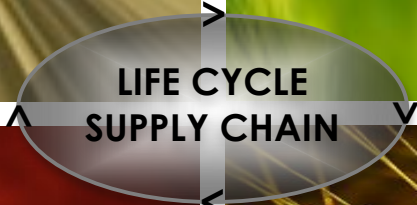




foundations



standards



benefits



process



## Benefits To All

In a life cycle process insuring that all participants are benefiting, it optimizes yours!



The purpose of this document is to highlight the benefits GCEL will trigger to the global logistics industry participants through the Soft-Infrastructure. The savings and economic benefits in this document are illustrated through a cost study scenario for simulated organizations and a live pilot project conducted on the busiest trade corridor between Canada & the United States. World best in class standards and methodology were used to measure these benefits, which in turn have been validated by the top technology and consultant firms in the world.

# Index

Section	Page
Soft-Infrastructure Overview	3
Benefits Foundation	8
Standards Used	9
Features & Process	10
Benefits Results	17
Attachments	

# Soft-Infrastructure Overview



The purpose of this section is to highlight the main foundations of the Soft-Infrastructure and to present the benefits it will deliver. This introduction will be presented through a question methodology in order to provide to the reader a comprehensive understanding of the Soft-Infrastructure in a simple manner.

## WHAT IT IS THE SOFT-INFRASTRUCTURE?

The Soft-Infrastructure provides the necessary tools to help reach the operations excellence required for organizations to earn national and international investment. These tools will help reduce operations and trading costs, maximizing operating efficiency to stimulate economic growth within every region and worldwide. The following represents the Soft Infrastructure's main foundations:

- **Public-Private Regulatory Body - Global Coalition for Efficient Logistics**  
*A rapid global deployment led by an international public-private regulatory body*
- **World Logistics Council Network (WLCN)**  
*Global deployment network includes the world's most prominent technology, finance and insurance organizations offsetting monopolistic & geopolitical concerns*
- **Technology - Global Logistics System (GLS)**  
*An open source information technology platform*

## HOW DOES THE PUBLIC-PRIVATE REGULATORY BODY WORK?

The main foundation required to deliver a tangible global solution for any national security industry (i.e. logistics, financial, insurance), is represented through GCEL's unique Global Structural Formula. This formula is of paramount importance in insuring a sustainable global program being delivered and maintained efficiently by capable global

organizations after being triggered by a non-profit organization, all in concert with government bodies.

Any global solution must address a basic dilemma: Who will provide the solution to stimulate economic development and achieve the objectives of both developing and developed countries?

Since global trade affects the interests of both public and private sectors, GCEL's global solution includes the participation of all forms of organizations, listed below, working in concert together capitalizing on each organization's capabilities and jurisdiction, thus introducing an independent global monitoring mechanism offsetting geopolitical and monopolistic concerns at the same time ensuring rapid global deployment, providing benefits to all participants.

## WHAT IS THE GOVERNMENT ROLE?

Governments are not business solution providers in the market place, but it is their responsibility to resolve problems facing their countries. To avoid anti-trust challenges, governments can partner with non-profit organizations that provide the monitoring mechanism and a transparent equal opportunity process to all organizations capable of delivering the required global solution.

## WHAT IS THE NON PROFIT (GCEL) ROLE?

The Global Coalition for Efficient Logistics (GCEL) is an independent body that brings together the public and private sectors whose combined efforts are required to resolve major global challenges for the common good. GCEL's public/private governing body allows the oversight and monitoring of the profit driven organizations to deliver the proposed benefits globally and rapidly in a non-monopolistic manner while offsetting geopolitical concerns.

## WHAT IS THE PROFIT SHARING (WLC - WLCD) ROLE?

The World Logistics Council (WLC) is a semi government organization governed by 4 Regional Councils from around the world (Americas, Europe, MEA and Asia). Each Regional council is governed by its region offsetting geopolitical and monopolistic concerns, while representing the interests of the region on the WLC board. The WLC is founded based on two main objectives; monitoring the performance of the Profit Driven Organizations (WLCN), as well as maintaining and enhancing the core system GLS to coincide with the needs of the public and private sector. System enhancements are made in coordination with all Gateways whom are selected by the Non Profit Organization GCEL. WLC has no direct commercial involvement with the private market, since its operation is supported through a profit sharing formula with the WLCN. The World Logistics Council Development Arm (WLCD) is wholly owned by WLC.

# Soft-Infrastructure Overview



The initial “Gateways” will be equally divided in each of 4 regions (MEA, Asia, Europe and the Americas). These highly capable organizations will be selected by GCEL, as a non-profit organization, through published guidelines and a transparent Request for Proposal (RFP) process thus providing to all capable organizations an equal opportunity to be part of the first round selection of the WLCN.

