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Tradenet in Ghana
Best Practice of the Use of Information Technology

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Abstract

Even since the Singapore WTO meeting in 1996, trade facilitation has attracted major attention in international trade discussions and negotiations. That trade facilitation was a key agenda point at the 2003 Fall WTO Summit in Cancun is only one recent illustration of how trade negotiators see trade facilitation, together with policies that reduce trade barriers, can powerfully help countries to better integrate into the world economy and thus enhance their growth prospects. The achievements of Singapore in speeding up trade transactions and connecting most members of the trading community into a single data network has attracted the attention of a number of observers. The experience has been replicated in Mauritius, and Ghana has recently moved towards introducing the key features of this approach to its own trading community. This Note briefly describes the achievements of the Singapore TradeNet, how it came about and what lessons it contains for other countries that aim to facilitate trade transactions. Then the Ghana experience to date is presented: the genesis of the initiative, the approach adopted in Ghana, the facilitators mobilized to implement the TradeNet approach. The Note will describe the results achieved so far and what still is missing to fully capture the benefits that TradeNet has to offer.

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1. Singapore TradeNet

The Singapore TradeNet links multiple parties involved in external trade, including 34 government controlling units, to a single point of transaction for most trade related transaction such as Customs clearance and payment of duties and taxes, processing of export and import permits and certificates of origin and collecting trade statistics. Trade transactions were drastically simplified.[2] Between 1989 and today the major achievements are the following:

- Processing time was reduced from 2-4 days to within minutes.
- Number of documents required fell from 3-35 (depending on the transactions) to 1.
- During this period the number of daily transactions processed rose from 10,000 per day to 30,000 per day.
- Freight forwarders estimate that they save 20-35 percent of the cost of handling trade documentation.
- Payments of Customs duties are in the coffers of Customs much faster than before.
- The compilation of trade statistics was substantially improved, benefiting the trading community as well as national authorities responsible for trade policy and economic surveillance.

TradeNet was not created overnight. The idea originated as early as 1979 when a high level Committee recommended that for Singapore to overcome its handicap of smallness, it had to make maximum use of information technology. A first step in that direction was to expand the skill base through accelerated IT training and the strategy implied bringing computerization to Government agencies. The foreign trade sector was chosen as a priority areas where quick results could be achieved, particularly in speeding up the clearance time for exports and imports. This would enhance the competitiveness of the Singaporean economy, an issue that received greater urgency when, in 1985, Singapore experienced its first recession.

The Singapore Trade Development Board (STDB)[3] was made responsible for coordinating the ambitions, concerns and activities of the trading community. Under its guidance trade documentation was reviewed and a proposal was made to reduce the multiple trade documents into one single on line form to be serve nearly all trade documentation needs in the country. This task was judged crucial, as it was near impossible to automate the multiplicity of forms and data requirements that prevailed at the time. The challenge of coordinating these different agencies, and their data

[2] Marvin Bower Fellow, John King and Ben Konsunski, (1995), Harvard Business School, Cambridge Massachusetts. UNESCAP Trade Facilitation Framework (2003), report of the UNESCAP Expert Group Trade Facilitation and Electronic Commerce, Paper (draft) prepared for the Bangkok, Thailand meeting (July 30-31).

[3] Officially renamed to International Enterprise Singapore, or IE Singapore, on 12 April 2002.

requirements into a set of coherent and simplified procedures that could be automated, was often more political than technical.

In December 1986 the initiative was given high- level backing. In fact the Trade Minister (B.G. Lee son of the Prime Minister currently Deputy Prime Minister) publicly endorsed the initiative and gave full political backing to the TradeNet project. He announced the launching of TradeNet for January 1989. A little more than a year later Singapore Network Services (SNS)[4] was created to own and operate the TradeNet system, with as shareholders the STDB, the port and civil aviation authorities and the international airport. So as not to slow down the implementation, the proposed TradeNet system was intensively reviewed and initial designs were prepared. This permitted launching a competitive bidding process for a systems integrator. In the event IBM won the contract to develop a system of electronic data interchange that would allow computer-to-computer exchange of inter-company business documents between connected members of the Singapore trading community.

The system was to be designed so that one document would be submitted by the trader to TradeNet, that would forward to each of the connected agencies and partners those data they need to make their required decisions or that pertain to their field of responsibility. Accuracy and speed were at a premium. Agencies that needed to make decision were then to make their decisions promptly to permit the overall trade transaction to proceed smoothly. They would gather agency relevant databases.

As of January 1, 1989 the system became operative and traders were invited to adopt its protocols on a voluntary basis. By the end of the year 45 per cent of all air and sea shipments were transacted through TradeNet, a share that rose to 95 percent by mid-1991, when the use of TradeNet had become mandatory—two years earlier than had originally been planned. Extensive training supported the adoption process for traders, particularly the small traders, and by continued high level political support. The progress with the interconnectivity amongst the various partners of the trading community benefited greatly from the fact that many of them had already acquired substantial computer savvy and relied in their work on sophisticated computer equipment. This was in part the result of Singapore's well-implemented government strategy to foster IT application. Registering and publicizing early benefits also contributed to overcome initial reluctance of the various government agencies and the trading community.

2. Ghana Context and GCNet Design

In the 1990's Ghana engaged in fundamental trade policy reforms, and this drive was strongly supported by bilateral and multilateral donors. The US provided support through its two trade and investment projects and the WB and the IMF provided substantial adjustment lending as well as support for private enterprise and export

[4] The name was changed to CrimsonLogicon August 15, 2002

development. This reform drive benefited from the strong personal support of the then Minister of Trade and Industry, in line with the Government's vision for a Ghana that is open to the rest of the world to attract foreign direct investment and promote business competitiveness. The vision implied an open economy, low tariffs and performing institutions. The reforms included the reduction and then the elimination of import quotas and export taxes as well as the reduction of the level of import tariffs and a reduction of the number of applicable rates. Non-traditional exports were to be promoted so as to diversify the economy and create much needed jobs, while there was great hope for large inflows of foreign direct investment (FDI).

