INTEGRATED TRADE SERVICES MODELS: BEST PRACTICES IN E TRADE FINANCE

Trade Promotion Working Group (TP 01/2006T)

June 2007

Prepared by:
Gilles Morin, Vice-President, Information Technology Business Services, Export Development Canada
Peter Cowan, Senior eGlobal Trade Management Advisor, Export Development Canada
Sabina Ouimet-Storrs, William Ralston, Emma Fisher, Research Associates

Contact: Peter Cowan
Global Trade Management Innovation Centre, Export Development Canada
151 O'Connor Street, Ottawa, Canada, K1A 1K3
Tel: 001 613 598 2961
Email: pcowan@edc.ca

Project Overseer:
Lesley Wilson, Policy Development and Integration Division
Foreign Affairs and International Trade Canada
125 Sussex Drive, Ottawa, Canada, K1A 0G2
Email: lesley.wilson@international.gc.ca

FOR THE ASIA-PACIFIC ECONOMIC COOPERATION SECRETARIAT
35 Heng Mui Keng Terrace, Singapore 119616
Tel: (965) 6775-6012 Fax: (965) 6776-6013
Email: info@apec.org
Website: www.apec.org

TABLE OF CONTENTS

INTEGRATED TRADE SERVICES MODELS: BEST PRACTICES IN E TRADE FINANCE

Executive Summary

In the context of Global Value Chains (GVCs) there appears to exist a digital divide. GVCs represent a continuum that moves from Global Trade Development (GTD) activities (the front end of transaction development, and the general area of interest for Trade Promotion Organizations (TPOs)) and those of Global Trade Management (GTM) activities (the fulfillment stage of transaction, normally the area of involvement for Customs, Logistics, and Financial firms).

This continuum, along with examples of functionalities that exist in GTD and GTM is illustrated below in Figure 1. The divide is the current reality that existent technology platforms supporting GTD and GTM do not bridge to each other.

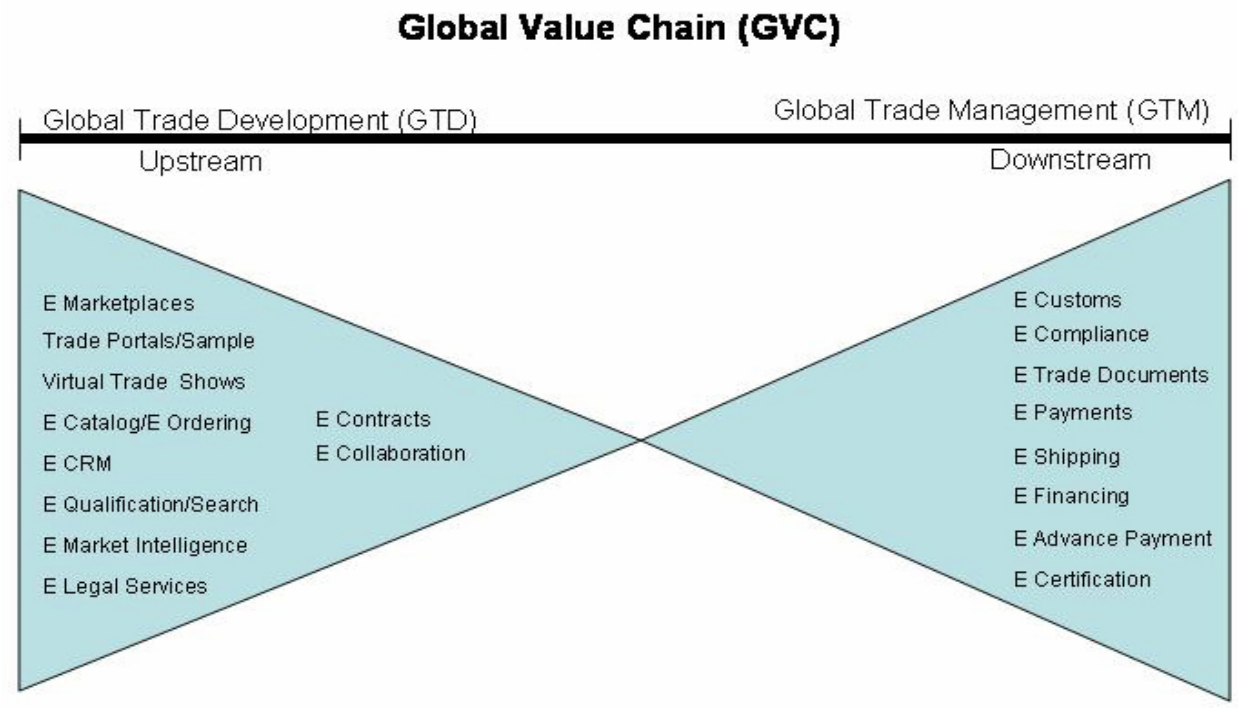

Figure 1: The Global Supply Chain Continuum

In an effort to understand this particular “digital divide”, a research proposal was submitted by Canada to the APEC Trade Promotion Working Group the Fall of 2005. The research would focus on the impact of technology, particularly Electronic Trade Finance (ETF), on innovation in both private and public domains, and determine the nature of those drivers that would facilitate the integration between GTD and GTM.

The underlying premise was that, through this research, examples of direction and effort within GVCs would be uncovered which would lead to an increased capability of TPOs to serve SMEs better in their internationalization efforts, and extend the value equation of TPOs further downstream in GVCs.

The following are the key observations of the research effort:

1. Only a handful of collaborative public and private initiatives are, or have been, aimed at the integration of ETF into GVC technology platforms.
2. ETF and supporting mechanisms do contribute to initial trust accelerators amongst new trading partners.
3. Technology platforms clearly help eliminate tariff barriers, provide support for FDI, and reinforce established trading relationships.
4. The role of neutral intermediaries continues to grow and be recognized as a legitimate bridge between government and private sector activities.
5. Most economies continue to struggle with the integration of SMEs into technology platforms associated with GVCs.
6. Big buyers or Government are the primary accelerators of adoption of, and or introduction of SMEs to technology platforms. National banks are reactive/defensive in their response to technology developments in GVCs.
7. Few examples were identified of a bridging of the “digital divide” between GTD and GTM functionalities facilitated by technology platforms.

Although the practical operational examples that were identified were limited, there was recognition by the majority of the participants interviewed that the use of technology was far more than just a process improvement exercise. Based on the several tangible examples identified it was acknowledged that the transformative power of technology was undeniable.

The execution of similar yet future initiatives will be a matter of specific targeting of resources to each economy’s strategic interests and capabilities, combined with the patient capital required to execute such initiatives. It is the latter point which explains the very significant involvement of Government entities in the examples identified to date. For there to be any collaborative effort on any reasonable scale, government entities need to become engaged.

The key recommendations of the report are as follows:

1. Further investigation on how ETF instruments can be leveraged to support trade development efforts and reduce risk and working capital needs of SMEs associated with the integration of supply chains is warranted.
2. The existing contribution of National banks to domestic supply chains and GVCs should be investigated further with specific emphasis on evaluating the importance of the market gap of trade finance with SMEs and its barrier effect on trade. E Payment and E Invoicing facilities are critical elements of a national trade infrastructure.
3. Opportunities to partner with private and public players to offer foreign buyers and domestic vendors credit rating services at a national level as a key trust building block of their E Trade facilitation services portfolio should be investigated. This would provide a ‘financial trust seal’ to foreign buyers, investors and vendors.
4. There appears to be a lack of segmentation tools and business intelligence modeling capabilities on existing platforms. These types of service offerings (e.g. Customer Relationship Management) should be expanded. Visibility into domestic supply chains and GVCs have as yet been untapped for strategic national advantage.
5. For SMEs to be further integrated into GVCs, existing efforts to ICT-enable SMEs need to continued and perhaps enhanced. By doing so, SMEs will have a greater opportunity to engage in the “value creation” (new processes or improved processes) that ICT brings to their international operations, not just the value enabling impact (making established processes more efficient).

6. Active consideration should be given to the creation of both a community of interest and a research agenda, the mandates for which would be to seek ways to engage SMEs in the use of ICT, such that it is used to accelerate/solidify their participation in international trade.
7. Case studies should be developed of the two prime examples of successful integration (Korea and Mexico) that were identified, such that lessons learned can be transferred and used, as appropriate, within each economy's integration efforts going forward.

Most TPOs appear to be at the early stages of recognizing the value of integrating specific aspects of their respective GTD environment with GTM technology platforms. To not continue to pursue the opportunity would actually create an opportunity cost that would only limit the value of TPOs to their prime constituents (the SMEs) as global trade evolves.

Numerous trade technology web-based applications have proven their value in recent years, and now form a mature portfolio of business tools that can directly support GVCs. This portfolio of applications should be viewed as an opportunity for a new strategic lever for TPOs that needs to be well positioned into any TPOs core development strategic objectives, in order for proper consideration of enabling the development of new information based trade services, supporting the review of core trade services delivery processes and opening new avenues for the creation of new distribution channels.

Chapter 1: Introduction

The impact of technology on established business practices is often championed in business literature and evidenced in fields of functionality across divergent organizational structures. The majority of these examples relate to the automation of established or reengineered processes and procedures with improved efficiency in mind. Generic "benefit" categories would be reduced costs, the reallocation of resources to more value-added activities and the acceleration of processes.

When observing global trade in the early years of the 21st century, one can easily identify significant examples of the impact of the internet on the interconnectivity of geographic markets, trade facilitation systems and services and supply chains. Monitoring trends in E Business reveals an acceleration of initiatives led by private and government institutions focused on building the digital economy to facilitate and enhance trade capacity. For instance, up until several years ago technology-based supply chain management was considered an add-on, not a core component of a firm's organizational model or central to strategic interests.

Today, supply chain practices and technologies are much more pervasive within and between firms, influencing not only organizations operating and manufacturing models but also influencing country trade models. It is this level of pervasiveness and structural integration that provides a major opportunity for TPOs to increase the relevance to their constituents. In the specific context of this paper the increasing integration of the sale of goods and services with trade finance support and information flow in the trade value chain reinforces the preceding observations regarding global trade in the 21st century.

Of particular note are easily recognized private sector names such as Dell, Acer and Wal-Mart, and lesser known names such as Brooks Sports, Burton Snowboard, Columbia Sports, Golden Chang and Grupo Bimbo who have actively embraced these developments. Government entities that have also embraced components of these developments include KTNET, DTTN, Trade Exchange and Nafinsa.

It is within this broad context, that a proposal[1] was presented to the APEC Trade Promotion Working Group concerning the potential impact of technology, using the Internet, on trade promotion activities, with the specific functionality or process of ETF as the starting point. The rationale behind the proposal was as follows:

ORIGINAL RATIONALE (FALL 2005)

Electronic interconnectivity of trade markets, trade systems, trade services and supply chains presents various opportunities and challenges to trade promotion organizations (TPOs). The growing integration of the sale of goods and services with trade finance support, logistic support activities and the sharing of information inter organizationally on electronic platforms, necessitates that trade promotion services understand these linkages and explore ways to effectively leverage these developments to the benefit of TPOs. As such, the purpose of this study is to explore these issues, from the initial perspective of E Trade Finance, and derive tangible information and examples for APEC such that its members can better understand, appreciate and follow through on these opportunities and challenges.

[1]APEC reference number - TP 01/2006T

The fundamental objectives of the study as defined at the outset were:

1. Create a business intelligence network (E Trade Finance think tank) or community of interest grouping of key Asia Pacific thought leaders to identify and monitor key trends and best practices over the next three years (2006 to 2009).
2. Build awareness amongst the APEC Members of the overall E Trade Finance landscape, and share knowledge of innovative and successful E Trade Finance practices and how they contribute to facilitating trade.

These objectives were to focus in three core areas:

1. public trade service initiatives,
2. private trade service initiatives, and
3. electronic trade finance initiatives.

