under dango each firm knows that it will eventually "win" a contract, without having to go to the trouble of competing; and dango spares the firms the discomfort of low prices.

Dango refers to the allocation of orders among a set of competitors combined with price fixing to restrict competition. The word “dango” literally means “to get together and talk” referring particularly to trade associations or groups of firms in one industry. Specifically, the term dango has adopted the special meaning of “bid-rigging” in the construction industry; roughly, bid-rigging “dango” means that a group of companies prepare the bids for a public works project in a meeting prior to the auction (bid opening).

As previously mentioned, a price is agreed upon and the bid-winner is determined; the other bidders then propose higher prices to obscure the agreement. In industries such as public works construction, where orders recur regularly, the winner changes with each bid and every firm profits in turn. In these cases, typically all large firms in the industry are involved, and the dango is organized through the trade association. In industries where future bids are uncertain, the winner may pay off the other parties to the agreement or subcontract a pre-allocated part of the job to all potential bidders. In either case, the

effect is that the price is higher than it would have been in truly competitive bids. Dango comes in varieties and occurs in all industries where there is procurement, public or private, it's not only for public works. What has led to the construction industries being singled out in dango is that the government, as the procuring agent, is immediately involved in the process. In fact, Japan's procurement system itself may be rigged and thus invite dango in the first place. This suspicion was confounded when in the late 1980s and early 1990s multiple cases of corruption surfaced that involved local politicians and construction companies.

In the legal context of dango, while the process of the auction (solicitation) involving public procurement is subject to Civil Code rule, bid-rigging can also be considered an antitrust violation, so dango can be violating the terms of cartel or customer allocation if the price is determined together with the designated winner. In addition, while dango is subject to Criminal Law, bid rigging is still a habitual practice of the Japanese construction industry.

Because dango has caused obvious inappropriate relationships between politicians, government and private companies, many people have an ingrained dislike of public works made by interlocking public-private relationship that are not in the best interests of the people.. After many questionable incidents affected by dango, many local and central government entities have put forth a great deal of effort in order to project "fairness" and "transparency" on public works bidding and ordering, especially for the selection method of key contractors (bidders). Decades ago, there was criticism of dango practices, describing them "voice from the heaven (Ten-no Koe)" which means selecting key contractors that interlocking politicians and bureaucracy, judged based on "the money" and "the people", in other words political donation, election cooperation or bribe.

Tantamount to cartel activity in violation of the Anti-Monopoly Law, *dango* cases have been probed many times, yet without prospect of putting a stop to it. In November 2005, public prosecutors searched the offices of several major electric-machinery companies in connection with an electrical facilities project ordered by Narita

International Airport Corp. Neither party saw *dango* as a crime, calling it a "necessary evil." (Wikipedia Ayashi Yamada 2006)

The concept of "working for the good of the industry" is deeply rooted in the world of Japanese public works. Government offices shower money on private companies through public works projects in a practice called "redistribution of earnings." In this way, tax money is passed down to lower-income regions through public works. Road and dams are necessary as infrastructure, but the money spent in the affected regions in the form of works expenditure is more important. In the same way, in the process of national economic growth, government offices have nurtured private companies.

Government offices nurture private companies by ensuring everybody gets a fair share of lucrative public works orders. This is the idea of promotion of industry through (profit) distribution; *Kansei dango*- bid-rigging.

But sometimes bidder agreement is elusive. When some companies do not give ground and no agreement is possible, bidders turn to what is known as "Heaven's Voice." "Heaven's Voice" is usually an industry heavyweight or influential politician, who plays the role of mediator, though he mostly respects the wishes of the government office involved. In most cases, the mediator is a top technical supervisory official. He does not comment directly. After discussion with influential people in the industry and politicians, his opinions are delivered indirectly through obscure channels.

Even though public works bidding is ostensibly competitive, it is principally a matter of "distribution" of public works orders, by arrangement. In this process, government offices have the upper hand over the private sector. As the expression *kanson-minpi* (respect the official, despise the private merchant) implies, government organizations and private enterprises do not operate on an equal footing in Japan. After World War II, Japan's Emperor-centered state system collapsed, but bureaucrats who acted as the "Emperor's

servants" have maintained their powers through other channels. Top-level public service examinations have even been the main arena where Japan's best and brightest compete. (Wikipedia Atushi Yamada)

Dango is widely facilitated in Japan by the practice of Amakudari.