By 1998 much of the policy reforms had been taken. But foreign direct investment was still lagging. A number of reviews, including those of the World Bank, IMF, FIAS and MIGA, suggested that for the policy reforms to have the desired impact on trade, FDI and growth, they needed to be complemented by the lifting of a number of structural investment constraints. These included in particular improvement of the operational efficiency of front line agencies like Customs, Immigration, Port authorities and the Investment Promotion Council, which were front line agencies for facilitating investment flows. The Government of Ghana took these suggestions to heart and decided to launch the Ghana Gateway project for which it solicited support from the World Bank. This vision of Ghana as a Gateway for West Africa to the rest of the World has been widely shared by Ghanaian civil society as well as the foreign donor community. It was envisioned that the measures would not only enhance the competitiveness of domestic business entities, but also make Ghana the most competitive investment destination within West Africa, as against other destinations like Cote D'Ivoire, Senegal or Nigeria.

Whilst Ghana was more cost competitive than Nigeria as a transit corridor for the Sahelian countries, its cost parity was about the same as that of Cote d'Ivoire, although lacking the Ivorian infrastructure backbone. The introduction of the automated system for clearance, plus the other reforms initiated for the front-line agencies was thus also seen as right steps to bring Ghana at par, if not in a competitive edge over Cote d'Ivoire.

In search of new ideas, and to see good examples of trade facilitation and promotion programs introduced elsewhere, official delegations visited New Zealand, Singapore, Mauritius, and Malaysia, countries with whom Ghana enjoyed excellent relations. The private sector was represented on these missions, which invariably included the then Minister of Trade, the Chief Executives of Ghana Investment Promotion Center, Ghana Export Promotion Council and Captains of Industry. This group transformed into a broader stakeholder group of public and private sector representatives. The Singapore and Mauritius visits particularly fascinated the delegation that saw in the TradeNet there an approach that provides the dual benefit of speeding up trade transaction without jeopardizing Government revenues, while streamlining the processes of trade transaction by bringing the various members of the trading community into an integrated network.

Upon its return to Ghana, under the leadership of the Ministry of Trade and Industry (MOTI) they identified the key elements of the approach that Ghana intended to pursue to reach in a short time a major breakthrough in trade facilitation. The design of the scheme was heavily inspired by the Singapore example and by the desire to rely on strong outside financial and technical support to implement the desired changes. Having visited the Singaporean model, and its Mauritian adaptation at first hand, the group was convinced the combination of strong political support and excellent technical implementing capabilities would be required to reach the objective of facilitating trade and investment, while protecting revenue if not increase budget revenue. The Mauritian model of implementing such a system, plus other policies measures propelled Mauritius into a leading textile and garment exporter. The MOTI took the lead in these initiatives as the Gateway vision reflected the view that trade would become the engine of future growth.

The Ministry of Finance, which has ministerial oversight responsibility for the Customs Excise and Preventive Services (CEPS), supported the initiative, and was mainly attracted to the project for the possibilities it offered to strengthen the Customs Services, and raising larger budget revenues. Despite the fact that much of the initial implementation had to be undertaken by CEPS, it was not asked to manage the project, as at that time it did not have the vision of trade facilitation nor the implementation capacity. But most of all, trade facilitation was seen as involving much more than Customs operations, and thus had to be managed outside CEPS to obtain the commitment of the various partners of the trading community.

The major elements of this proposed strategy were:

- An Inter- Ministerial Gateway Oversight Committee, with its Secretariat was to oversee the various components of this ambitious initiative, and a capable public servant, was chosen to head this Secretariat.
- After review of proposals from various software and systems integrators, the Singaporean firm, Crimsonlogic (ex-SNS) that managed TradeNet there was invited to provide the electronic data interchange (EDI) system that would become the core of the Ghana TradeNet. Significantly, Crimsonlogic had also successfully transferred this technology to Mauritius, and had convinced the Ghana Gateway team of its capability to do the same in Ghana. It was, however, not prepared to commit investment funds directly for the development of the EDI, as required by the Government; and this was assumed by SGS Societe General de Surveillance S.A. (SGS), which had a strategic partnership with Crimsonlogic, to play the role of the strategic investor and lead technical partner. Incidentally, SGS also had a long expert knowledge, and experience in providing trade assurance services for Ghana.
- Ghana thus adopted the Customs management system that was designed for Mauritius and that was smoothly interfacing with the initial TradeNet from Singapore. .
- As part of the arrangements, a company would be created that would be charged with the implementation of both the TradeNet and the Ghana

Customs Management System (GCMS) for CEPS. In fact, this company would be given a *de facto* Build Own and Operate (BOO) contract.

With the view to ensuring a broad stakeholder commitment to the project, various private and public entities were invited to participate in the equity of the company that would manage the TradeNet and assist in computerizing Customs operations. In particular the communications infrastructure companies, several banks, the chambers of commerce and industry, as well as the ship owners' and freight forwarders associations were invited. However, most declined either for lack of vision or capital. It is worthwhile to note, however, that since the rollout of the Service and its effectiveness and financial viability have become apparent, most banks and a few stakeholders such as the Ghana Institute of Freight Forwarders have sought to subscribe to the equity.

In the event Ghana Community Network (GCNet) was created as a joint venture company with its shareholders as SGS (60 percent), CEPS (20 percent), the Ghana Shippers Council (10 percent), and two local banks (each 5 percent). SGS had operated the Ghana Pre-Shipment service until 1988, and had expert knowledge in the country, and at that stage in its company business plan wanted to expand it portfolio in its Trade Assurance Department. By participating with a majority stake, SGS strove to meet its accountability obligations with the necessary operational authority. In November 2000, GCNet was incorporated with equity of US$5.3 million (total investments so far are now estimated at $7 million). The CEPS' contribution consisted of in-kind equity contribution of computer equipment that it had procured with World Bank funding under the Gateway Program. The other equity partners however contributed cash.

GCNet operates under a service contract with MOTI. The contract specifies that it installs the electronic data interchange system and the Customs management systems. No clear performance indicators or targets were included in the contract, only the requirement to report periodically on the progress of the project and the results obtained.