APEC, with principal sponsorship from Korea, Singapore and Chinese Taipei agreed to the proposal. Ideally the objective of the paper would be to show how the use of technology has allowed innovative practices to migrate, or will permit them to migrate, upstream in the trade value chain to the operational and strategic advantage of the APEC member trade promotion organizations, the ultimate stakeholders in this project.

But why should a TPO care about this? In 2004, the International Trade Centre (ITC) noted in its publication, “TPO Best Practices: Strengthening the delivery of trade support services.”

> *Trade Support Institutions must therefore continually justify their existence and their right to demand scarce resources. This can be done only if they remain relevant, offer needed services to their client exporters, and strive to provide the best services at a competitive cost. (ITC 2004)*

This paper will provide a direction and motivation for TPOs to reach beyond their current scope of trade promotion at the front end of the GVC continuum, and look for lessons within their own economies at the GTM end of the continuum. By doing so they have the opportunity to pull/ transform these lessons into their end of the continuum in a more collaborative technology based manner than before, and as such meet the challenge (why should TPOs care?) as articulated in the ITC statement above.

Chapter 2: Research Methodology Approach

General

The nature of this research project was investigative/environmental scan in nature; therefore it was limited to desktop research and personal interviews. The observations from this research were then placed in a conceptual framework to facilitate the analysis, and subsequently develop operational suggestions and recommendations for TPOs. Additionally recommendations for further and more detailed research were also developed based on the initial observations.

The first step was to gather a base line understanding of the potential institutions within the APEC community that would be interested in the subject matter. To that end the following broad categories of institutions targeted for interviews were identified:

- Government and private sector electronic trade services initiatives, such as trade councils, trade services agencies, government E Marketplaces, sectoral hubs, trade banks, local banks, logistic players.
- Government and private sector electronic trade finance services such as export credit agencies (private and public), development banks, government agencies, international trade banks, regional domestic banks, non-banks, large suppliers, large buyers, logistics players, software providers.

Once the firms/institutions in each category were identified, a common approach was created to engage them by using an explanatory statement of the project intent, anchored in the role of trade finance facilitating the financial value component of global supply chain issues:

“To identify the key emerging ETF trends of well-established integrated trade leaders and of emerging global trade economies, there are five questions that need to be answered:

- Who leads or influences the development and implementation of electronic trade finance practices and levers alignment? What are your key service trade offerings (upstream and downstream); what has been the adoption rate, what have been your key market successes?
- What are the emerging or implemented ETF practices influencing integrative trade? Identify examples of trade finance value chain integration (working capital, bonding, insurances, data triggered financing).
- How are these electronic trade practices linked to domestic supply chains or critical sectoral supply chains in these economies? Have you targeted specific industry sectors, or size of companies?
- What is the role of the different public and private sector players in this agenda?
- Has leadership in trade practices translated into leadership in E Trade services and ETF? If yes, in what way?”

Attached, as Appendix A, is a list of all the institutions that agreed to be interviewed for the study as a result of the above approach[2]. These institutions are segmented by broad category of institutional type. It is clear from the list that certain categories of institutional type are not significantly represented, and certain institutional types are represented in some economies and not others. This is a reflection of one of two reasons; an inability to identify an institution in a given category for the economy in question, or if identified, they did not agree to a meeting.

The level of representation for the meetings held ranged from middle management to the most senior executive level of organizations. Participants represented themselves as having both the authority to speak on the subject matter in question, as well as the experience base to support their views.

The broad categories identified in our outreach effort, and the evident heterogeneity of these institutions, made the use of a standardized questionnaire inappropriate. As such, a desktop research of publicly available sources on each firm was undertaken in preparation for each interview. This research was then used to tailor interviews to the specific interests of the institutions in question.

As the experience base increased during the project, more cross references to other institutions' activities were used during the interviews to facilitate discussion about different approaches, and to determine the distinguishing features in approaches between economies, private sector companies and government agencies.

Core Research Limitations

As noted, the heterogeneity of the institutions interviewed placed a major constraint on the standardization of the interview process and ultimately the ability to compare results. Additionally, the lack of Non Disclosure Agreements undoubtedly constrained the amount of information that was provided by participants, particularly those in the private sector. The project was also constrained in the results obtained due to a lack of response from private sector institutions to the project.

[2] In all cases but one there were no Non Disclosure Agreements (NDA) agreed to. In the one case that there was a NDA, it was a function of an agreement between Export Development Canada and the third party, and any comments that are made referring to the third party in this document have been agreed to by the third party in question prior to the finalization of this document.

Chapter 3: Major Concepts of the Study

The nature of exploratory research, particularly given the formative nature of a research program such as the target of this paper, is that it is necessary to frame the preparation for interviews, the interviews themselves and the discussion with a number of concepts against which the results can be evaluated. In this study, there are six concepts:

1. Global Value Chains;
2. integration drivers;
3. technology and innovation;
4. SMEs;
5. E Trade Finance; and
6. E Trade facilitation platforms.

These six concepts and their variations are frequently referred to in academic and business literature. In discussion of these concepts, comments will remain primarily in the domain of "applied" business practices, although when useful to represent observations, reference will be made to academic literature. These concepts are intended to provide a useful framework for a discussion of the observations.

Concept 1 : Global Value Chains

At first glance, placing the concepts of "trade promotion" and "trade finance" in the same context would seem odd. The former is traditionally associated with the activities of TPOs at the very front end of transaction development and the latter is associated with the fulfillment stage of a transaction (How will the firm get paid? Will the goods arrive on time?). What possible link is there between these two extremes?

Figure 2 below places international transactions in a continuum format, and is intended to visually represent GVCs. In basic terms, sourcing and selling represent the Global Trade Development (GTD) or the upstream component of the GVC, and the trade compliance, supply chain and finance represent the Global Trade Management (GTM) or the downstream component of the GVC.

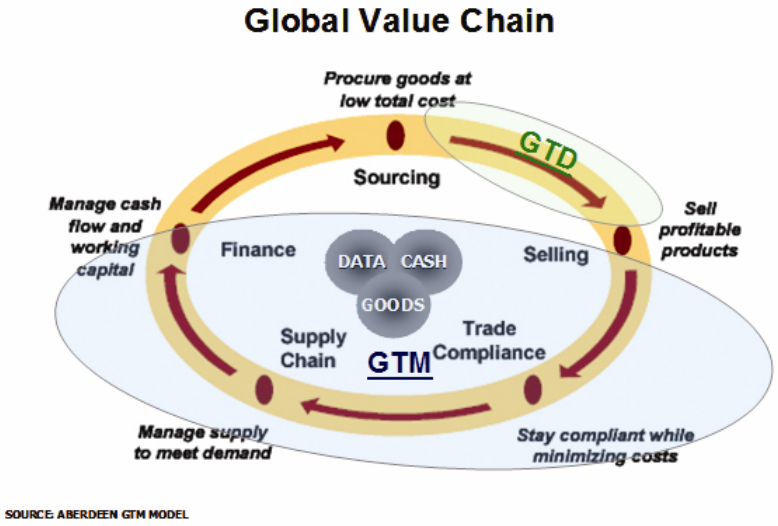

Figure 2: The Global Value Chain

Under the umbrella term of GVC, GTD in general terms refers to the procurement and selling of goods and services. Specifically it represents the operational response of TPOs to help exporters find markets for their products via:

1. Country image building (advertising, promotional events, advocacy);
2. Export support services (exporter training, technical assistance, capacity building);
3. Marketing (trade fairs, exporter and importer missions, follow up services); and
4. Market research and publications (general sector and firm level information). (Lederman, 2007)

Global Trade Management (GTM)[3] in general terms refers to the management of existing trade flows. Specifically, it represents the operational response, principally by enterprises, to the convergence of three traditional silos of trade:

1. Physical Movement of Goods (e.g. sourcing, procurement, tracking);
2. Information Streams (e.g. purchase orders, shipping documents); and
3. The Financial Supply Chain (e.g. L/Cs, open account, cash flow), driving their convergence into a single deployment of people, processes and technology.

Concept 2: Integration Drivers

Organizations which may seem to have exceedingly little overlap (e.g. TPOs and logistics firms), may have unrecognized value opportunities to integrate, using the innovative impact of technology as the catalyst for consideration of such cross-organizational linkages.

In other words, the possibility of linkages between GTD and GTM activities should not be discounted without investigation.

In fact, experiences have shown that the biggest value creation derived from process review is from the cross corporate inter-unit process review; consequently, the expectation that value creation suggestions can be derived from process reviews associated with inter-organizational process reviews is quite reasonable.

Examples of these would be the U.S. EXIM's collaboration with UPS, Nafinsa of Mexico in its linkages to domestic supply chains and Kotra's efforts to move downstream from trade promotion to incorporate contract negotiation and dispute resolution partnerships. Therefore, it is important that an effort is made to understand current or potential linkages, the leveraging effect the linkages may have, specifically on trade development and promotion activities, on the capacity to innovate and the challenges in engineering such linkages. This integration effort is represented in the Figure 3 below: The underlying premise of the diagram is that there should be ever increasing evidence of a trend in upstream and downstream integration of the GVC led by both private and public service participants. This integration should be driven by specific drivers and the intent of the research, in part, is to find examples of these drivers that are influencing the integration and connectivity of the GTD and GTM components of the GVC.

[3] A more commonly used term is Supply Chain Management (SCM), which generally incorporates only the goods and information value chains. GTM recognizes the equal importance of each value chain, including the financial value chain, and reinforces the integration of the three, something that SCM literature does not normally promote.

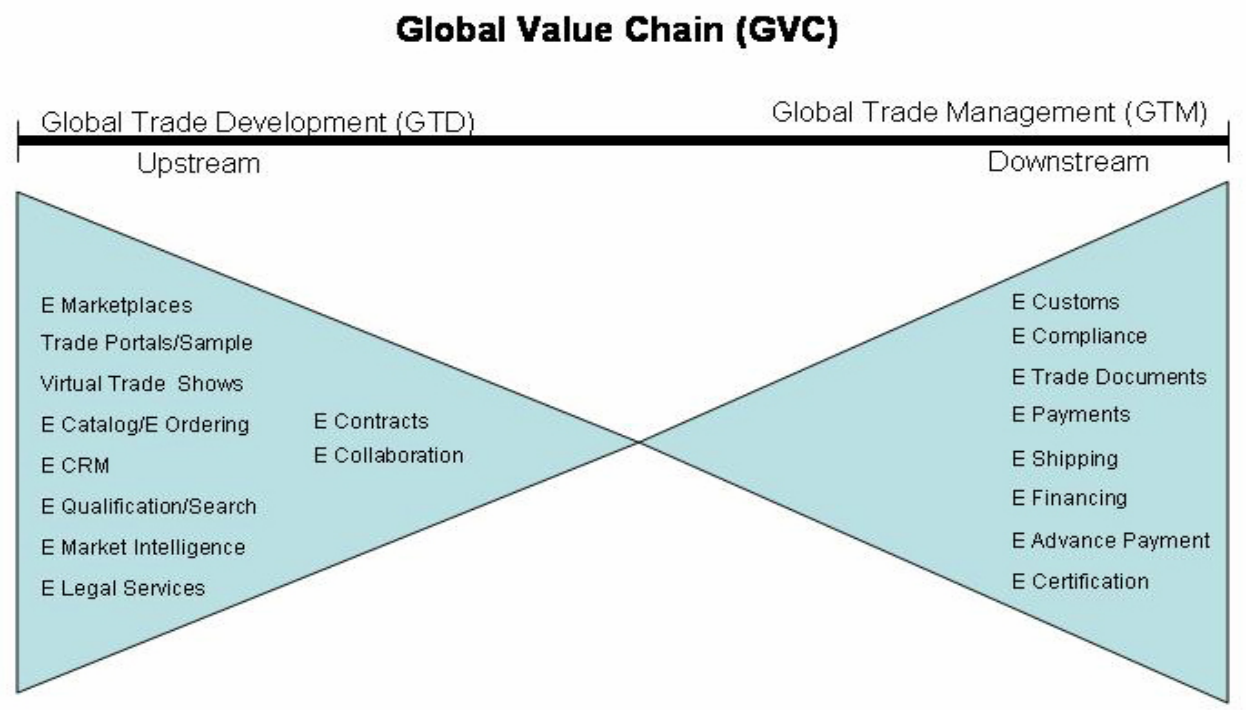

Figure 3: Global Supply Chain Continuum

Concept 3: Trade Technology Portfolio and Innovation

Numerous trade technology applications have emerged in the past years and now form a mature portfolio of business tools directly supporting global commerce. This portfolio presents a new strategic lever for TPOs that needs to be well positioned into the TPOs core development strategic objectives. This will enable TPOs to develop new information based trade services, support the review of core trade services delivery processes and open new avenues for the creation of new distribution channels.