Government officials try to locate the Dango problem: In Feb.2001, the Japan Lawyers Association conducted a survey on the bidding system after interviewing construction companies; they reported one source of the pervasive Dango problem is caused by the local government by sending “side signals” to contractors who will participate in the e bidding. For example, Hokkaido local government was exposed as participating in the Dango problem in 2000. The Association for Sewer Industries are often called "Kansei-Dango" which means a collusive bidding at the initiative of government agencies. There is controversy regarding government entities having involvement in Dango in Japan.

Even after the 2011 disaster, one bid-rigging case had nine companies that joined in the bid for removing debris has been accused of participating in Dango in Miyagi Prefecture, one of the worst affected areas.

Amakudari as it relates to Dango:

Amakudari means "Descended from Heaven" and in this context refers to the way in which retired bureaucrats can land lucrative jobs in private corporations as a reward for their "distribution" of public works. Corporations that have benefited from bid-rigging offer such ex-officials well-paid sinecure posts such as (non-managing) senior officer or adviser. Bureaucrats' *amakudari* posts in private corporations reflect their final position in government service. Former bureau heads will get their own office, secretary, car and expenses. Generally, in amakudari, senior civil servants retire to join organisations linked with or under the jurisdiction of their ministries or agencies when they reach mandatory retirement age, usually

between 50 and 60 in the public entities. The former officials may collude with their former colleagues to help their new employers secure government contracts, avoid regulatory inspections and generally secure preferential treatment from the bureaucracy. Retired high-ranking public officials will become sales representatives, and act as channels for informal communication with government offices. (Wikipedia Atsushi Yamada 2006)

Amakudari, in one form at least, was practiced during Imperial Japan, where it incurred little or no scrutiny or oversight. And, because many industries were nationalized at the time, it was likely a simple task to relocate bureaucrats as it would have been an entirely internal government process. As bureaucrats rise up the civic ladder, they compete for fewer and fewer positions of seniority. Some retire early, while others continue to vie for the remaining positions. Those who ultimately lose are then expected to voluntarily retire from the ministry in almost ritualistic fashion, to preserve the absolute seniority of the new senior officials. The bureaucrats who retire from the ministry are awarded a consolation prize of sorts via *amakudari*, a kind of "thank you for playing the right way."

While *amakudari* is frequently noted as a way of 'compensating' bureaucrats for their efforts and modest salaries while in the civic service, *amakudari*'s proponents have also defended it as a means of lubricating the machinery of public-private sector relations

Amakudari officials can be used to communicate directly with their former ministries, thereby bypassing bureaucratic red tape and making *amakudari* officials particularly powerful lobbyists. This is supposed to work both ways as well, as the private firms are supposed to be able to use *amakudari* officials as a window into the legislative process of the ministries, allowing the private firms to keep abreast of new laws, ordinances, and initiatives. It's clear that in practice, *amakudari* amounts to little more than a network that facilitates bid-rigging and bypassing of competitive bidding procedures, avoidance or outright falsifying of inspection records, and

generally a circumvention of traditional expectations of transparency and fair play.

Designated Competitive Bidding

Public Invitation Designated Competitive Bidding

In Public Invitation Designated Competitive Bidding, the commissioning entity first decides, for each project; the scope of firms from which it will request the submission of technical documents, and then publishes an outline of the project and the qualifications of firms from which the entity request the submission of technical documents. Firms that are interested in bidding on the project submit their technical documents. The entity (agency) then examines the submitted documents and designates firms for participation in bidding. Reasons that a particular firm has not been selected for bidding are generally provided upon request. For example, the Ministry of Land, Infrastructure and Transport (MLIT) ordinarily adopts this method for projects with a contract value of ¥200-730 million. ($2,600,000-$9,600,000 US$)

Project Interest Registration Designated Competitive Bidding

In Project Interest Registration Designated Competitive Bidding, at the time of registration for the qualification to submit tenders, commissioning entities request each construction company to indicate what types of construction projects it prefers to bid on. When it comes time for the bidding by this method, the entity considers the preferences of each company, and requests 10 or 20 registered companies to submit technical documents ("provisional selection"). After examining the submitted documents, final nominees are selected to submit bids. Reasons that a particular firm has not been selected for bidding are generally provided upon request.