3. GCNet Concept, TradeNet, and Ghana Customs Management System (GCMS)—A Vision Rolled Out

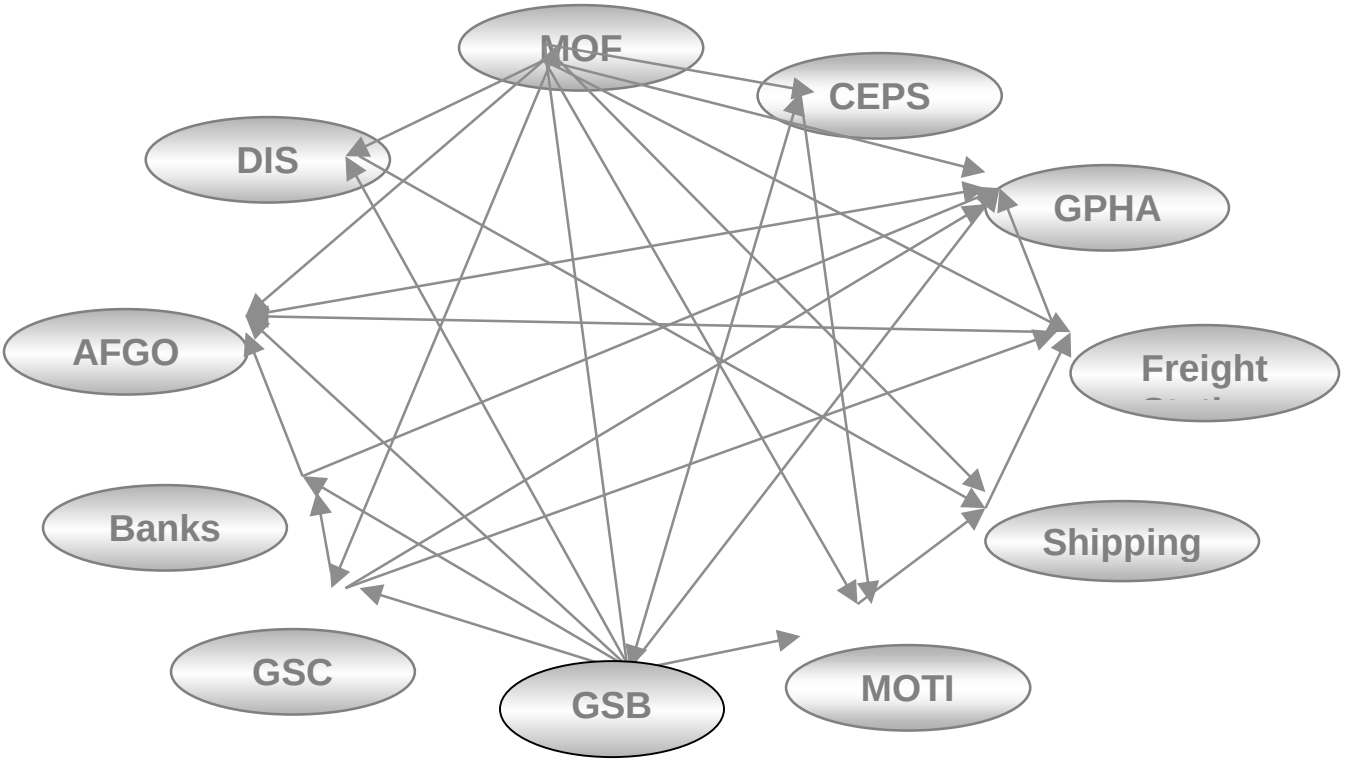
The TradeNet Vision

The GCNet vision was to transform a spaghetti type network of connection that has been in operation amongst and between the various agencies and entities involved in the trade transaction process into an interconnected network of members of a trading community.

Figure 1 provides a thematic presentation of the various documents and communication links that existed in the pre-reform years. Figure 1 presents a situation where each agency requires a unique set of documents, that must be submitted only to it and that are

not shared with other members of the trading community. These data are often duplicative and must be transcribed for further processing. Lots of paper work is involved, multiple copies are required, and the transcription is error prone. All this was time consuming and costly. Various studies reported processes that range from 25-32 stages that needed to be tackled before a consignment could be cleared. These included an Import Declaration Form, inspection reports, certificate or permit from the relevant regulatory bodies (e.g. Food and Drug Board, Ministry of Interior, Free Zone Board, certificates of origin issued by the Ghana Chamber of Commerce and Industry, etc.). In meeting these diverse agency requirements, trade operators were obliged to crisscross from one agency to the other to chase documents being processed, as these agencies were neither networked to communicate with each other nor had access to a common data base.

Figure 1. Many Actors and Many Connections [5]



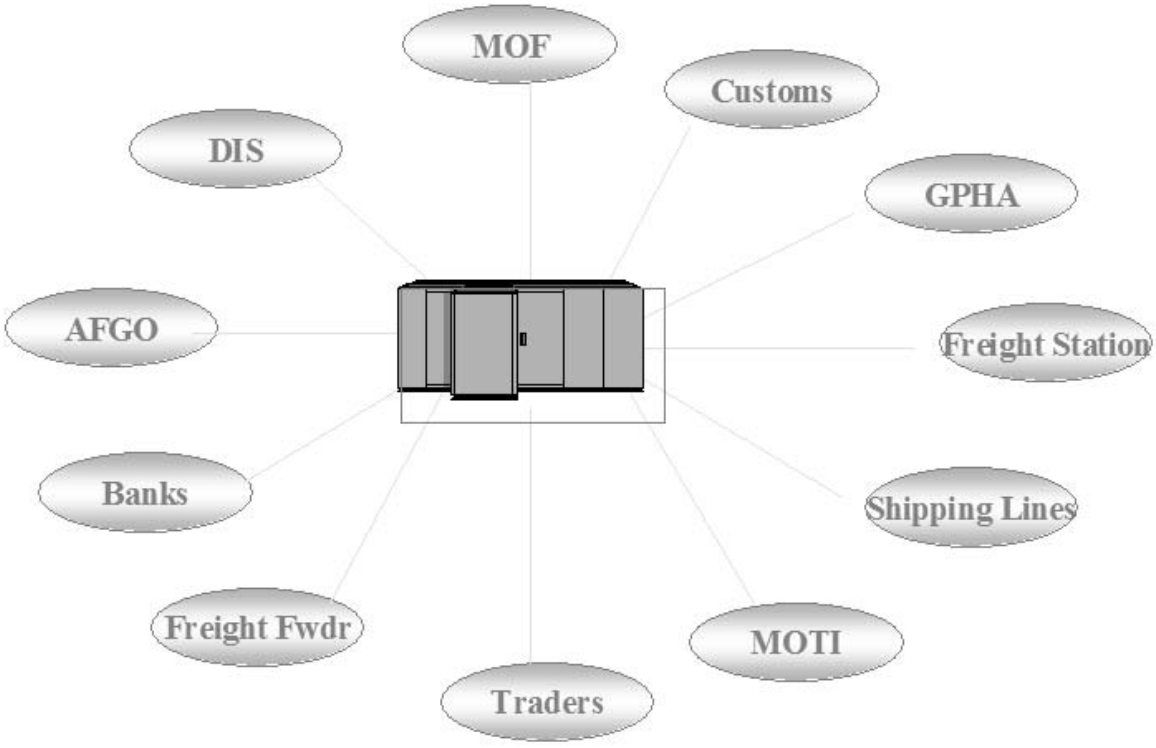
Source: TradeNet.