Figure 4 illustrates a variety of web based applications that can be integrated into E Trade facilitation platforms.

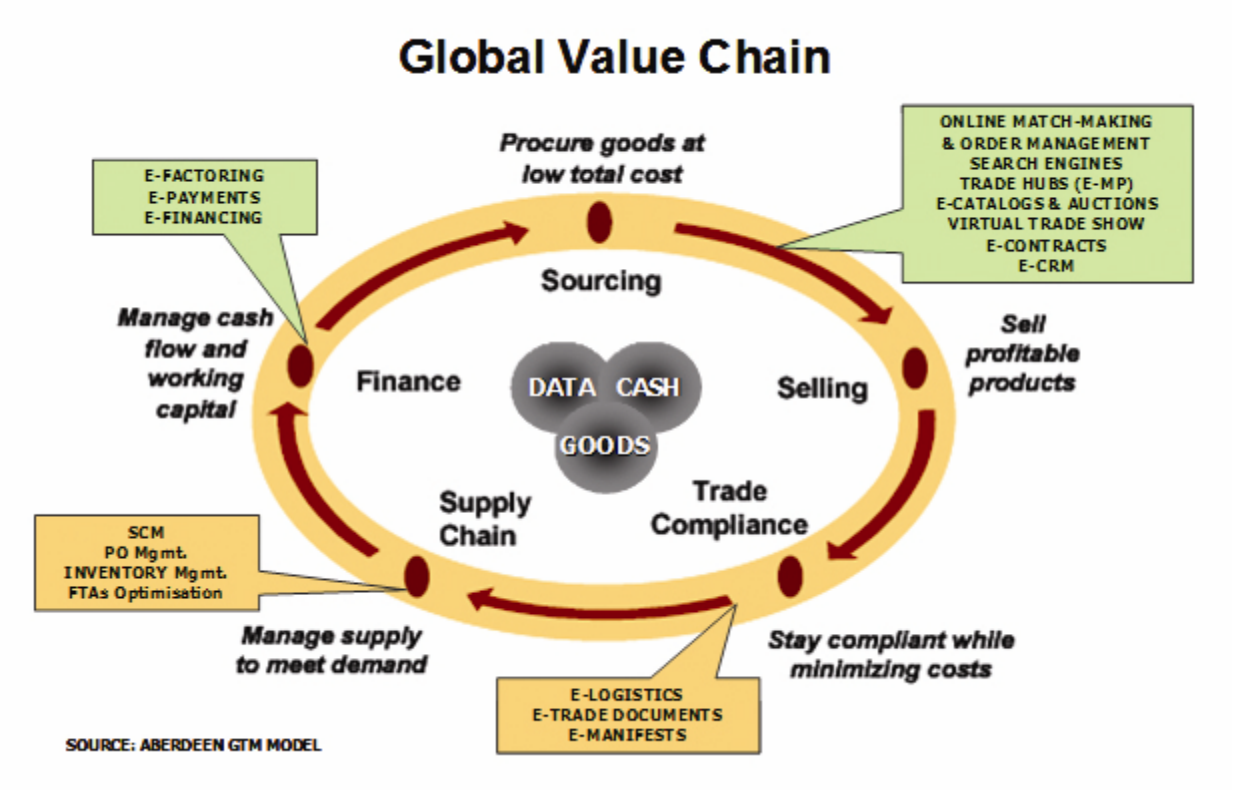

Figure 4: E Trade Facilitation Platforms

Additionally, it has been argued that technology can be a vehicle for innovation (Applegate 1999) (Applegate 2007) as evidenced by its effectiveness for example in creating new distribution channels of business, extending the business beyond its brick and mortar constraints, creating new threats of disintermediation, creating new opportunities for intermediation and creating new barriers to entry.

If organizations look at IT applications (e.g. supply chain management applications) that are clearly anchored in the best practices performance (Aberdeen 2005) (Aberdeen 2006 a) b) c)) (Aberdeen 2007) the core benefits of such applications, developed in larger part by the users themselves, are greater timeliness, accuracy and transparency of information and events. Given this heightened performance, entities should see innovative practices and applications that actually distinguish them from their competitors. They will become lead users.

Applegate (ibid) represents this heightened innovation process by creating a stage model representation of ICT development. As companies progress through each stage the option value (or the potential for increased innovative impact) of the ICT infrastructure grows. The three stages are:

Stage 1:
Technology investments in reusable, ***value enabling*** (existing processes) infrastructure lower costs, improve asset efficiency, create strategic "option values" for future growth. Usually associated with significant scale, the commodity nature of the product and/or standardization of data, and supporting critical existing business operations. Project C from Taiwan, to be discussed later in the paper, is an example of a reusable technology investment.

Stage 2:
Investments in ***value creating*** (new processes or improved processes) ICT applications to drive profitable growth through further cost reductions and more importantly through revenue generation. The very extensive effort by Singapore in standardizing documentation, and reducing the documentary requirements for trade flowing through their economy would be an example of this in a government context.

Stage 3:
Create ***value sustaining*** (create competitive advantage or build barriers to entry) ICT applications and infrastructure through revenue generation and value sustaining ICT applications. The Nafinsa example, to be discussed later in this paper is an example of this.

Concept 4: SMEs and GVCs

One of the most recent characterizations of GVCs is from the Conference Board of Canada (March 2007: "*Canada's Changing Role in Global Supply Chains.")* where GVCs[4] are described in the following manner:

> "Rather than producing something entirely within one country, companies increasingly use inputs from two or more countries to produce a single good or provide a service. Declines in tariffs, transportation costs and communication costs, combined with technological advances, have made it both possible and attractive to break production into smaller parts. Companies then produce or buy each input, for example, goods such as electronic parts or services such as engineering, from wherever it can be made or provided most efficiently. In recent years, exports and their imported inputs have risen together, increasing the share of components in the total trade. There has also been a significant increase in global foreign direct investment and sales of foreign affiliates. Combined, these developments provide strong evidence of a trend toward increasingly global or regional - rather than strictly national - *value* chains."

An underlying assumption of most of the literature associated with GVC discussions is that the current participants of GVCs have already internationalized their operations. As such, although the migration to best in class GVC practices may have been, or is in process, these firms already had the scale and capital to address these issues.

However, at the same time SMEs that can view these GVCs as a growth opportunity do not have the scale, capital or in many ways the capacity (human resources and leadership) to internationalize, or even to access them. How do they integrate themselves into these GVCs? What are the specific GTD/GTM challenges they face?

[4] To be consistent in terminology of this paper, the term "global supply chains" used in the Conference Board of Canada document has been changed to Global Value Chains (GVC).

These challenges can also be framed in strategic/policy terminology as outlined below:

- Many SMEs participate in GVCs as low value ($ value of input, technological content, or intellectual property) contributors. How can these firms migrate to higher value input?
- Many SMEs that participate in GVCs have limited power due to nature of the low value input, and as such limited power/influence to affect SCM issues (pricing, delivery time, payment terms). How can these firms be enabled in a manner that gives them more influence?
- For those SMEs that have internationalized, but are not already in GVCs, how do they become IT enabled sufficiently to allow them to compete to enter GVCs?
- For those SMEs who have not yet internationalized, yet it is part of their corporate objectives, how do economies enable themselves to engage internationally?

This convergence of discussion around GVCs and SMEs is important because if SMEs can become involved in such GVCs there may be increases in performance stability, financial performance, knowledge transfer, the opportunity to participate in economies of scale and, ultimately, improved ability to internationalize, the ultimate objective of TPOs.

The importance of technology to these questions has been documented in many cases, with a bias in such research to ICT being an enabling factor to improved internationalization, export performance (Karavdic 2005) (Karavdic 2006) and relationship management with trading partners (McCabe, 2006).

Concept 5: E Trade Finance

E-Trade Finance (ETF)[5] represents a core component of GTM which seeks to intermediate capital more efficiently and effectively into a supply chain network. Its success is contingent on employing GTM to create stable supply chain networks that fundamentally alter the risk profile from payment risk to supply chain performance risk (e.g. on-time delivery, agility, performance). An emerging trend toward open account from letters of credit as a means of settling international trade transactions is accelerating the adoption of such financing strategies by large buyers and global financial institutions.

Essentially, ETF increases cash flow velocity in the GTM component of the GVC by employing a buyer credit risk-based, payables discounting model - essentially reverse factoring (Kappler, 2004). This type of program allows buyers to extend their payables to optimize working capital, while allowing smaller suppliers to access liquidity at any time through the discounting of receivables at preferred rates (based on the better credit risk profile of the buyers).

ETF leverages a technology investment, which facilitates the exchange of electronic documents like purchase orders, invoices and acceptance notifications between members of a supply chain cluster. Specifically, it utilizes the "visibility" created by an E platform to increase the level of trust in the trading relationship by making all participants privy to the same trade data on demand and uses the data generated to create payment triggers (data triggered financing) based on specific events and contracted terms, thereby diminishing traditional payment risk.

ETF seeks to redefine the procure-to-pay and order-to-cash processes by creating a win-win scenario for all parties by reconciling the needs of buyers and sellers, as opposed to the traditional, adversarial procurement model that pits them against each other[6].

While the overall process intermediates capital more effectively and efficiently into the supply chain, distinct benefits accrue to each party:

Buyers:

- Minimize investment in working capital by increasing Days Payable Outstanding and reducing inventory.
- Reduces Cost of Goods sold – many buyers report being able to negotiate better discounts from suppliers (up to 10% in some cases).
- Reduces borrowing costs – evidence indicates a reduction in the cost of funds (up to 280 basis points (Aberdeen 2006 b)) and the total borrowing due to less investment in working capital.

[5] ETF is often referred to as supply chain finance or data triggered financing, but for the purposes of this paper, given the original mandate of the project to discuss e trade finance, ETF will be used for this paper.

[6] The traditional procurement model often produces sub-optimal procurement, as the more powerful buyer seeks to extract concessions on price, payment terms and delivery from the weaker supplier. In fact, this "cost shifting" to the weaker participants actually increases the cost to the buyer as the supplier incorporates its higher cost of capital into the cost of the goods. Moreover, in extracting such concessions, the buyer weakens the overall strength of the supplier thereby increasing the long-term risk of GVC disruptions.

- Automation reduces Accounts Payable administration costs due to fewer manual transactions.
- Increase cash flow.
- Increases stability of supply chain – buyers no longer shift risk to the smallest, weakest member of the supply chain.

Suppliers:

- Reduces Accounts Receivable by offering early payment opportunities.
- Reduces cost of capital by leveraging the buyer's credit rating.
- Increases certainty of cash flows – defined payment terms and visibility into payment status.
- Provides pre-shipment, Work in Process financing based on data triggers .
- Increases the strength of the customer relationship.

A far more comprehensive representation of this type of discussion can be found at source websites such as www.aberdeen.com and www.tradecard.com However, it is hoped that the forgoing discussion sets up a sufficient enough framework for the discussion of the ETF cases to be discussed latter in the paper.