GCEL’s guidelines for Gateway selection will be based on the following criteria:

- Technical capability
- Offsetting geopolitical and monopolistic concerns
- Reach in the global market place

Following the award of the Gateway licenses, the WLCD will train all Gateways to deploy the GLS globally during the implementation of the Humawealth Trade Lanes over a six to eight month period. *(For further information please refer to the Humawealth documents).*

## WHAT IS THE PROFIT DRIVEN (WLCN) ROLE?

The World Logistics Council Network (WLCN) is comprised of capable finance, insurance and technology organizations selected by GCEL through published guidelines and a transparent Request for Proposal (RFP). They will work together in a co-operative environment with a global governance structure that will monitor their efforts to build and deploy the required core system GLS. These companies, with their market opportunity and profit driven motives, will ensure rapid global deployment benefiting their customers in developed and developing countries alike.

## WHAT IS THE PRIVATE SECTOR (END USER) ROLE?

These organizations seek to maximize their profitability through cost reduction and creating or expanding their markets, among other factors. These firms require a competitive multi service provider environment that is provided by the renowned, capable and reliable profit driven organizations that they trust in delivering and maintaining a 24/7 efficient service to help sustain their business.

Presently GCEL’s private sector members include more than 2.7 million manpower from prominent technology, financial, insurance organizations in 130 countries around the world serving 60% of the world’s GDP. GCEL projects to double its private members by the end of 2010. Please note the above Organization Chart, which reflects the Global Structural Formula.

## WHO IS PART OF THE WLCN?

The WLCN is comprised of the following:

- 12 Technology Gateways (TG)
- 12 Financial Gateways (FG)
- 4 Insurance Gateways (IG)
- Qualified Integrated Technology Providers (ITP)

Each TG will work with WLCD to build its own User Interface providing free portal access to the core system. These prominent global firms will ensure rapid global deployment of the GLS linking their customers’ vertical systems to the GLS providing increased benefits to their customers while offering a wide range of providers to choose from around the world. While there will be 28 Gateway organizations at the outset, subsequent rounds will allow for additional Gateways.

GLS provides an open platform that allows multiple integrated technology providers (ITPs) to plug into its system, providing them with large market expansion opportunities. ITPs involved in Data Systems Integration and Shipment Tracking have developed cost effective technology advances in electronic messaging, radio frequency identification (RFID) and global positioning systems (GPS) that are resulting in operational efficiencies within the marketplace.

ITPs will view the GLS as an effective means to reach numerous shippers, third party service providers, stevedoring companies, surveying companies, customs brokers, etc. The GLS platform allows these technology providers to provide their customers global access to GLS value added services, at no cost, while increasing their own market share through the GLS global market network.

As an example, with respect to tracking, GLS open platform strategy is important since one shipment flow can be subject to multiple tracking devices or tracking technology providers. Moreover, containers on board a ship can be subject to multiple tracking technologies and providers. This ability to efficiently “tie in” to multiple tracking providers provides the shipper with a continuous flow of information without the burden of additional integration investment cost.

# Soft-Infrastructure Overview

Regarding messaging, master data system integrators are currently providing connecting gateways for thousands of suppliers and customers to exchange valuable trade information. The GLS platform provides a ready made vehicle for these integrators to increase their market penetration across multiple industry segments as their customers must utilize logistics to deliver their product to the market place.

This overall enhanced information connectivity will provide significant competitive advantages to GLI participants, while at the same time providing technology providers increased sources of revenue via the global reach of the GLS platform.

## WHAT IS THE FOUNDATION OF THE GLS?

The GLS is an open source technology platform that provides seamless end-to-end tools to logistics industry participants to manage the global supply chain by all shipping modes. As a prerequisite, it is expected that when a technology solution is presented, a standardization process is a must. However, it is important to recognize that many attempts have been made to standardize the Global Logistics Industry (GLI) by large organizations as a first step towards efficient logistics. These attempts failed to achieve the result as originally intended, because each region, country and organization around the world has reservations about completely changing their logistics process. This is because their present method is the result of many factors, i.e. years of experience in their specific geo-location, technology availability, and country regulations.

At the present time, it is too early to attempt to standardize the GLI. However, we can standardize and simplify the Shipment Process since the common denominator between global logistics verticals and countries is the shipment. In other words, all previous attempts to solve this problem have not been successful because they have attempted to standardize the GLI process. The Global Logistics System (GLS) approach is different because it focuses on standardizing the shipment process, not the GLI, since the common denominator of this industry is **The Shipment**.

## IS THERE A COMPARATIVE EXAMPLE ADDRESSING THE STANDARDIZATION ISSUES?

In the past, the sales, marketing, booking and other aspects of the airline industry were mainly dependent on the travel agents. This made sense when airline carriers booked fewer passengers, aircraft were slower, and destinations were limited. However, when the passenger industry began to grow, providing more destinations and using larger jets, the volume of passenger bookings increased exponentially. Moreover, accuracy and efficiency became important elements to rapidly coordinate flight connections. Individual efforts by agents with antiquated methods could no longer keep-up. The Global Airline Industry pioneered the Global

Horizontal E-Passenger System (GHEPS). Today there are only four GHEPS (Sabre, World Span, Amadeus, and Galileo) utilized by travel agents worldwide. Today these systems are also available to the public online via the Internet. Now, any traveler can have access to what was once limited to travel agents.