[5] MOF: Ministry of Finance; CEPS: Customs; GPHA: Harbor Authority; MOTI: Ministry of Trade and Industry; GSB: Ghana Standards Board; GSC; Ghana Shipping Council; AFGO: Airport authority; DIS: Destination Inspection

For instance the 13 copies of the shipping manifest had to be submitted to Customs by the carrier. This information was then transcribed by CEPS, and used as a basis for the jerquing of the manifest so as to assure that all cargo that was brought in by the carrier had been subjected to a declaration. This process was time consuming, error prone and did not provide a transparent method to audit whether in fact all cargo had been declared. Statistics were compiled by the Statistical Service gathering all paper documents, or collecting these on diskettes, and compiling them into different sets of statistical table's (nature of the trade, countries of origin and destination, etc.) The transmittal and manipulation of the data necessary to produce the desired statistical data again took lots of time, was not very accurate, and statistical data was produced with great delays.

This situation created lots of opportunity for soliciting and providing "facilitation money" to speed up transaction, to be permitted to jump the queue, or simply to adjust the Customs declaration to suit the particular objectives of various persons involved in these transactions. The lack of transparency for these transactions left a very weak audit trail, and in most instances none at all. All this impeded the competitiveness of the economy.

Figure 2. TradeNet Concepts



Source: TradeNet.

Figure 2 portrays the *vision* of a totally interconnected trading community, one that is put in place in Singapore and that constitutes the objective of GCNet. The idea is that the trader submits one document to the TradeNet (GCNet), a document that contains the information required by all agencies that require information either to fulfill their regulatory function or to provide the necessary permits. The TradeNet then sends selectively the information to the relevant agencies, which respond immediately either with requests for further information or with the necessary permits. The objective of the integration of all traders into a community is to reduce the transaction cost for the trader, and to make Government regulatory operations more effective and efficient.

Working Towards More Efficient Customs Transactions

During the 1990's Customs operations were subjected to a number of reviews.[6] These reviews noted the commitment of officers of the Service, its general acceptance of an obligation to meet revenue targets. Also the legal framework for CEPS operations was judged satisfactory, albeit requiring some modifications. However several weaknesses were also noted. The structure and organization of CEPS, its information technology and human resources management structure and tools were not appropriate to meet the demands for modern, effective and efficient Customs operations. Entry processing was very labor intensive and slow. Numerous manual records were kept and the information technology in place (ASYCUDA) was grossly under-utilized and maintained, bringing little value added to the procedures in place. As a result, Customs' operations were not consistent amongst the different clearance stations, inspection companies were called in to assist in valuation work, transit trade was hindered by the requirement that they be accompanied to ascertain that they left the country, and revenue leakages resulted from weaknesses in every point of the clearance process, from manifest declaration, warehouse control to payment of duties.

Proposals to strengthen the ASYCUDA system were frequently made, but no improvements were undertaken that had lasting results, largely because of the absence of a real champion for such a change and the lack of budgetary resources devoted to such strengthening and inadequate support from the developers of the program. CEPS staff was also rather complacent as the existing situation let them benefit in terms of payments of significant "facilitation money". Clearance times were very slow, with much of the blame falling on slow operations at CEPS, even though other factors also accounted for significant clearance delays. There are no accurate estimates of the time it took importers between declaration and clearance, but importers note that the fastest clearance took four days at the sea ports, while the average clearance times took several weeks. Clearance at the airport was faster than at the seaport.

In any event ASYCUDA, as installed and used in Ghana, was unable to treat a declaration in less than 24 hours. Hence a drastic upgrade of Customs operations was required if the trade facilitation aims of the Government were to be attained. A phased

[6] Crown Agents prepared a report in 1994 and again in 1998 was commissioned by the Ghana Gateway Secretariat and the Commissioner of CEPS with the agreement of the World Bank. In 1998 Michael Lane prepared another diagnostic of CEPS operation in preparation of the WB's Gateway lending operation.

program was adopted. First CEPS would simplify its trade procedures, and acquire a modern Customs management system.
This system would consist of the various modules required to manage import, export, warehouse and transit trade (and indeed all relevant Customs operations) from declaration of cargo to payment and clearance. The system would need to be as modern as possible within the Ghanaian context, and be modeled on systems that are fully operational elsewhere. Once this new IT system was entrenched, a full-fledged Customs modernization program could be initiated to bring on other add-on values. This strategy was risky, as the implementation of the new Customs management solution might run against the same problems that cause the ASYCUDA solution to basically fail. Special safeguards were therefore required to reduce this risk. Entrusting GCNet to support CEPS with the introduction of the GCMS was intended to address this risk.

Roll Out of TradeNet and GCMS

The roll out of GCNet was initially plagued with teething problems. The timing of the GCNet incorporation (November 2000) was only one month ahead of the December 2000 national elections in Ghana. The opposition won the elections, and it took up to March 2001 for a new Cabinet to be installed. This power vacuum and the transition period before the new Cabinet members, reviewed policy decisions made by the previous Government for due diligence purposes, seriously affected the implementation of the Gateway Program, and prevented operational decisions to be taken by its Secretariat, amongst which were the procurement of computer hardware to be used by CEPS as its GCNet contribution. Also, with many new Ministers being appointed, GCNet did not get the political backing that had been expected at its creation, when a powerful MOTI stood behind the project and its vision of integrating the various trading partners into one trading community.