Concept 6: E-Trade Services Facilitation Platforms (e-platforms)

The term "trade facilitation" has numerous definitions depending on the source. Two of these are presented below:

> International Chamber of Commerce - Facilitation (*is*) that which focuses on improvements in the efficiency of the processes associated with trading in goods across national borders. This requires the comprehensive and integrated approach to simplifying and reducing the costs of trade transactions, and ensuring that all relevant activities take place in an efficient, transparent and predictable manner, based on internationally accepted norms, standards and best practices. (International Trade Centre 2005).
>
> APEC - Trade Facilitation generally refers to the simplification, harmonization, use of new technologies and other measures to address procedural and administrative impediments to trade." (APEC, 2001)

The reality of these definitions and others is that they are targeted principally at the GTM end of the GVC, and are far more focused on the goods and information components related to cross border compliance and security issues. A discussion of this subject can be found in the *Assessment Report on Paperless Trading* (APEC, 2005).

For the purposes of this paper, the term "trade facilitation" is expanded to include the word 'services', with a specific focus on the new term's application to E platforms. The incorporation of the term "services" is intended to expand the concept of Trade Facilitation to encompass the whole of the GVC concept, including GTD, and to place this in the context of all E Platforms where all parties (e.g. government, SMEs, big buyers, financial institutions, logistic companies) are using them in support of GVCs.

The term E Platforms will be used for the balance of the paper, however it should be quite clear that within this generic concept, there are a number of versions of this concept present in the APEC economies. Within this concept, both the purely private and the public/private platforms would be included. Examples are provided below:

- Alibaba, E Bay
- Taitra (Chinese Taipei)
- UTrade Hub (Korea)
- Tradelink/DTTN (Hong Kong, China)
- TradeNet/Trade Exchange//Lawnet/Portnet/Marinenet (Singapore)
- Project A/B/C (Chinese Taipei)
- Nafinsa (Mexico)

Each of these can be further categorized in many different ways; many to many, one to many, buyer oriented, supplier oriented, trade compliance facilities, trade matchmaking etc. The fundamental point however is not so much the segmentation that the variety of platforms illustrate (which is very significant in its own right), but rather to note that this diversity of platforms are using technology to provide Stage 1 innovations primarily.

If these practices could be combined and shared with the objective of simplification and standardization of trade facilitation in mind, there is a clear logic path towards Stage 2 and 3 innovations based on collaboration models that provide the promise of the lead user effect.

It should be noted that the simplification and standardization concept is in many ways the precursor to the abstract constructs of trust and neutrality[7], and the positive impact that E Platforms have on these constructs in relationships between parties of these platforms.

For clarification purposes, what is being suggested (i.e. collaborative model) is not an all encompassing end to end solution. There are already sufficient examples and anecdotal stories of enterprises that have entertained such an idea, even tried to execute, but eventually have reduced, constrained or even withdrawn from such efforts.

What is being conceptualized is that greater collaboration on selected issues between parties that represent both sides of the GVC would enhance innovations to at least a Stage 2 level, and by sharing these innovations accelerate the adoption of such innovations by wider audiences to the end goal of greater simplification and standardization amongst trading parties across GVCs.

[7] An investigation of the concepts of trust and neutrality related to e platforms within the APEC community was beyond the scope of the project, however it was a subject matter that came up repeatedly. Related literature to the subject matter can be found in McKnight (2002), Pavlou (2004), Ratnasingam (2003) et al.

Chapter 4: Analysis of Drivers

Before presenting the key observations of the research project, a few comments about the nature of the drivers that were evidenced in the research is considered beneficial. The reality of the institutions interviewed is that they exhibited diverse heterogeneity, and the same applies to the drivers, which further complicates the ability to make comments that have some applicability to more than one of the stakeholders at any given time of this research project.

Drivers refer to those aspects of organizational, inter-organizational behaviour, and specific economy behaviour that appear to determine the pace and direction at which technology is being embraced as an innovation enabler or an integration tool within an inter-organizational environment.

The most significant drivers observed are outlined below:

Balance of power – how is it distributed (perceived or real) amongst participants within an inter-organizational framework? This most often relates to the competitive and cooperative relationship strategy of the partners in a GVC. For instance, is the power used to reduce input prices, or to grow the Buyer's suppliers' capacity to keep up with the Buyer's own growth patterns? Either approach frames, in completely different ways, the respective institution's support of integration and innovation. This issue is particularly evident when a Global Buyer (e.g. Dell, Wal-Mart) anchors a GVC.

The issue – The proponent(s) of, and the nature of the specific issue in which technology is applied can define the degree of collaboration, its limits, and possibly even the desire to collaborate. For instance if an institution feels that it can retain a competitive advantage on a process or effort, it may choose to go it alone, which would clearly limit cross organizational transfer of innovative ideas.

Prescriptive or voluntary – the method of implementing innovation, whether prescriptive or voluntary, can determine not only the pace of adoption but also the nature of exclusion (i.e. companies just opt out of a business line that is affected by the prescription).

The performance metric – the metrics used by organizations or networks of organizations will influence pace. For instance, if the performance metric is cost driven (e. g. reduce process costs), then there probably is less of a propensity for a process to be considered a competitive advantage, and therefore organizations will be more willing to integrate, than in cases where something has a direct impact on pricing (e.g. reverse auctions, or group buying efforts).

National interest – often national interest supersedes the interests of individual organizations or collaborative communities and as such entities will be engaged in activities that they would not have pursued in their own right (e.g. security agenda in North America)

Ubiquitous nature of the Internet - An underlying assumption of integration is the ubiquitous nature of the internet; not only its availability but also the human resources to support it and the management acceptance of it. The degree to which that capacity is present and used actively at the enterprise level, will have a significant impact on the pace of adoption. However, this should be interpreted in the context of the balance between labor costs and efficiencies gained by automation. Clearly, the level of labor costs can act either as a inhibitor or a facilitator of technology adoption. In addition, the ability of Global buyers to move the sourcing of supply

chains to low cost countries will continue to act as an inhibitor to further automation at the level of the SMEs.

Vision/Strategy driven - For those institutions who are vision driven (long time horizon - 5 to 10 years), have a high acceptance for venture type projects, are willing to go where the market is perceived to be going, or are going where a strategic advantage is considered attainable, then they are clearly more inclined to increased integration efforts. For instance, the identification of a national trade infrastructure as a competitive advantage that would attract foreign direct investment, to accelerate an economy's increased participation in global trade, and/or a means to engage SMEs in international trade.

Needs/Pain driven – For those institutions who are needs/pain driven (short term horizon - less than 5 years), where there is a low acceptance of venture type projects, where the immediate objective is responding to current market needs, and where return on IT investment has more of a dollar return orientation than structural or strategic advantage orientation; then these firms will have less inclination to integration efforts, and may actually see such integration efforts as a loss of competitive advantage in the short term. This type of behaviour may be more representative of the enterprise sector such as Financial institutions fear of being disintermediated or the impact on cost of production structure to due to the increased presence of India and China in global trade.

The fundamental implication of this discussion regarding drivers is that each integration effort or opportunity will in all likelihood have its own unique path and solution, whether it is institution specific, inter-organizational in nature or economy wide in context. Consequently, the findings described below should be considered evidence of the very formidable challenges to further integration, influenced by the very diverse nature of the drivers.

Chapter 5: Observations

(a) Private and Public Electronic Trade Services Initiatives

Within the context of the general concepts and the drivers discussed previously, outlined below are the general observations associated with the first two principal focuses of the research project (Public and Private Trade Services).

In most cases, specific institutions are identified as the source of the observation, as they are implementing it in practice or the individuals interviewed provided an opinion to support the observation. A detailed discussion of the ETF services findings (the third area of focus) will follow this discussion.

<u>GVC/ E Platform Observations</u>

1. Few collaborative public and private initiatives are, or have been, aimed at integrating ETF into GVC structures, with varying degrees of success (Kotra, Nafinsa).
2. In the banking community, the International trade banks are the most active and involved in supporting ETF (e.g. Standard Chartered, HSBC). National banks lag behind and are very conservative (e.g. Canadian banks). Non-banks may provide new capabilities (e.g. UPS, Wal-Mart) for established clientele and supply chain partners and many disintermediate established players.
3. In the private sector, Alibaba (Alipal) and eBay (Paypal) reinforce the importance of embedding ETF facilities into e-platforms to secure payments among unknown trading partners.
4. E Platforms have helped eliminate non-tariff barriers and provide support for Foreign Direct Investment In (e.g. DTTN, Tradenet)
5. Few stakeholders focused on addressing the major ETF gaps with SMEs.
6. The role of neutral intermediaries seems to be established (e.g. KTNET, Trade Gate, DTTN, Standards associations). However, the definition and dynamics of neutrality are probably driven by the power balance of the parties involved. As such the identification of issues to be dealt with in neutral situations is probably a function of the issues becoming standardized among competitors or no longer providing a competitive advantage to the parties to the platform.
7. Private sector banks are slow adopters of multiparty E Platforms because they see such platforms as a challenge to their relationships with their clients or having a negative impact on their brand. Also by keeping transactions in a non commoditized fashion, they can continue to promote their solutions as “unique”.

<u>SME Observations</u>

1. ETF and ETF supporting systems (i.e. payment) do contribute to create initial trust between newly trading parties (e.g. Alibaba, eBay, Nafinsa, Kotra).
2. Advanced payments, reverse factoring and credit rating information services are on the rise as a mean to support SMEs (e.g. Nafin, Coface, TradeCard, Project C) within E Platforms.
3. As outlined in the force field illustration below, many drivers can be identified that prevent/hinder SME entry into GVCs (left hand column) or encourage SME entry into GVCs (right hand column). In the current environment, the drivers applicable to SMEs are materially skewed to the left hand column.

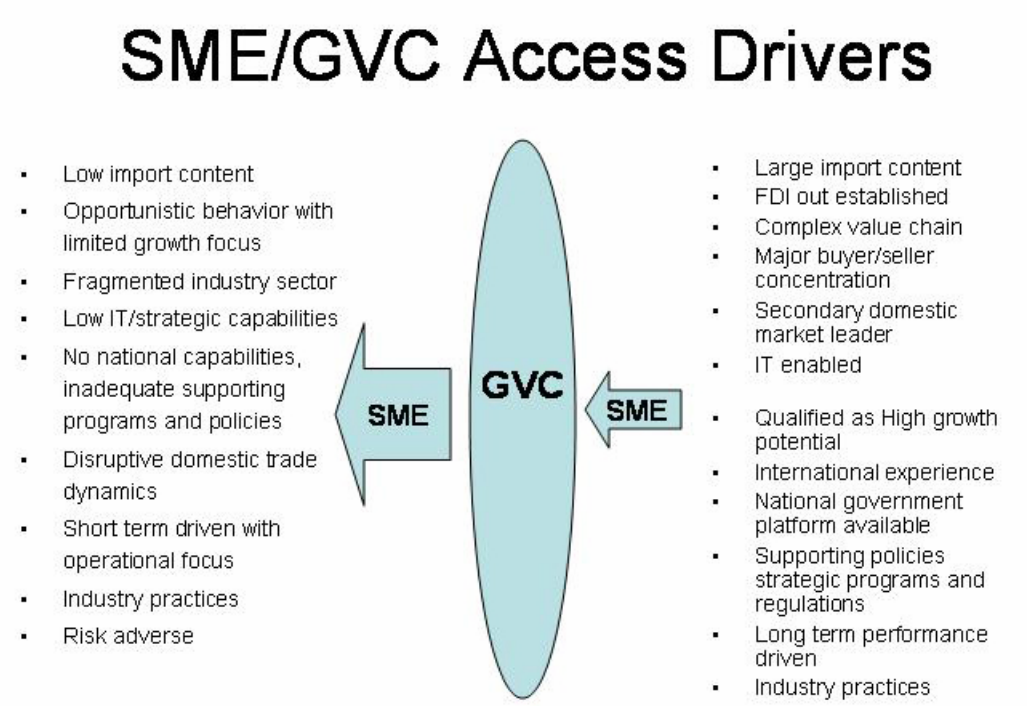

Figure 5: Drivers

Most countries and agencies visited are struggling with the SME constituency (e.g. Comet project in New Zealand). In some cases a continued commitment to the effectiveness of public and private E Platforms as a means to incubate and support the development of new trade (import-export) relationships remains open for discussion. Not so much from the perspective of the minority of exporters who do embrace such platforms actively and successfully, but from the perspective of the number of exporters involved (not large numbers) and the pace of adoption which is extending the time line for investment. Having observed those hesitations however, there are also a number of examples where the existence of E Platforms (e.g. DTTN, Tradelink, U TradeHub, Kotra) have provided added value improvements.