For example, the MLIT ordinarily adopts this method for projects with a contract value of ¥100-200 million yen. Many other entities introduce this method for projects smaller than those that use Public Invitation Designated Competitive Bidding.

Other Bidding Systems in Japan

Usually, in the post-disaster construction, most of Japanese central/local government entities or quasi-governmental agencies often employed the open and designated competitive bidding system, but recently they are now testing or have partially introduced the following contract systems.

Value Engineering (VE) System

The VE system is introduced as a means of improving quality and reducing cost of a project. It is adopted at the tendering phase or at the post-contract phase. In VE in the post-contract phase, half of the cost savings achieved through the use of VE is often returned to the contractor. The MLIT and Local Housing Supply Corporations are beginning to use this system, and some local governments are testing and using it.

Technical Proposal Integrated Evaluation System

In the Technical Proposal Integrated Evaluation System (Gijyutsu Teian Sougou Hyouka Houshiki), for a particular public works project, the commissioning entity calls upon bidders to submit technical proposals in addition to price bids. The entity then evaluates the bid considering both the price and the technical proposal, reviewing factors such as quality, speed, design, and safety of execution. This system was used for the first time in FY 1998 to award a contract from the Ministry of Construction (MLIT at present).

Design-build System

Traditionally in design-bid-build, in principle, different firms carry out both the design and construction of public works in Japan. But a small number of public commissioning entities are beginning to use the design-build system.

Design Build in Japan

In Japan, Design-Build (DB) method is called "Sekkei-Kanri Ikkatsu-Hacchu Housiki". In 1997, then the former Ministry of Construction (currently the Minister of Land, Infrastructure and Tourism: MLIT) has begun to conduct some DB pilot projects. 19 projects sponsored by the central government have been implemented as of 2003[†]. Examples;

Example 1: Saga Tanigawa Bridge, Kyoto-city, Kyoto prefecture.

This 200 meter long bridge is a pure design-build project. The agency specified standard of road, bridge range, and major geotechnical conditions. The designated contractor selected the architectural style, and conducted all design/build activities after bidding; including technical concepts and selection of bridge structure form. This included strength and durability, quality control, operation and maintenance, and consideration of environmental conditions[‡].

Example 2: Ichikawa City Elementary School, Chiba prefecture.

In this instance the design-build for this school had 4 main criteria: 1) perform earthquake safety- reinforcement work outside the existing school. 2) Perform new construction and refurbishing while still using the existing school. 3) Offer the shortest acceptable construction

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[†] Japan Association of Civil Engineering and Association of Construction Industries (2004), "Recommendations for Public Procurement System (Kokyo-Kouji Choutatsu Seido no Arikata ni-kansuru Teigen)"
[‡] Hidetoshi Takabuchi and Tomakuzu "Addressing Design Build Case".

timeline. 4) Perform all tasks within acceptable budget parameters. This project resulted in a reduced construction timeframe, allowed for school to continue as scheduled, reduced waste, and came in under budget§.

Example 3: Osaki City Hospital, Miyagi prefecture.

In this case the design-build team consisted of 8 different contractors, and was selected with a focus on a streamlined schedule and cost reduction. The project commenced in January of 2011. The tragic March 11, 2011 earthquake and tsunami halted all construction while an assessment of geotechnical conditions was done. The project is scheduled to continue, however adjustments to timelines and market conditions of construction materials due to supply-demand, will have an effect on the originally bid price.

Some of the major construction companies reviewed said that the DB (design-build) system has not been fully exploited as envisioned due to constraints from the existing system. At that time, the Ministry of Construction put emphasis to introduce more projects using the DB system and create the standard of new technologies in order to improve the cost-benefits using the new DB system. In the end of 2000, the ministry established the Advisory Committee of Introducing DB, and this organization was composed of 10 experts in the field of public works. This committee held three regular meetings up until March 14, 2001.

The report the committee created include the following 5 key ideas: 1) application of DB system, 2) risk allocation, 3) selecting the contractor, 4) calculation of planned price and design change and 5) how the ordering party (agency) is involved in the designing and building phase. Up to 2006, more than 50 DB projects have been done, but the MLIT has not shown enough data materials (e.g. website, official evaluation report for bidding process), that means

§ Higashi Nihon Gekisai Fukkou Shinbun

the Japanese central government has paid little attention to the review process regarding the performance of DB projects.