At CEPS, the leadership was initially tentative of the reforms that the introduction of the new Customs management system required, particularly the document and process simplification it required. As a result of this and the uncertain political direction, it took CEPS 14 months to bring in its capital to GCNet. It also took a while (till July 2002) for the legislation to be modified to permit the automation of Customs operation.

However, once the new administration had completed its due diligence on the relevance of the project, and the operational modalities to be followed, the new administration supported it as a key feature of its revenue mobilization and facilitating role for trade operators.

The service contract of GCNet with MOTI contained a commitment to assist in the implementation of the electronic data interchange system and GCMS at CEPS, and to be paid a fee for each declaration processed by the TradeNet. In fact, GCNet was to be the systems integrator and needed to select the various systems that would make up the overall package. With respect to the data interchange system the choice was rather simple, as the initial inspiration had come from seeing the Crimsonlogic platform operating in Singapore; and its subsequent modification by Mauritius Network Services

(MNS). As a result, GCNet secured the services and support of both Crimsonlogic and MNS (itself a joint venture company between the Mauritius telecom provider, Crimsonlogic and the Mauritius Government) to rollout its Service. .

GCNet had hands on approach during this whole process, even at times when the political commitment was lackluster because of political transition. In addition GCNet provided assistance to CEPS not only for the training of its staff, something that was included in the service agreement with MOTI, and installation of the EDI technology, but also for some infrastructure and maintenance expenses for which CEPS claimed not to have the budgetary resources. In fact GCNet stepped in wherever necessary to ensure that the TradeNet and GCMS would operate smoothly, which included, providing air conditioning for some offices, infrastructure installation and management, ensuring that back-up generators for the GCMS are provided with diesel fuel as well as up to date, and paid up maintenance contracts. GCNet has also assisted for a national Customs Selectivity Team to be set up for the coordination and implementation of risk assessment, and also trained CEPS staff to undertake post clearance audits.

4. GCNet = TradeNet + Customs Management System

GCNet operates a customized electronic system for processing trade and Customs documents, recording the results of this processing and validation, and the related duty and tax payments. This is carried out by the deployment of two systems, that is, the Ghana TradeNet and the Ghana Customs Management Systems (GCMS). Through the Ghana TradeNet's Electronic Data Interchange (EDI) platform, users of the systems are able to interface with the GCMS, and also transmit messages and receive replies electronically between the various parties connected to the system. These parties include key public sector agencies such as the Ministry of Trade and Industry and Presidential Special Initiatives (MOTI), Ministry of Finance (MoF), the Bank of Ghana (BOG), Customs Excise and Preventive Service (CEPS), etc. and the private sector (e.g. the shipping lines, AFGO, the freight forwarders, banks, etc). The TradeNet thus provides a medium for exchanging trade information between businesses on one hand, and Government agencies on the other, thereby making GCNet a "B2G" or "Business to Government" company.

To enable users access its service, GCNet has established its own private communication network. This is made up of a fiber optic broadband link between the GCNet Office and CEPS. This link is complemented by radio links, which also cover other CEPS Collection Stations, plus dedicated leased lines and points of presents in locations outside Accra. This network links CEPS offices throughout Ghana, and in so doing facilitates easy access to the system by its users. The development of this private network also ensures that the system will always be up and running, and not suffer any communication hiccups, given the unreliable nature of the normal communication networks. In the

absence of a well-articulated national communications strategy this new networks stands in isolation without the necessary interface with other agencies.

GCNet has worked closely with CEPS to re-engineer CEPS operational processes, including the preparation of new Customs Procedure Codes that meet standards set by the World Customs Organization (WCO). The Ghana Customs Tariff Book (which provides for only four rates 0, 5,10 and 20 percent) has similarly been extensively reviewed and updated to ensure that it meets standards set by the harmonized system of the WCO.

Throughout the development of the systems, GCNet has sensitized all key stakeholders, (e.g., Ship owners, Clearing Agents, Importers/Exporters, Banks, etc) and engaged them in interactive consultations to ensure that the systems address their concerns and also meet their expectations. GCNet has also embarked upon an extensive training program and for CEPS staff and Declarants to ensure that all GCNet users trained adequately in specific fields of the system that they require for their trade and Customs transactions. In addition, GCNet has prepared User Guidelines, posters, and procedures on CD-ROMs and a Web Site for easy reference by the users. Copies of these documents are available at GCNet offices for registered Declarants.

The TradeNet and GCMS systems were rolled out gradually. First tests were run at the Kotoka airport. When these were conclusive, the full roll out could begin. Traders were moved in batches so that the learning process was stretched out over time, to permit CEPS staff to acquaint itself with the new procedures and to permit traders and their representatives to be trained in using the system. The first EDI declarations were lodged at Kotoka International Airport (KIA) in October 2002 for import transactions and the transition was completed by December 2002. From March to June 2003 the system was implemented at Tema Harbor, also for import declaration. On November 14, the system was introduced at Takoradi seaport, and also started capturing exports. The other clearance stations will be connected in the coming months.