Specific areas for improvement have been found in the impact in reducing non-tariff barriers, providing easier access for SMEs to global markets, and matching buyers and suppliers. In these cases, however the acceptable time horizon for investment purposes is longer.

One of the dilemmas for SMEs is that initially TPOs will engage them from an E Platform perspective and facilitate their migration towards internationalization. However once they reach a certain level of sophistication on the GTD side of GVC, TPOs appear to have an inclination to disengage from the ICT enablement of SMEs and migrate themselves to a more high personal touch environment in pursuing their trade development agenda.

This creates a hurdle for SMEs who wish to continue with ICT enablement (most of the opportunities for such enablement are in the GTM side of the GVC) as in most cases there is no neutral third party with a mandate to continue to facilitate the ICT enablement process. The exception to this observation is where a single national government trade facilitation platform of integrated trade services is being, or has been built.

Innovation Observations

1. Most examples of innovation have been at the stage 1 level (value enabling). Few examples of Stage 2 (value creating) and 3 (value sustaining) have been seen, except in narrow niches (e.g. Hong Kong (China), Korea, Mexico, Singapore, Chinese Taipei).

2. There is a clear impression that SMEs are neither the beneficiary of ICT innovations (Stage 2 and 3), nor demand such. The situation can be described as a glass ceiling and floor at the same time. Institutions are able to see through, but neither side appears to have an imperative to push through. There are some claims that medium-sized companies are now being targeted more by E Platforms as the next market segment to move into from a growth perspective (e. g. TradeCard).

3. Innovation, in many cases, is best practices of a sector being copied, encouraged by benchmarking. It has been noted that "…if all firms in an industry are seeking opportunities in the same places, they tend to come up with the same innovations." (Sawhney, 2006). As such, even though the benchmarking may provide Stage 1 innovations, it is those projects (Project C, Nafinsa) where innovation was sought outside "established boundaries" that clearly brought the most transformational value changes.

(b) E Trade Finance (ETF)

One of the primary objectives of the research project was to identify existent and innovative ETF platforms and provide specific details on them. As indicated previously the primary focus of this paper re ETF is related to the use of ICT to migrate financial services upstream in the GVC to provide financing earlier than before, and the impact such initiatives could have on unrelated functionalities and institutions.

The private sector global banks are actively pursuing this functionality within major global supply chains, but consider it a proprietary advantage as it provides a differentiating feature in the competitive world of global banking. As well, several logistic firms have implemented such functionality on a smaller scale but primarily in North America (e.g. Fed Ex). The ability to access a detailed perspective on these private sector facilities was limited and for competitive reasons global banks were not in a position to disclose information other than what is available on their public web sites.

All recognized that data triggered platforms were a reality of future trade practices, however there was open debate as to how fast they would actually materialize outside of very sophisticated SCM practices. Also questions about the pace and adoption of such functionality beyond the major buyers and their tier 1 suppliers remain answered.

Outside the pure private sector the potential of the concept is also recognized by many, but demand for it has not been forth coming except in specific situations usually driven by country specific needs or for proprietary reasons as an extended product offering of already established products. Kotra appears to be experimenting with on line financial service but are still in a prototype environment. Consequently, outside of Project C (Chinese Taipei) and Nafinsa (Mexico), we did not uncover any on line public/private E Platforms that have fully operationally associated themselves with ETF activities using data triggered activities. Both of these cases are described below, and in each represents a variation of the core theme of ETF described previously in the paper.

Chinese Taipei – Project C

Project C (MOEA, 2004) was the extension of the successful implementation of Project A/B which was implemented in 2000/2001 with the objective of promoting e-commerce in the IT industry. The particular focus was on enabling the IT linkage between global buyers and major export oriented manufacturers (Project A) and procurement /inventory management associated with global IT supply chains that performed a major portion of their high value added sourcing from Chinese Taipei (Project B), with the objective of reducing the supply chain cycle time. Project C was an extension of this success into the provision of internet based electronic banking services with a focus on the liquidity needs of sub suppliers associated with the main manufacturer that anchored the global supply chain within Chinese Taipei.

The principal issues to be addressed were that the majority of payments were still paper based in the form of written cheques (working capital timing issue), that most banks still relied on letters of credit and letters of hypothecation which require time commitment as most of this was done manually (working capital timing issue), and more often than not the financing required collateral (working capital availability issue). The objective of Project C was to therefore remove the timing issue by allowing suppliers to access working capital earlier in the production process, give them access to unsecured funds (increasing liquidity) and removing manual processes related to payment which, would reduce working capital timing issues.

Project C was premised on extending the value equation (transparency, timeliness and accuracy) of the existing Supply Chain Management (SCM) system (goods and information value chain of GTM) to the financial value chain of GTM. As the financial institutions were given access to the information with the SCM system associated with specific supply chains (date of order, goods receipt, invoice issuance, account payable postings etc) the bank would then issue funds to the sub supplier in question, in a phased approach with a declining price structure as the transaction moved from origination to fulfillment.

The flow of events in this process are illustrated below (MOEA, 2004).

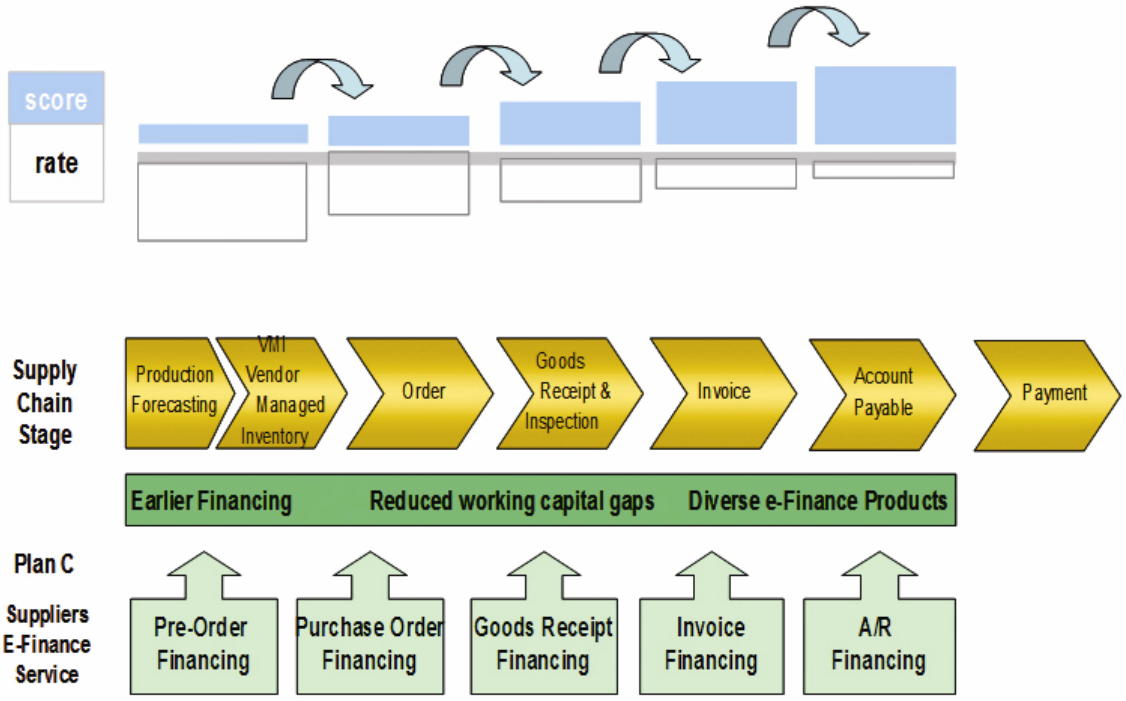

Figure 6: Project C

In the early part of 2004, nearly 24 billion TND had been disbursed under Project C and more than 21,000 suppliers were beneficiaries. At the time of the visit to Chinese Taipei in March 2006, the program was considered successful in that:

- The funds disbursed were actually incremental funds and that the new program had not just displaced established facilities;
- The cost of funding had declined up to 2%; and
- The default rate was lower than traditional lending.

However, some structural issues that were beginning to limit the upside potential of the program were also identified. These limitations fell into several categories:

- The major manufacturers and buyers in the supply chains appeared to be setting their IT priorities elsewhere than on the payments processing function. Paper checks still remain the norm.
- The program although addressing working capital issues was launched in an economy that has significant financial liquidity, such that this particular facility was in competition with other sources of funds. It would appear that although the program has provided value, the “unique” attraction of the program may have been overestimated.

- Financial institutions were reevaluating their commitment to the program in light of their strategic interests which led in some cases to continued support but perhaps not championing the program, to in a least one Financial Institution's case, withdrawal from the program because the facility simply did not meet the strategic interests (product profile, branding) that the firm wished to promote.

Project C was, and probably still is, a clear example of where integrative exercises associated with the goods, information and financial value chains of GTM did lead to innovative practices. Two Stage 2 examples of these practices are identified below:

1. The real innovation of Project C was not the improvement associated with automation of the existing processes, but rather the use of third parties' SCM system which provided sufficient security and trust that a number of banks were willing to issue funds without collateral because of the transparency, timeliness and accuracy of the information provided by the SCM system originated by projects A/B. As the lead manufacturers, the core clients of the disbursing financial institution, provided the underlying information, this system is sufficient enough to give comfort to the banks that the suppliers would meet their repayment obligations, and as such would not require forms of guarantees, collateral or security as previously required.

2. The impact it had on the extension of new credit, the provision of funds earlier (e.g. pre purchase order) than is the normal practice of financial institutions in this sector, and the apparent changes in the security/collateral requirements of financial Institutions.

Mexico – Nafinsa Productivas

In 2000, the Mexican government identified a serious liquidity issue related to the lack of funding being directed, let alone available, to the country's SMEs. The existent financial institution infrastructure was not targeting this market sector at all, and given the lack of credit information associated (i.e. the traditional starting point of Financial Institutions before considering the extension of funding) with the SME constituency in Mexico there was little chance that they would target this constituency on their own in the future.

To that end, the government directed Nafinsa (a government owned development bank) to establish a facility that would act as the catalyst for increasing 'structural' liquidity for SMEs within Mexico, that was IT based and that would prepare the groundwork to allow these SMEs to grow within Mexico and internationalize their operations if they chose to.

Currently, there are more than 600 buyers anchoring the platform, ranging from government agencies providing services to Mexican citizens, to major government agencies running power and energy utilities, to major private sector buyers (retail stores, bakeries, hotel chains). Their primary motivation for being on the system is that the majority are interested in the financial stability of the principal members of their respective supply chains. By being on this platform and reducing the risk of poor financial performance of their suppliers, they use the platform as a risk mitigation tool.

The second reason for participation is that presence on the platform allows buyers to have their payment terms extended by their suppliers (i.e. from 15/30 to 90 days), which has an immediate, positive benefit on their working capital cash management practices.

In 2007, there are about 115,000 registered SME suppliers on the platform, of which about 85,000 are active participants. The benefit for the suppliers is that buyer considers them to be strategic, as it is the buyer who has invited them on the platform. That in itself is a reputation enhancer. From a cash management perspective the suppliers have now moved from short payment terms (net 15 to 30) to next day payment terms once the Accounts Payable (AP) has been recognized by the buyer and posted to the electronic platform. Once posted the suppliers are able to sell their Accounts Receivable (AR) immediately if they choose to at discounted rates based on the buyer's credit rating.