PART II

How were alternative contracting methods implemented after the disastrous earthquake and tsunami of March, 2011? And was any consideration focused on sustainability and green procurement in these contacted works?

The Japanese government was in a period of strife when the March disaster occurred. A short term Prime Minister Ship, and re-election are some of the reasons. It wasn't till October that the framework for re-building finally got laid out. A new subsidy was allocated to local governments, and a new government department (the Reconstruction Agency) will be created whose sole responsibility is the re-building project (at the present situation, the government appointed a responsible minister who will manage the new agency but the agency has not been established. This new department will start on February 2012). Originally 12 trillion yen were allocated to this new department. Some government parties (DPJ political party) wanted up to 19 trillion yen for this endeavor (for the next five years). Local governments did get a considerable amount of autonomy in how to spend or structure these re-building funds; including deregulation of public construction, financial support, unification of land use planning, and preferential tax treatment for establishing new local businesses in in the affected areas, with support of the central government. It was expected that a rebuilding committee composed of local and central government would effectively develop the planning and bidding system.

Cleaning up debris was the first daunting task. 200 billion yen were allocated for this effort. Money was allocated to construct several incinerators to burn debris, and efforts were enacted to also recycle this huge amount of debris.

Removing debris and recycling:

Japan was greatly affected by the damage of the March 11th quake, rows of housing and building were reduced to rubble by the terrible earthquake and tsunami. Massive debris and disaster waste may present a credible threat to rebuilding and living conditions, thus, removing debris is one of the most urgent and crucial steps for rebuilding. It will require a number of years for all the debris-removal effort.

The case of 1995 earthquake:
In the case of Hanshin-Awaji Earthquake that happened in 1995, about 20 million tons of debris appeared. This was equivalent to the amount of debris for approximately 8 years of Japan's general waste for a one year period. According to data, debris removal in Hanshin-Awaji earthquake , 50% of incombustible materials were recycled for metal and concrete or put in landfills. Additionally, for combustible materials, 86% was incinerated, 4% recycled for wood chip and 10% for final disposal in the affected area.

Regarding securing a location for waste disposal facilities, the projects for removing debris and demolition work were led by Hyogo Prefectural government as the most affected, and the prefectural government ensured 129 ha location for interim waste storage. At that time, many municipalities around the disaster area made effective use of these debris for land use because the affected areas had many unused public lands and uncompleted landfills. Moreover, crushing machines and incinerators were effectively used for intermediated treatment of debris. The total of treatment capacity was 11,555 tons per day with 45 crushing machines and 34 incinerator plants because very few had critical damage to them. As a result, 50% of debris in Hanshin-Awaji case was recycled for rebuilding with various purposes; concrete for landfill, wood chip, pulp, recycled fuel and fertilizer. 90% of the debris was disposed within Hyogo Prefecture.

Regional cooperation – beyond border between prefectures: After the 2011 disaster, massive waste that can prevent early recovery includes concrete, wood chip and metal debris. Generally, things that are recyclable will be recycled, and others will be disposed to landfill area as the final disposal site. To encourage waste disposal various techniques are used. For example, good quality concrete will be reused as materials for landfill or rebuilding construction, Good quality waste wood will become pulp material and recycled fuel through chipping operations, and good waste metal will be reused as construction material. For the near term future large-scale cooperation beyond borders between local governments is required in order to address massive debris through making necessary facilities for waste breakup and incineration effective.

After the 2011 earthquake, about 25 million tons of debris was generated in the affected three prefectures; Iwate, Miyagi and Fukushima. Today (12-2011), according to the Cabinet Office's report, 70% of debris removal has been achieved in these three prefectures. Among the three prefectures, in Iwate (12 municipalities) the removal performance is more than 80%, so this area is being developed rapidly for a full-scale rebuilding project. In the Waste Management Law, the central and local governments have to collect and manage disaster waste generated by the earthquake. However, under this law the private companies have to take responsibility to treat their debris originating from their own factory as industrial waste. In many cases, companies are struggling with paying the cost for the debris removal because many companies in the affected areas have experienced financial trouble after the disaster.

To address this issue, the central government (MLIT) provides a financial support program for struggling private companies to manage their debris through loans arranged by the government. Today, debris removal efforts are in the final stage. 80% of the affected municipalities have almost completed plans for their rebuilding, and from now on we can expect that more municipalities will succeed in debris removal necessary for implementing rebuilding and reconstruction projects.