5. A Typical Import Transaction

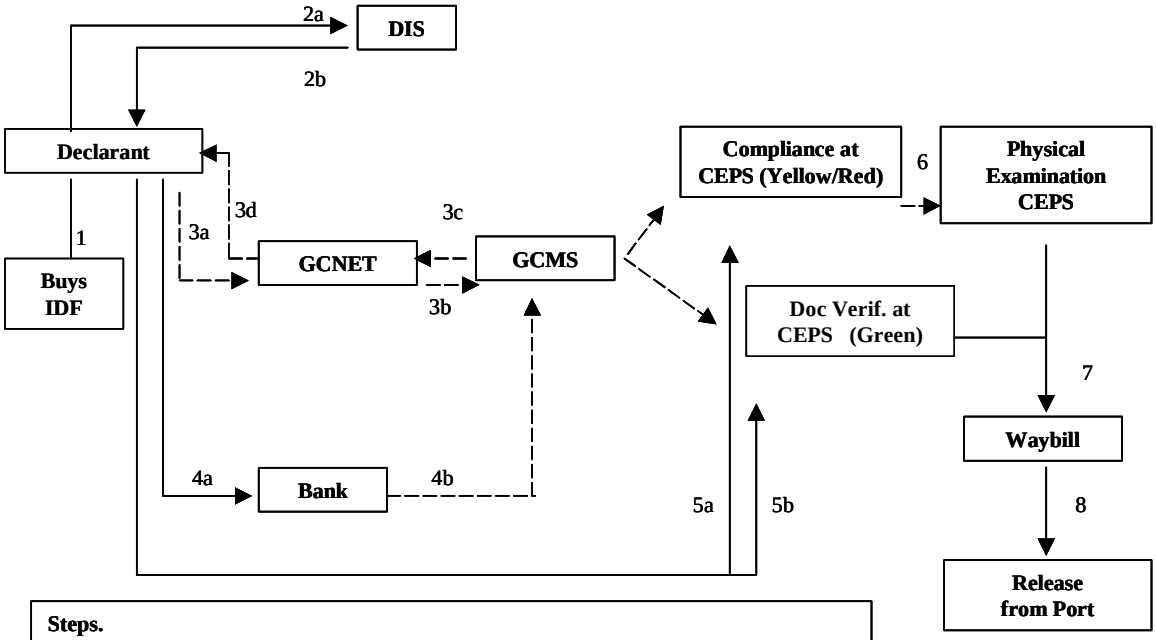
The following simple import process illustrates the advantages of the new procedures.[7] It will also suggest some of the problems that still need to be tackled before Ghana will fully master the challenges of trade facilitation. Of course, there are a number of special import regimes, transit and export transactions for GMS foresees specialized modules. Figure 3 provides a schematic view of the full Customs clearance process that can be divided in eight separate steps.

Step 1. Importer obtains an Import Declaration Form (ID) from MOTI at a cost of ¢50,000 (recently increased from ¢5,000). System is not connected to GCNet. The IDF is used by the banks for payment purposes and by the Destination Inspection Services (DIS) merely as a notice of intent to import the goods listed on the form.

[7] Annex I sketches the procedures that prevailed before GCNet's interventions.

Step 2. Importer requests a Destination Inspection from one of the four DIS companies engaged by MOTI. Only two of these DIS companies are members of the International Federation of Inspection Agencies (IFIA) that certifies and regulates the operations of inspection companies. At times the IFIA member DIS companies draw on the out of country resources of their affiliates elsewhere. One DIS agency relies heavily on scanning of cargo to examine containerized cargo. Scanning equipment is on order for the other DIS companies. Importers are charged 1 percent of the CIF value of the shipment for the DIS certificate. A paper Final Classification and Valuation Report (FCVR) is given to the trader and to CEPS.[8]

[8] The author did not directly consult with DIS companies. However from discussion with the representative of MOTI it was learned that the largest DIS company claimed that in September 2003 it had uplifted about 75 percent of values on inspected invoices (for 62 percent of invoices a change of HS classification was enforced and for 65 percent of the invoices the values were uplifted without a change in the declared HS classification). For the month of September a savings of $5.4 million was claimed. These uplifts attracted no fines from the importer. As is the case in many other countries where PIS operate (a variant of DIS) the intervention of these companies is heavily criticized by importers and by Customs officials and is claimed to lack integrity and to be time consuming. The author did not go into the operations of the DIS.



Steps.

1. Declarant buys IDF at MOTI
2a. Declarant submits IDF, Invoice, Bill of Lading to DIS Company
2b. DIS issues report
3. Declarant electronically validates Customs Declaration through GCNet/GCMS and obtains response
4a. Declarant proceeds to Bank and settles all duties and taxes
4b. Bank confirms payment electronically to GCMS
5. Declarant proceeds either to Customs Document Verification (Green Channel) or to Customs Compliance (Yellow/Red)
6. Compliance routes Declaration electronically to Examination Officer who conducts examination (No examination on Green Channel)
7. Officer releases consignment electronically
8. Waybill is issued and consignment is physically cleared.

In addition (step 3) consignment manifest is sent electronically from Shipping Agent to CEPS for electronic checking and strike-off.

Legend

IDF	= Import Declaration Form
MOTI	= Ministry of Trade and Industry
GCNET	= Ghana Community Network
GCMS	= Ghana Customs Management System
CEPS	= Customs and Excise & Preventive Service
DIS	= Destination Inspection Services
- - - - - - - -	Electronic transmission
————	Paper transmission

Step 3. The Declarant (importer or shipping agent) prepares an electronic Customs Declaration on his office PC that has a GCNet installed Front End Software and submits it to TradeNet that is located at the HQ of GCNet. The declaration provides data required by that particular import. Customs data such as valuation, weight, HS classification, origin of the cargo, taxes and other fees due as well as the data required by the Ghana Standards Board (GSB) or any other controlling agency. The Declaration is electronically forwarded to CEPS HQ. GCMS validates the Declaration, a process that takes only a few minutes, and electronically notifies the Declarant of validation or sends it back through GCNet to Declarant for further information or to resolve inconsistencies.

In the meantime, upon arrival, the carrier manifest is transmitted electronically to TradeNet with a copy to CEPS and the Ghana Port and Harbor Authority. This will permit CEPS to verify whether all cargo included in the manifest has been declared within a reasonable period of time, and to remind owners of cargo that declaration must be made or goods forfeited.

Step 4. The Declarant prints the validated declaration and pays the taxes at one of the two banks connected to TradeNet, branches of which are located at the CEPS clearance offices. Bank electronically notifies GCMS that taxes and duties have been paid for that particular declaration.

Step 5. The Declarant presents himself with supporting documentation (printed declaration, invoice, certificate of origin, DIS certificate, etc.) either the Document Verification Section or the CEPS Compliance Office of the clearance point, depending on the risk profile. The risk analysis module of GCMS determines whether the cargo is to be cleared without further ado (Green Line), will be subjected to document verification (Yellow Line) or requires physical Inspection (Red Line).

Step 6. GCMS assigns the inspector who will do the physical inspection randomly. GCMS inform the freight station of the inspection requirements.

Step 7. GCMS issued clearance statement, and eventually the need for the Declarant to make payment adjustments, and releases consignment electronically to the port authorities and the Declarant. Port authorities issue waybill manually (electronically as of first quarter of 2004).