This allows them access to cash much sooner than before. As the purchaser of the AR are participants from the financial Institution sector, they can now establish a documented track record of performance with the financial institutions community that has led to extensions of credit (outside the platform) for other activities (capital equipment purchases, mergers/acquisitions) to the suppliers, that would not have been available without this platform.

The financial institutions for their part are now purchasing assets that were not available before and are using the underutilized credit capacity of the buyers as the credit enhancer. It has allowed them to extend further credit to buyers, and has helped them enhance their relationships with these buyers as the buyers continue to grow, both domestically and internationally. It should also be noted that the term financial institutions encompasses traditional banks (deposit taking institutions), as well as other financial institutions such as factoring companies. The platform has been particularly beneficial for growth of the factoring companies in Mexico, as well as factoring volumes overall.

The actual mechanics of a transaction are as follows:

1. A Cadenas Productivas program is set up with a large buyer.
2. Nafinsa hosts the platform for data exchange.
3. Suppliers are invited by the buyer to register to transact on the platform. Standard terms are negotiated (generally net 90 days) (off line).
4. The Buyer issues a Purchase order to the supplier (off line).
5. The Supplier performs the work and submits an invoice to the buyer (off line).
6. Goods are received, and when the invoice is accepted by the buyer, the supplier is notified by a posting of the Buyer's Account Payable (Supplier's Account Receivable) on the platform.
7. At this point the supplier has three options
    i. Immediately discount the Account Receivable at rates, posted on the platform, based on the buyer's credit risk
    ii. Discount any time until maturity of the receivable
    iii. Wait until maturity for payment (i.e. net 90 days from posting on the platform)
8. Upon discount, the buyer's credit limit with the financial institution is reduced

9. Dependent on the action chosen in Step 7 funds are remitted to the supplier net of fees and discounts, next day through the Financial Institution.
10. The buyer makes payment to the FI based on the payment terms negotiated in Step 3.

An illustration of the platform is presented in Figure 7 below.

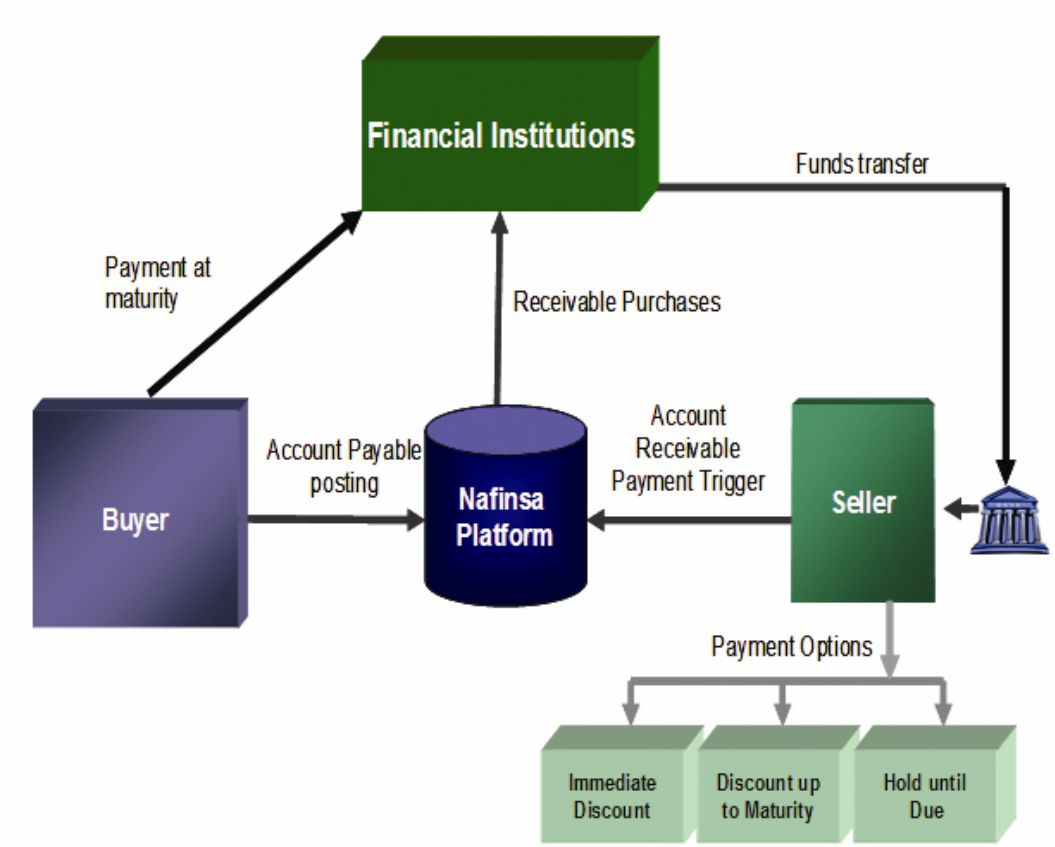

Figure 7: Nafinsa

The Nafinsa platform continues to grow in volume and strategic intent. In the six years since it has been in operation, it has grown from 0 to 12 Billion $US equivalency in volume of transactions annually. Its buyer membership has now reached 600 buyers now that all agencies of the Government of Mexico will be joining the platform.

This development is a vote of confidence by the Mexican government in Nafinsa's operational performance. Additionally, Nafinsa's platform was launched in selected Central American economies by the Central American Bank for Economic Integration (Cabei). Currently a number of major buyers on the Mexican platform are using the platform as a means to extend their payable obligations to suppliers in these newly adopting economies. It would appear that the Nafinsa platform has the potential to become a standard within this regional area.

This platform provides examples of a number of innovative practices, some of which are identified below:

- Stage 3 – although a Stage 3 type innovation (value sustaining) was described as one that establishes barriers of entry, it is completely fair to say as well that innovations that fundamentally break down barriers of entry and structural resistance, and provide growth opportunities that were not present before, has to also be a Stage 3 type of innovation. The systemic extension of credit to a new market segment in such a short period of time is such an innovation.

- Stage 2: By allowing the buyer to mitigate the financial risk of exposure by financial institutions to the buyers supply chain partners, the platform provided a Stage 2 (value creation) innovation.

- Stage 2: By giving access to SMEs to increased liquidity, the platform clearly provided a value creation for the SMEs.

- Stage 2: By providing a platform that improved terms of payment to the buyer and suppliers, value creation was created for both parties.

- Stage 2: By placing the "reverse factoring" on the platform, and supporting it with an appropriate e commerce legal framework, a quite traditional paper based financial instrument, has become revitalized.

- Stage 2: By placing multiple banks on the same platform, bidding for the same asset, the platform has created choice of financial partners to the SMEs (something which is quite rare as it goes against the traditional reality of banking relationships - one bank provides all the financial services to a SME).

- Stage 2: Both suppliers and buyers have identified the platform as a means for cross border trade promotion, as a cross border fulfillment tool and its proactive impact in stabilizing established business relationships and establishing new relationships.

In summary, the generic advantages that could apply to these types of E Platforms are:

- Earlier financing for suppliers
- Improved cost of funds for the suppliers
- Improved cash management opportunities for both buyer and supplier
- Lower bad debt ratio
- New growth opportunities for financial institutions
- Capacity to extend outside a specific economy's boundaries

However, at the same time, several obstacles have been noted:

- These platforms can challenge brand image and preferred means of operationalizing the strategic objectives of firms, particularly banks, which may lower their enthusiasm for them.
- They fundamentally hinge on the buyer's willingness to use its underutilized credit capacity, or the buyer's ongoing commitment to the priority of limited capital invested in such a venture.

As indicated, the foregoing examples were the only non-bank driven examples that were found, where ETF financing was offered on an E Platform with “data triggered” attributes. Global banks are very active in this space, particularly when efforts are attached to the GVCs of major global brands. However the appeal of the Nafin model is that ETF structures are not dependent on GVCs but in fact can be facilitated in developing markets based on domestic supply chains, and then extended outward to support regionally based supply chains.

In summary, these tangible examples plus other conceptual examples of trade finance supported by E Platforms are represented in the following illustration. Figure 8 shows the migration from traditional paper based forms of trade finance to data triggered forms of trade finance and the expansion of products conceptually available, given the presence/utilization of E Platforms.

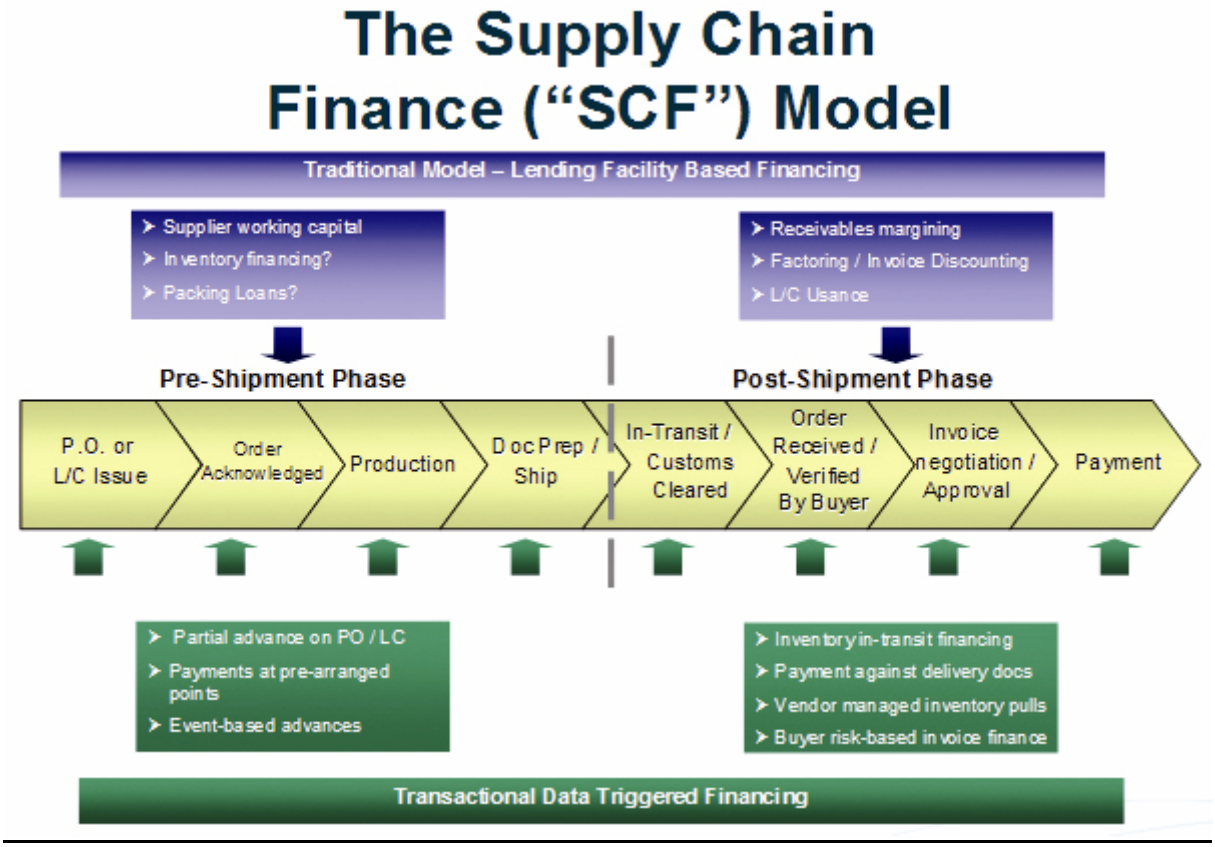

Figure 8: Migration of Trade Finance

Chapter 6: Discussion

The general findings of this report were somewhat limited in identifying examples of clear transformational value creation activities within GTM, but at the same time noted very significant GTM process innovation in all economies, either within a national strategy effort or within individual institution's efforts.