After the March 2011 disaster, some people in affected areas started "Green Recovery (Green Fukkou) Projects" , a kind of eco-friendly rebuilding effort for the restoration of farmland, fisheries, forests, which includes energy savings and disaster waste recycling.

Broad farmlands were damaged by seawater brought about by the disastrous tsunami when the earthquake happened. Today, many farmers have made efforts to reduce salt level on their land. For these efforts, MY FARM, an agricultural firm in Kyoto who can provide professional services on restoration of fallow soil and rental farms, has developed improved materials to reduce the soil's salt level. This material could reduce the salt level which enables people to grow some vegetables like cabbage.

However, to grow healthy agricultural products further monitoring of salt levels are needed. So NEC (An Electronics Company) provided agricultural ICT (information communication technology) including sensors and cameras to monitor salt level, water, temperature and set up solar panels on farmlands. Moreover, NTT (telecommunication company) made a system that enables people to check monitoring data through the ICT with devices such as iPhone. Also, these committed groups are developing farmer's (SNS) to share farmer's knowledge and the challenges to improve farmland. This emerging practice is expected to restore agricultural land in affected rural area without abandonment of cultivation. (Source from Report on Nikkei BP Environmental Management Forum, Oct 11.2011: http://eco.nikkeibp.co.jp/article/report/20111003/108605/)

One more case study, Green Earth Caravan, green nonprofit created "Nanohana-Daichi Fukkou Project" (Field Mustard and Earth Recovery Project). The purpose of this program includes landscaping, soil cleanup from soil damage, and economic revitalization through planting flowers and trees. Field mustard absorbs salt from the soil and is good for improving soil quality. Also, the nonprofit expects oil produced from field mustard to open up the opportunity of local production of bio-fuel.

After the flowers bloom, farmers will extract oil from the field mustard, and the nonprofit will sell this oil. Usually, in Japan, this is used as cooking oil, but recently sustainability visionaries plan to use this oil as biodiesel fuel for automobile or electric generators. Hopefully this will serve as a positive symbol of the reconstruction movement.(source from Biodiesel Adventure http://space.rgr.jp/bio/2011/11/1117.html)

Japan has done an impressive job of removing debris and restoring infrastructure, like roads, bridges and buildings since the March 2011 earthquake and tsunami. When you compare rebuilding progress to other disasters in the last 20 years, Japan's recovery is truly remarkable and is a testament to the resiliency, discipline and fortitude of the Japanese people. Although the rebuilding process in Japan is really just beginning, as of the writing of this paper we cannot see any signs of an increase in the use of the design-build contracting method being utilized in the re-building effort. As a matter of fact, overall, many contractors say that politics is making the entire bidding and award process prohibitively cumbersome.

PART III

This text hopefully can offer lessons learned for public procurement professionals who are faced with similar emergencies and disasters.

In the United States and the European Union, in the last decade Design-Build has been used sparingly, as the true transparent nature of the traditional Design-Bid-Build method is engrained as the most competitive form of contracting method for Public Works projects. There are disadvantages to this traditional method. There is no synergy or privity of contract between the Architect/Engineer and the General Contractor. There is no concurrent efficiency of time lines in the design and construction. General Contractors, who try to bid on a project with hardly any healthy profit, will look to make up for it trying

to find defects and change orders in the specifications and drawings. This can lead to a project that lacks real harmony.

Design-Build does have advantages. By definition, there would be coordination and efficiency between the design part and the actual build. Different stages of the design and construction should be able to be carried out concurrently, saving valuable time and money. Researchers on "Selecting Project Delivery Systems" by Victor Sanvido and Mark Konchair of Pennsylvania State University found that design-build projects are delivered 33.5% faster than projects that are designed and built under separate contracts (design-bid-build).Sanvido and Konchar also showed that design-build projects are constructed 12% faster and have a unit cost that is 6.1% lower than design-bid-build projects. Also in a design-build project more of the risk is assumed by the contractor. Ogunsanmi, Salako, and Ajai say in their paper on Risk for Design-Build, that "The reason for this is because the contractor is in charge of design, procurement, engineering, and construction of the project". Design-build is very adept to be utilized in emergency situations where the public is in desperate need of re-built infra-structure. There is no reason why an ethical well-seasoned public procurement professional should not use the Design-Build method if it is approved by statutory regulations, and if it is carried out in a transparent and ethical manner. A Design-Build project is carried out through some sort of Request for Proposal process. And because it is not awarded by low bid, there is an element of subjectivity in the selection process. If there are no established values of trust and transparent ethics in the procurement process, there will always be questions about that subjective selection. It must always be for the good of the agency and the people, and must be carried out to the most rigorous demands of transparency and scrutiny.