Step 8. The goods leave the port.

In addition to these Customs clearance related steps there are cargo handling and warehouse procedures that need to be completed as well as controls by regulatory agencies such as the GSB, Food and Drugs Board, etc. Steps three through notifying the port authorities of clearance authorization (first part of seven) are managed electronically by GCNet and GCMS.

6. Outcomes

While it is rather early to make a full assessment of the results obtained several already emerge clearly.

Revenues are up

At the airport revenues for July to September 2003, were nearly 40 percent higher than during the same period in 2002. Five percentage points of this is due to the depreciation of the Cedi versus the US Dollar during this period. The increase in import volume does not appear to have contributed to this increase in revenues as it is estimated that import

volumes have stagnated year on year. With no real change in the activities of the DIS companies during this period, GCNet operations are conservatively estimated to have added 30 percent to the customs revenues from airport traffic.

Clearance times are down

As noted above there are no firm statistics regarding the clearance times before the introduction of GCNet, but traders are unanimous that the improvements are major with respect to the time it takes to clear goods both at the Airport and at Tema Harbor.

With respect to the KIA Airport, GCNet notes that average clearance times has dropped from 3 days to four hours. Currently:

- 18% of clearance in less than two hours
- 75 % of clearance the same day
- 15 % of clearance between 1 and 2 days
- 10 % of clearance in more than 2 days (often problematic cargo)

Customs document review takes on average 10 minutes, used to take 24 hours in the past
Bank payment takes an average 10 minutes, used to take a few hours.

With respect to Tema Port, GCNet claims that clearance time has been reduced from a week on average to days. Currently:

- 14% of clearance on the same day
- 30% of clearance between 1 and 2 days
- 45 percent of clearances between 2 and 5 days
- 11 % of clearances in more than 5 days (often problematic cargo)

Customs document review takes on average 15 minutes instead of 24 hours
Bank payment takes 10 minutes against previously a few hours.

Community Networks is being initiated

A start has been made with connecting various members of the trading community with the result that trade transactions are easier for traders and that Government and regulatory agencies begin to have access to streamlined data. Much work still needs to be done, but the following members of the trading community are already connected:

- The shipping lines that provide electronic manifests to GCNet that transfers these to GPHA.
- Ghana Shippers Council obtains all information regarding the movement of ships and airplanes. Yet the Council –which is founding member of GCNet--still demands paper documentation of the same information, against a fee. Plans are to afoot to use solely the electronic transmission of this documentation as of the beginning of 2004.
- CEPS obtains Customs declarations electronically
- Banks inform CEPS electronically of payments made
- Statistical Service is connected to receive from CEPS all relevant trade statistics. Unfortunately the Statistical Service has not yet taken advantage of this connection.

- Ministry of Finance (MoF) is connected and can download all trade information as well as all transactions of taxpayers identified by TIN (Tax Identification Number). MoF has not yet taken advantage of this connection in part because its own management system is still based on manual procedures.
- VAT Service is connected to system and accesses information on imports made by VAT registered firms.

Winners and losers

The clear winners of the GCNet initiative has been the traders that benefit from faster clearance times at Customs and a reduced need to provide "facilitation money". Representatives of the shipping owners and agents as well as freight forwarders were very vocal in their support of GCNet, having to produce fewer documentation, and gaining quicker vessel turnaround time in the process.

The Treasury also benefits from higher revenues and from faster access to the tax payments.

Losers are CEPS personnel that previously benefited from substantial facilitation payments, offered by traders to accelerate cargo clearance and at times to close their eyes when cargo left the port premises without declaration or to accept declarations that included under invoicing and erroneous product classification so as to lower duty liability. Some CEPS personnel are clearly unhappy with the present situation and are afraid that any further modernization of CEPS would further undermine their entrenched positions and involve drastic changes with respect to recruitment and training requirements. Such personnel invariably tend to frustrate traders, with the view to extracting payments or delaying the process. Others have "tested the system" to ascertain the non-availability of loopholes that can be exploited. Decisive action against such officers, albeit not as stiff as would have been expected, serve as a deterrent to mitigate such rearguard action.

7. Lessons Learned and Road Ahead

Lessons learned

Private/public sector partnership can work. GCNet anchored the reforms and ensured continuity and focus to the reform objectives during a period of political transition, and when no other local organization had the wherewithal to effect such a drastic transformation of trade and Customs procedures. If CEPS or the Gateway Secretariat had been in charge of implementing the trade facilitation project, it is unlikely that much progress would have been achieved to date. The BOO solution to trade facilitation is exceptional. It has been tried only in a few countries amongst which are Singapore, Mauritius and Tunisia where its "community-owned" concept found good acceptability. Further replication is worth looking into when the circumstances warrant.

Drawing on information technology can yield quick results. It took only from early 2001 to mid 2003 to roll out GCNet and GCMS in ports that account for more than 90 per cent of all Ghana's trade. Clearance times and revenue performance exceeded expectations in this short period of time.

Hands-on technical support to Customs cans speed-up Customs operations. Whereas Customs had struggled for years to upgrade its information system or to make the best us of it, the reform required an outside push and hands on implementation support to force the process simplification required and the adoption of advanced IT processes.

Top-level support for the project greatly helps to launch and sustain the project. Initially the project benefited from top- level MOTI support, support that was seen to bring with it the support of the whole Government. When that support wavered after the December 2000 elections, the project floundered for one year and the Gateway Secretariat could provide no real support. It was during that time that GCNet had to wait for more than 14 months to obtain approval from the National Communications Authority (NCA) to use a secure radio frequency, as part of its communications network. Also the absence of dedicated support for the project made it difficult to ensure that the various trade related agencies were fully integrated into the network, for certain operations to be rationalized for optimal benefits to be derived from usage of the system.