The following are our observations:

There exists a divide between the relatively active engagement of technology for the purposes of integration and innovation at the GTM end of the GVC, and the bridge between the GTM and GTD ends of the spectrum. There seems to be a gap that only a few entities (e.g. Kotra and Nafinsa) are trying to bridge, as illustrated in the following diagram.

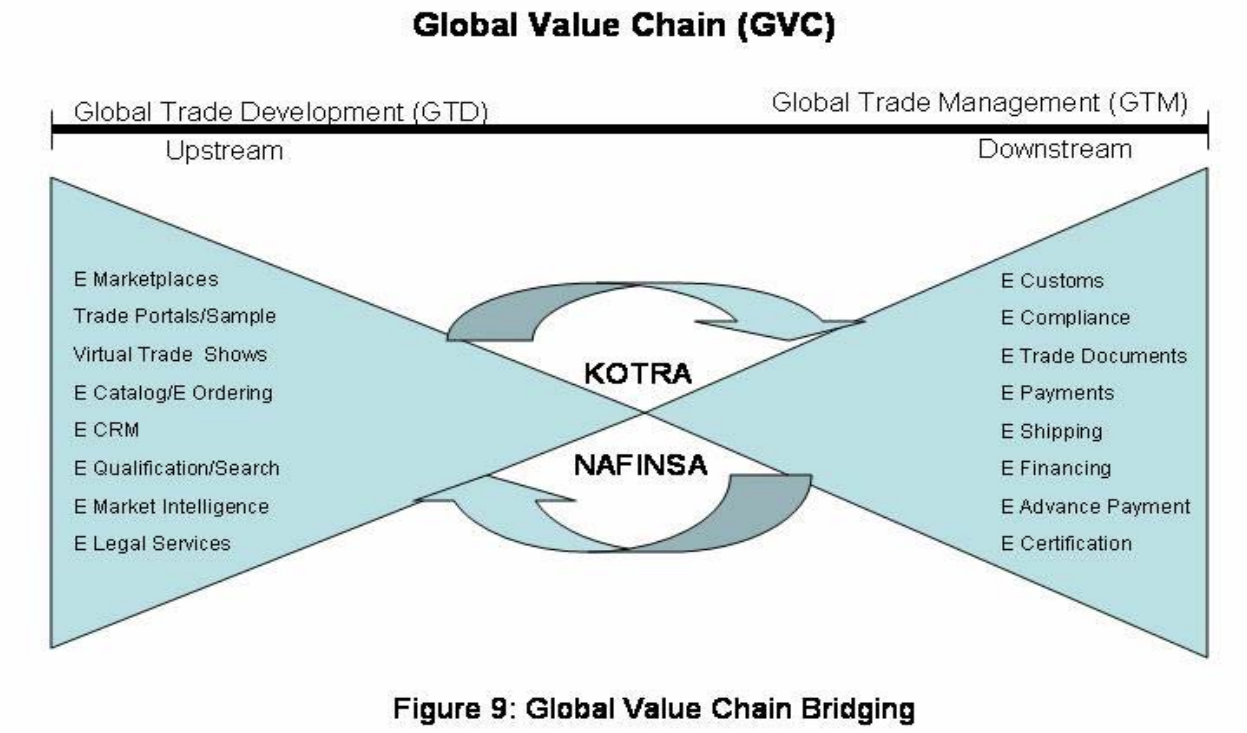

Figure 9: Global Value Chain Bridging

At beginning of this paper, a model was introduced with the purpose of capturing the full continuum of the GVC. The objective was to bring focus to one of the key issues of the paper, the impact of integrative drivers that would allow the innovative potential of technology at the GTM end of the continuum to migrate to the GTD end of the continuum. The investigation has led to the general conclusion that the drivers which were articulated are present, yet their impact to date show neither an easy migration from GTM to GTD, side of the spectrum, nor is there strong evidence of a general momentum in that direction.

There is a perception that E Platforms are primarily a Stage 1 type of process innovation/efficiency exercise for GTM activities, with far less application in the GTD environment. However, if the currently divergent interests of GTD and GTM could be integrated together, then the level of innovation could migrate to Stage 2 innovations. The desire to overlap divergent interests acts as the catalyst to look outside the traditional "operational" boundaries of GTD and GTM, for solutions that would identify TPOs as leaders in GVC activity, and as these solutions would not be process based (Stage 1 Innovation) they would of necessity be Stage 2 innovations.

The underlying logic of an E Platform that incorporates GTD and GTM functionalities is that if these functionalities can be commoditized and automated (contract, dispute resolution, shipping, compliance, financial tools), they will facilitate the internationalization of SMEs.

In discussing SMEs there is also a clear segmentation that needs to be noted. For those SMEs who are in a "many suppliers to one buyers" market, there can be an expectation of a greater likelihood of being required by buyers to adopt ICT practices that will pull them into GVCs thus facilitating their internationalization. However, for those SMEs that are in "many suppliers to many buyers" type markets, the drivers for a higher degree of ICT adoption are not as high, and their path to internationalization may be slowed down. For this latter group it would appear that there is a role for TPOs to facilitate the adoption of ICT practices and E Platforms in order to accelerate the internationalization process.

The principle barriers for implementing such platforms are those of economies of scale and the establishment of service level expectation (low touch) that is sufficient value enough to draw SMEs to the platform yet remains economical enough to operate. From participation in these platforms a minority of companies will emerge to migrate (natural mortality rate of businesses (i.e. financial failure)), mergers and acquisitions, and strategic withdrawal from markets, product or economies will have a serious attrition rate on this migration) to the higher value services that TPOs can offer.

Such an effort is more conducive to a public-sector led initiative where the principal beneficiaries are SMEs, rather than a private-sector led initiative. These platforms should be considered as enablers and facilitators of future performance, rather than as a tool for immediate returns. They will help the next generation of SMEs "outgrow" the need for TPOs low touch services and allow them to migrate to the high touch services of TPOs.

Supplementary to these general comments are the following observations:

Only when further integration of the GTD/GTM value chains has been embraced, will a higher level product and service innovation be observed, particularly when combined with an additional investment in data mining, and Customer Relationship Management functionalities (CRM) on E Platforms.

Wrapping GTD services around transactional services (ETF, GTM) will be a major catalyst for the development of trust among unrelated parties and could be a significant trade enabler, due to reduced perceptions of risk.

ETF is not available for those SMEs that do not belong to GVCs. However, the Nafinsa example has shown that most SMEs do belong to domestic supply chains, consequently application of data triggered financing need not only be exclusive to GVCs. ETF can be "domesticated" using a multiparty national platform, and then once successful, used as a tool/lever for internationalization, as Mexico is now doing.

Economies should look to other entities within their government's infrastructure that have knowledge to assist through 'knowledge transfer' of operations. For example, a government or local credit bureau or credit risk taking agency can use their tacit or codified knowledge to facilitate the screening of foreign counterparties (online or offline), not just in E Market places but in physical trade promotion activities (Trade shows).

Economies should consider creating a national Letter of Credit depository, a credit information repository or database of qualified trade agents. This could create a common denominator among global trade participants that may provide the starting point to engage participants in E Platform activities that have a global focus.

The starting point for an integration effort should be the E Platform within government that is considered leading edge for its functionality (finance, security of trade, trade facilitation, B to B, G to B). Economies should consider building a "neutral brand of trust and integrity" on that platform, and migrate to more advanced inter-organizational exchanges within GVCs. The private sector must be engaged early in the process.

Economies should consider looking to private sector providers to provide online expertise regarding such things as dispute resolution processes, contract negotiation, bonding or payment mechanisms. It will require the development of a governance model that is as yet ill defined, but the benefits of this type of collaborative model in the creation of a neutral platform have the potential to be very material to the further internationalization of SMEs.

If the principal beneficiaries of low touch technology applications are SMEs, the majority of whom may not be ready for it (they are lifestyle firms rather than growth firms), then TPOs should be more selective about which SMEs become the principal beneficiary of such efforts. In other words, create a selective gating process (target the minority of SMEs that are growth oriented, not those that are lifestyle oriented[8].

Economies should consider doing an inventory analysis, of APEC TPO ICT enabled services, and place these innovations on a scale of innovation for benchmarking purposes.

Further investigation into how ETF instruments/competencies could be leveraged to support trade development efforts and reduce risk and working capital needs of SMEs associated with the integration into GVCs should be conducted.

The existing contribution of domestic financial institutions into the respective economies' trade value chain should be revisited in order to evaluate the barrier effect on trade development of

[8] The concept of a lifestyle exporter is meant to indicate that the enterprise in question has reached a level of successful performance that the owner operator is quite satisfied with the firm's current level of performance and responds to export opportunities opportunistically, not in a strategic growth oriented manner.

the lack of standardized E Payment and E Invoicing facilities as critical elements of a national trade infrastructure[9].

Finally, opportunities to partner with private and public players to offer foreign buyers and domestic sellers credit rating services at the economy level as a key trust building block with the objective of breaking the electronic anonymity barrier[10] should be investigated.

One of the prime objectives of this project was to create a community of interest (COI) to monitor key market trends and best practices re ETF over the 2006 – 2009 period. The research to date has shown limited practice, yet high awareness of the potential of ETF associated with GVCs. A valued partner in such a COI would be the private sector, particularly the larger institutions, but it is not expected that there would be much interest in sharing information, as would be required in a COI, due to confidentiality and competitive reasons.

As such, the focus of active participation will most likely come from the participation of organizations with public mandates and an interest in increasing the internationalization of SMEs, by connecting them to GVCs, in part through improving access to ETF. Consequently, an active expression of interest towards a community of interest as described above, by APEC, would be appreciated. If such an indication is provided, EDC would be prepared to structure a proposal for the effective development and execution of such a COI.

[9] The CEO of Citigroup noted in his presentation at SIBOS 2006 that their (the banking community's) challenge was to eliminate fragmentation and lack of interoperability standards and that "all of this requires massive investment that none of us individually can support."

[10] Electronic anonymity refers to the complete lack of knowledge of each other when two potential counterparties meet on line. If there was someway for a third party to be the trust "surrogate" for each party, this would accelerate the process of trust enablement at least at the initial stages of transaction development.

Chapter 7: Specific Research Recommendations to APEC

The nature of this research project was largely investigative, and should be complemented by research at a level that is more systematic, controlled, empirical and critical, in order to facilitate the discussion of a number of the issues raised.

To that end, a number of general research suggestions are identified below. (It should be noted that these topics are mostly generic in nature and that the specific attributes of economies or the industry sector targeted, would probably lead to modifications, in order to allow them to be testable.)

Research recommendations:

Economies should consider building a profile of SMEs with the highest propensity to integrate into GVCs. What specifically in the nature of the SME business (high margin, low volume, transaction based versus relationship based, lifestyle versus growth oriented, import/export balance, leadership) affects the degree of its involvement in GTM or GTD?

Economies should consider evaluating the effectiveness of current matchmaking services present in E Platforms, with particular emphasis on segmentation by industry sector, and success in fulfillment, not just the introduction of counterparties.

Economies should consider evaluating further the degree to which the established nature of ICT infrastructure in SMEs accelerates the participation in either GTD or GTM, as there is some evidence that engaging in a global operating strategy and global supply chains is enabled by the level of SMEs ICT infrastructure.

Economies should consider determining the adoption rate by SMEs of inter-organizational IT applications, and the impacts on the selling/buying performance of the firm or firms, by industry classification.

Economies should consider creating case studies on collaborative digital business models, where the neutrality of the “host of the platform”, is a condition precedent for success. Understanding the dynamics of such efforts may well lead to the ‘governance’ model that would accelerate the integration between GTM and GTD.

Economies should consider benchmarking specific processes/functionalities amongst or between TPOs that are technology based.

Consideration of areas where collaboration, based on common interest, amongst TPOs could be operationalized. The E Market Services partnership (www.emarket services.com) serves as an example of this.

Economies should consider developing case studies to evaluate the effectiveness of Nafinsa and Kotra in bridging the gap between GTD and GTM.