The lack of these professional methods is also just bad for true and fair economic growth. Japan or any country that does not offer this kind of professional acumen in their public procurement professional will deprive themselves of being able to fully utilize this alternative contracting delivery method for emergency public works projects,

especially in a devastating disaster such as the earthquake and tsunami that struck Japan in March of 2011.

I will quote Kazuhiko Takeshima, of the Japan Fair Trade Commission, in his address to the 54th Antitrust Law Spring Meeting of the American Bar Association, in March 2006. "I believe that what is most needed to sustain growth in Japan is realizing our economy and society needs a high level of transparency and competitiveness. This is what I mean by this. There is no growth without competition. In other words, business enterprises can achieve sustainable economic growth only through competition in a marketplace, and economic growth is achieved as a result of such competition. Businesses and industries are doomed to see their business efficiency fall and their competitive edge is lost at an early stage, if they have evaded competition for one reason or another. Freedom in activity and creativity of business enterprises are the fountainhead of economic vitalization and development. It is also from this perspective that I believe it necessary for the Japanese government to strongly implement competition policy in the broadest context of the structural reforms that are underway by its initiative.

Restrictions of competition pertaining to the sale of relevant goods and services by prearranged choice of bid winners from among the participants, or so called bid-riggings, erode the integrity of the entire bidding system and at the same time violate the Antimonopoly Act. In bid-riggings, officials of national and local governments have increasingly been found to be involved in them. Before 2003, while penalties may be imposed on business enterprises involved in such bid-riggings, there was no sanction on the side of the officials who induce bid-riggings."

Since the enactment of the law in 2003 to penalize officials involved in bid-rigging, as of 2006,only three cases have been prosecuted.

I will further quote Atusushi Yamada, 2006. "The losers are the taxpayers. Bid-rigging is entrenched because Japanese taxpayers lack a strong awareness of their rights. Monitoring offices like the General

Accounting Office and Fair Trade Commission does not have enough power, and this is another reason why bid-rigging and overly expensive orders (projects) remain a problem. These organizations were "imported" from the United States after World War II, as a part of the democratization process. Despite their appearance of effective functioning, they are not firmly rooted in Japan. The powers of government offices that distribute and spend Japan's budget money are greater, and so the checking function of the General Accounting Office is ineffective. The Fair Trade Commission too is considered a toothless watchdog, and is effectively under the control of the Ministry of Economy, Trade and Industry.

With no end to *dango* bid-rigging likely, a strengthening of the penalties for violation of the Anti-Monopoly Law was discussed in 2004. But the lobbying of influential industry organizations like Nippon Keidanren (Japan Business Federation) ensured that such measures were half-hearted.

Even though prosecutors do expose bid-rigging, parties involved often get suspended sentences and are seldom actually punished. Individuals' sense of responsibility is also watered down by perceived extenuating circumstances-that bid-rigging is done at the behest of corporations. Fines for guilty corporations are small and the profits from orders won through bid-rigging far outweigh them. Society as a whole takes a lenient view of the practice. This is reflected in sentencing, and makes bid-rigging an everyday activity". (Wikepedia Atusushi Yamada 2006)

The World Trade Organization, agreement for "Open and Competitive Bidding procedures", states: "The Government Procurement Act (GPA) is based on the principles of openness, transparency and non-discrimination, which apply to Parties' procurement covered by the Agreement, to the benefit of Parties and their suppliers, goods and services. *Recognizing* that it is desirable to provide transparency of laws, regulations, procedures and practices regarding government procurement".

All tax paying citizens have the right to expect that their public procurement professionals are highly trained, efficient, effective, ethical people who will have a fiduciary duty to be good stewards of public funds. We can only hope that in a tragedy such as the earthquake and tsunami that occurred in Japan, March, 2011, the people will get what they deserve.

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