The Road Ahead to Complete the Project of Trade Facilitation

Customs reform must now be tackled seriously. So far the reforms at CEPS have been limited to the introduction of the GCMS and the associated process simplification. However CEPS is till a rather outmoded and inefficient organization. Its organization structure shows serious shortcoming that will prevent it from fully internalizing the ongoing reforms and to take advantage of the possibilities offered by the modern Customs process systems in place. Several issues can be mentioned to illustrate this conclusion:

- CEPS has limited specialized capacity in Customs valuation to provide support to the officers in charge of document compliance checks. In most Customs organizations such staff is assembled in a Valuation Department or Unit and staff is specialized in various commodity categories. CEPS should gradually take over from the DIS companies, or could rely much more selectively –and more economically on valuation support from inspection companies.
- The Ministry of Finance should take over the supervision of the activities of the DIS companies.
- CEP does not have a team that can draw operational conclusions based on the plentiful data that has become available to support modern management techniques.
- Modern risk analysis is absent In October 2003, in Tema Port, nearly 99 percent of all cargo is physically inspected, a ratio that stood at 88 percent at the KIA. This high number is only in part explained by the rigid requirement from MOTI and the Ghana Standards Board to inspect a large share of total imports, and by the difficulties presented by the imports channeled by informal traders and the shipment by occasional importers that have no track record with Customs.

However proper risk analysis should be able to drastically reduce these numbers, if only by permitting large traders with recognized track records to automatically pass through the Green Channel, with possibility for later audits. It is understood that 10 percent of all traders may well represent 50-70 percent of all imports, so that the introduction of a "Gold Card Scheme" –Green Channel and exemption from DIS-- system would drastically reduce trade impediments.[9]

- Staff training and recruitment will need to be revised substantially.[10] Customs techniques that in the future will depend increasingly on fast clearance with minimal physical and document inspection, will require that teams perform efficient post clearance inspections. This will imply that staff be re-assigned from physical inspection in the ports or airport to post clearance monitoring and audits, assignments that imply substantially different skills. Staff with redundant skills will no longer be needed. [11]

More Members of the Trading Community Should be Part of the GCNet Community. Obviously this will take time, and persuasion to overcome the lack of computer savvy at some of these organizations, and the latent rivalry between them. High- level visible support will help.

- ***In the immediate future*** it should be possible to convince GPHA to issue the waybills electronically and the Shippers Association to dispense with the obligation of carriers to submit manually shipping information that is already contained in the manifest that is electronically forwarded to the Council. The Statistics Service should activate its connection and initiate the download of trade statistics. The VAT Service and IRS, who are already connected, should prepare themselves to use the data provided by the GCMS, for which a streamlining of TINs will be needed. Such data can be most useful in their own audit work, particularly when full year data will become available.
- The Bank of Ghana and MOTI could do likewise for the on-line "real time" collation of trade data, that they require for preparing various trade statistical reports.
- ***In the near future*** it should also be possible to connect MOTI with respect to the issuance of the Import Declaration, if this will still be required in the future, as well as the documentation of the DIS companies that operate under MOTI contracts. The early connection of the Food and Drug Board as well as the Ghana Standards Board would also benefit trade greatly by permitting a greater streamlining of inspections.
- Similarly connections can be made by a whole range of agencies such as the Ghana Free Zone Board, NCA, Investment Promotion Center, Diver and Vehicle

[9] Recommendation consistent with that of Michael lane, who visited CEPS in early 2003 for the WB Gateway project supervision.

[10] The training commitment that the DIS companies have recently signed with MOTI does not appear integrated with CEPS business plan. Similar training commitment in other countries have never been able to replace a dedicated training effort managed by Customs themselves.

[11] Some CEPS staff are presently functionally illiterate and incapable to contribute to running modern and efficient Customs services.

Licensing Authority, Minerals Commission, etc. which have key roles to play in the processing of trade documents and the clearance of cargo.

Clearance Time is not Only a Question of CEPS Operations. Other Agencies Need to Carry Their Weight. Now that CEPS operations are faster and less costly, efforts should be made to reduce the overall clearance time that is affected by the operations of DIS (average one week or more) and by overcrowded and inefficient port management practices.[12] Some observers suggest that the drastic reduction in the time CEPS takes to clear goods has overwhelmed and thrown up the inefficiencies elsewhere in the transport logistics chain. In any event, measuring the improvements in clearance times due to Customs intervention has a major result such that blame for the delays now can be laid to where it belongs. This may be a major side benefit of carefully measuring clearance times and making them public. It may energize or shame other responsible parties into improving their own performances.

[12] GPHA is presently commissioning a new management tool that cold provide substantial support for improved port operation. This system should be integrated with GCNet.

Annex 1.

Import Procedures Before GCNet's Intervention

Before the GCNet and t he GCMS were rolled out, a full review of all formalities required for an import transaction to take place were reviewed in detail. Following this review, combined with the possibilities offered by GCNet and GCMS, the procedures were substantially simplified. Below is included a description of a typical import process. For special import regimes the procedures could be substantially more complicated. Multiple face-to-face contacts between importer or his representative and Customs officials easily lead to integrity problems.

1. Shipping Agent submits shipping manifest in 12 copies
2. Obtain Shipment Notifications
3. Declarant purchases Import Declaration Form
4. Declarant submits documents for Destination Inspection
5. Declarant buys Customs Declaration Form in 13 copies
6. Declarant submits Final Classification and Valuation Report from Inspection Company
7. Declarant pays self-assessed duties at bank (only 1 Bank accepts payments, located at point of entry- (usually overcrowded and delays)
8. Bank issues payment receipts and passes it on to CEPS (located at same point of entry)
9. Declarant submits Declaration with supporting documents to CEPS
10. CEPS reviews declaration (Face Vet)
11. CEPS enters Declaration into ASYCUDA (takes a minimum of 24 hours)
12. CEPS prints ASYCUDA form and confirms or alters the tax liability
13. CEPS "numbers" the Declaration" and affixes a date and hologram seal on the paper
14. CEPS "detaches " the 13 copies and "dispatches" them to the various intended recipients
15. CEPS Verification Unit receives its copy of the declaration.
16. An Examination officer is allocated the particular shipment
17. Results of the inspection are entered in the "Landing Accounts Book"
18. "Landing Accounts Book" is signed and given to the Declarant
19. Declarant pays handling charges to Port Authority and/or Shipping agent as required.
20. Port Authority issues Waybill
21. Goods are moved to the Gate, where they are frequently re-inspected, before the release can take place.
22. Manifest is jerked (strike of)
23. Agents report monthly to CEPS on their activities.