Economies should determine how important the perceived loss of competitive advantage is due to participating on E Platforms, in establishing barriers to collaboration on E Platforms.

There was little evidence that GVCs are being extended to new economy activities. As these activities tend to be of higher value input, it would be useful to investigate the application to GVCs in this context.

Economies should consider exploring the concepts of trust and neutrality of existing E Platforms within the APEC community in a more rigorous and detailed manner. This will help to determine best practices, as a better articulation of these concepts as a selling point for E Platforms may enhance the acceleration of adoption of these E Platforms.

Chapter 8: Summary

The world of trade development and support activities has come a long way since 2001, when the International Trade Centre undertook a study on SME views on ICT as a business development tool with the following general conclusion:

> "…connectivity is seen as a valuable communication too, but not as an essential aspect of competitiveness. The use of ICT was acknowledged as important to establishing a modern and innovative business culture within the enterprise, but was regarded as having no, or minimal, direct impact on sales prospects or purchasing efficiencies.
>
> Few of the managers considered web strategy an integral part of their overall business. Nor did they believe the application of ICT would become a fundamental element of their long-term business development strategy. For the vast majority, the seamless e transaction is a long way off because of perceived difficulties in introducing on line financing and payment and customs and taxation applications."(ICT 2001, p.23)

This study provides evidence that all the perceived challenges, as articulated in the statement above, have been met. It is no longer a question of immature or unproven technology, as there are examples of implementation. The challenge is now how to move beyond process improvement to the creation of value added enhancements facilitated by technology.

It is hoped that this paper has been useful in highlighting the opportunity that exists through further integration/innovation for TPOs. The salient points are:

- Look to the GTM end of the GVC continuum for integration and innovation partnerships.
- Do not underestimate the impact of ICT enablement of SME as a facilitator of those firms' internationalization efforts.
- The nature of ICT enablement at the SME level requires some form of government involvement.

While most TPOs appear to be at the earlier stages of this integration/innovation effort, not to continue to pursue the opportunity actually creates an opportunity cost that will only diminish the value of TPOs to their prime constituents (the SME) as global trade evolves.

At the beginning of this paper, an abstract was presented describing the original rationale for this study, as conceived in the Fall of 2005. Given the observations in the report, and to conclude the report, a revised version of the original rationale is provided as a "go forward" content statement:

Spring 2007

The growing number of examples and modes of integration of trade finance support, logistics support activities and the sharing of information inter-organizationally on electronic platforms of various forms, particularly within GTM offer TPOs a unique lens into the potential leverage/innovation impact of technology on established processes and functionalities. At the same time, the lens also shows that there are significant obstacles that should be dealt with in order to maximize this leverage/innovation impact within GTM functionalities, as well as the migration of the impact to GTD functionalities. The reality is that as TPOs are under ever more

pressure to show value to their stakeholders the promise that technology can provide innovative impacts beyond efficiency gains must be explored.

Moreover, as shown in this report, some of the best-in-class thought leadership and in some cases practice leadership on this subject area rests within the APEC community. The TPOs are encouraged to reach beyond their current scope of trade promotion currently evident within GTD, look for lessons within their own economies' GTM activities and pull/ transform these lessons into their end of the GVC continuum in a more collaborative technology based manner than exhibited previously.

Bibliography

1. Aberdeen Group, New Strategies for Global Trade Management, March 2005
2. Aberdeen Group (a), Research Brief: Sourcing from Low-Cost Countries? Supply Chain Financing and Technology Innovations May Help Extend LCCS Benefits, November 2006
3. Aberdeen Group (b), New Strategies for Financial Supply Chain Optimization, November 2006
4. Aberdeen Group (c), Research Brief: Quantifying the Supply Chain Opportunity, December 2006
5. Aberdeen Group, Technology Platforms for Supply Chain Finance, March 2007
6. APEC (www.apec.org/apec/ministerial_statements/sectoral_ministerial/trade/2001_trade/annex_b.html)
7. APEC, Assessment Report on Paperless Trading of APEC Economies, APEC Electronic Business Alliance, APEC Electronic Commerce Steering Group, September 2005
8. Applegate, L., Making the Case for IT, Financial Times Mastering Information Management Series, March 29, 1999
9. Applegate, L., Austin, R., McFarlan, F., Corporate Information Strategy and Management, McGraw - Hill Irwin, 2007
10. Central Online Management and Export Trade Accelerator Project Report (Comet), http://www.med.govt.nz/templates/StandardSummary____23773.aspx
11. The Conference Board of Canada: Canada's Changing Role in Global Supply Chains, 2007
12. International Trade Centre UNCTAD/WTO and State Secretariat for Economic Affairs, Executive Forum 2000, Export Development in the Digital Economy, Geneva: ITC/seco 2001
13. International Trade Centre UNCTAD/WTO: TPO Best Practices: Strengthening the delivery of trade support services, Geneva: ITC, 2004
14. International Trade Centre UNCTAD/WTO: Business and the WTO Negotiations on Trade Facilitation, Geneva ITC, 2005, Technical paper no. BAS -05 -34.E
15. Kappler, I., the Role of "Reverse Factoring" in Supplier Financing of Small and Medium Sized Enterprises, Development Research Group, World Bank, 2004
16. Karavdic, M., Integration e commerce into existing export marketing theories: A contingency model, Marketing Theory, Volume 5(1): 75 -104
17. Karavdic, M., e-commerce and export performance, Cambria Press, Youngstown, New York, 2006
18. Lederman, D., Olarreaga, M., Payton, L, Export Promotion Agencies: What Works and What Doesn't, Development Research Group, World Bank, 2007
19. McCabe, B, Engaging Trading partners in e- Business, Department of Communications, Information Technology and the Arts, Canberra, 2006
20. McKnight, D., Choudhury, V., Kacmer, C. (2002), Developing and Validating Trust Measures for e-Commerce: An Integrative Typology, Information Systems Research, Vol. 13, No. 3., pp. 334-359
21. MOEA, Project C for 2004 e-Asia Award (internal use), 2004.6
22. Pavlou, P., Gefen, D. (2004), Building Effective Online Marketplaces with Institution-based Trust, Information Systems Research, Vol. 15, Issue 1, pp. 1-37.
23. Ratnasingam, P., Pavlou, P. (2003), Technology Trust in Internet – based Interorganizational Electronic Commerce, Journal of Electronic Commerce in Organizations, 1 (1), January – March, pp. 17-41
24. Sawhney, M., Wolcott, R., Arroniz, I., The 12 Different Ways for companies to Innovate, MIT Sloan Management Review, Spring 2006, Vol. 47 No.3

APPENDIX A: Institutions Visited

AUSTRALIA

Trade Promotion Organizations	Austrade (www.austrade.gov.au)
Export Credit Agencies	Export Finance and Insurance Corporation (www.efic.gov.au)
Banks	Westpac (www.westpac.com.au) ANZ (www.anz.com) Bibby Financial Services (www.bibby.com.au)
EMarket Places/ Software Companies	Red Wahoo (www.redwahoo.com)
Academics	
Logistics	TradeGate (www.tradegate.org.au)
Other	Australian Government Information Management Office (www.agimo.gov.au) Australian Customs Service (www.customs.gov.au) Standard Australia (www.standards.org.au)

CHINA

Trade Promotion Organizations	China Council for the Promotion of International Trade (www.ccpit.org)
Export Credit Agencies	
Banks	BNP Paribas (www.enercomxp.bnpparibas.com)
EMarket Places/ Software Companies	
Academics	
Logistics	
Other	China International Electronic Commerce Center (www.ec.com.cn) APEC E – Commerce Business Alliance (www.apec-ecba.org)

HONG KONG, CHINA

Trade Promotion Organizations	Hong Kong Trade Development Council (www.tdctrade.com)
Export Credit Agencies	Hong Kong Export Credit Insurance Corporation (www.hkecic.com) Coface HK (www.coface.hk)
Banks	Standard & Chartered (www.standardcharted.com) Exonomy (www.exonomy.com) HSBC (www.hsbc.com.hk)
EMarket Places/ Software Companies	Alibaba (www.alibaba.com) Core Solutions (www.coresolutions.com)
Academics	
Logistics	UPS (www.upscapital.com)
Other	Office of the Government Chief Information Officer (www.ogcio.gov.hk) Tradelink (www.tradelink.com.hk) Digital Trade and Transportation Network Ltd. (www.hk-dttn.com) GS1 HK (www.gs1hk.org)

JAPAN

Trade Promotion Organizations	
Export Credit Agencies	
Banks	Mizuho Bank (www.mizuho.co.jp)
EMarket Places/ Software Companies	
Academics	
Logistics	Polisa (www.polisa.or.jp)
Other	E Comm (www.ecom.jp) JastPro (www.jastpro.org) Rosetta Net (www.rosettanet.gr.jp)

KOREA

Trade Promotion Organizations	KOTRA (www.kotra.or.kr)
Export Credit Agencies	Korea Export Insurance Corporation (www.keic.or.kr) The Export-Import Bank of Korea (www.koreaexim.go.kr)
Banks	
EMarket Places/ Software Companies	EC 21 (www.ec21.com)
Academics	
Logistics	
Other	KTNET (www.ktnet.com); KITA (www.kita.org) LG Nortel (www.lg-nortel.com)

NEW ZEALAND

Trade Promotion Organizations	New Zealand Trade and Enterprise (www.nzte.gov.nz)
Export Credit Agencies	The Treasury (ww.treasury.govt.nz)
Banks	
EMarket Places/ Software Companies	
Academics	
Logistics	
Other	State Services Commission (www.e.govt.nz) Ministry of Economic Development (www.med.govt.nz) Export New Zealand (www.exportnewzealand.org.nz)

SINGAPORE

Trade Promotion Organizations	
Export Credit Agencies	Coface Singapore (www.cofacerating .com.sg)
Banks	Overseas Chinese Banking Corporation (www.ocbc.com) Development Bank Singapore (ww.dbs.com)
EMarket Places/ Software Companies	Crimson Logic (www.crimsonlogic.com)
Academics	
Logistics	APL Logistics (www.apllogistics.com)
Other	Singapore Customs (www.customs.gov.sg) Infocom Development Authority (www.ida.gov.sg) Standards, Productivity and Innovation Board (www.spring.org.sg)

CHINESE TAIPEI

Trade Promotion Organizations	Bureau of Foreign Trade (www.trade.gov.tw)
Export Credit Agencies	Export Import Bank (www.eximbank.com.tw)
Banks	Huan Nan Commercial Bank (www.hncb.com.tw) Changhwa Commercial Bank (www.chb.com.tw) China Trust Commercial Bank (www.chinatrust.com.tw)
EMarket Places/ Software Companies	Trade Card Asia Pacific (www.tradecard.com)
Academics	National Sun Yat-Sen University (www.oia.nsysu.edu.tw)
Logistics	
Other	

INTEGRATED TRADE SERVICES MODELS: BEST PRACTICES IN E TRADE FINANCE

Printed in September 2007

Prepared by:
Gilles Morin, Vice-President, Information Technology Business Services, Export Development Canada
Peter Cowan, Senior eGlobal Trade Management Advisor, Export Development Canada
Sabina Ouimet-Storrs, William Ralston, Emma Fisher, Research Associates

Contact: Peter Cowan
Global Trade Management Innovation Centre, Export Development Canada
151 O'Connor Street, Ottawa, Canada, K1A 1K3
Tel: 001 613 598 2961
Email: pcowan@edc.ca

Project Overseer:
Lesley Wilson, Policy Development and Integration Division
Foreign Affairs and International Trade Canada
125 Sussex Drive, Ottawa, Canada, K1A 0G2
Email: lesley.wilson@international.gc.ca

FOR THE ASIA-PACIFIC ECONOMIC COOPERATION SECRETARIAT
35 Heng Mui Keng Terrace, Singapore 119616
Tel: (965) 6775-6012 Fax: (965) 6776-6013
Email: info@apec.org
Website: www.apec.org