The main forces behind the changes of the Global Airline Industry were:

- Rapid customer demand
- Increased volume, frequency and locations
- Customer centric industry

The airline industry has identified the common denominator between the multiple airline verticals being “the passenger”. Therefore, the main target of the airline systems was based on achieving efficiency and security of the passenger when crossing the jurisdiction of multiple airlines and, therefore, every airline vertical despite their language, company objectives and needs, have provided the minimum data required for the passenger to travel across these verticals / countries efficiently and securely. This minimum data are printed on the boarding pass (passenger name, boarding gate, flight number, etc.) or known as Universal Data Elements (UDE).

Based on the UDE the airline industry was able to build a holistic door-to-door information technology solution providing optimum service to their customers. Customers today through the Internet can evaluate the best option that fit his/her needs, buy the ticket, assign his seat, finance his tickets, and arrange airport pickup and more, at no cost.

## HOW CAN WE LEVERAGE THE LESSONS LEARNED FROM THE AIRLINE INDUSTRY TO ENHANCE THE LOGISTICS INDUSTRY?

As the common denominator between the multiple airline companies' verticals is the passenger, the common denominator for the logistics companies' verticals is **the shipment**. Therefore, our emphasis should be on maximizing shipment efficiency and security when crossing the multiple logistics verticals and not on the vertical in house systems themselves. Otherwise, we will fall again into the trap of a customized solution or another failed attempt to standardize the GLI.

The focus on the shipment will allow us to easily standardize and simplify the shipment process based on the minimal data requirements, the logistics UDE, achieving horizontal efficiency and security from shelf-to-shelf.

# Soft-Infrastructure Overview

## WHAT LOGISTICS SUCCESS STORIES CAN BE USED TO VALIDATE THE HORIZONTAL EFFICIENCY PROCESS?

The horizontal concept in logistics has been proven through the success of international courier businesses such as UPS, FedEx and DHL. The formula of their success is one horizontal system -> one carrier from shelf-to-shelf, e.g. (“it is UPS personnel all the way”).

The advantages of using courier services include:

- Shelf-to-shelf service
- Portal access with ease of use
- Shipment tracking

The disadvantages of using courier services include:

- Size & destination limitations
- If you dislike the carrier service, you must change system
- High cost of use

When combining the common denominator strategy with the horizontal system approach we will have the new dimension in global shipping: one-system => multiple carriers/LSP => one-system that is the formula of the GLS. The main key advantages of using the GLS include:

- Deployed by trusted partner providers
- Free of cost to the end user
- Ease of integration, Portals (Portal accessibility) or Plug In (Data Integration)
- Ease of use
- Shipment tracking with minimal technology requirement
- No size or destination limitations
- Up to 30% reduction on landed import / export costs
- Up to 15% reduction on operation costs
- Maximum capacity utilization of conveyances and terminals

If you dislike the carrier service, then you switch the carrier/LSP and keep using the system.

## HOW DOES THE GLS TECHNOLOGY WORK - IN BRIEF?

The GLS represent a new dimension in the global shipping industry delivering new levels of efficiency and cargo security to every participant in the shipment flow. The GLS provides seamless end-to-end tools to logistics industry participants to manage the global supply chain by all shipping modes. GLS effectively leverages investments made by current in-house “legacy” vertical software systems by employing open standards thus enabling new capabilities from existing legacy and propriety systems. GLS standardizes and simplifies the shipment process through sophisticated business applications that enhance reliability and dependability of logistics networks worldwide. It also provides a common open

platform for financial, insurance, RFID and GPS tracking provider services thus maximizing their customers’ value proposition while expanding their market opportunity.

## HAS THE GLS BEEN BUILT UPON TANGIBLE RESULTS?

YES. The GLS has in fact been built upon previous tangible results!

The Secure Cargo Anti -Terrorism Coalition (SCAC) delivered successful results of GLS version 2.4 of logistics efficiencies and enhanced cargo security (“Proven in Practice”) through Phase One of the initiative. Phase One involved Ford Motor Company, Magna International, TNT Logistics, Oracle and Bell Canada- Emergis, among others, over the third largest border entryway into the United States.

Acknowledgment has been received from the world’s most prominent technology, insurance, and finance firms, as well as respected government leaders, non governmental organizations, academicians and their institutions, who have affirmed the benefits delivered by GLS and the GCEL initiative and their readiness to participate in GCEL’s global initiative. Further information regarding the GLS is included in the accompanying Technical Materials and as further described through the following questions.

## WHAT ARE THE GLS BENEFITS?

The benefits delivered by GLS, at no cost to the end users, were demonstrated as a result of a live pilot project and a cost study recently conducted for global public and private organizations.

It’s worth mentioning that the GLS users can generally be divided into two extreme categories: a competent organization in a competitive environment and an incompetent organization in a monopolistic environment. Both categories will use the GLS and receive training at no cost achieving maximum benefits with less effort.

In addition, the transparency of GLS will easily identify weak links in the integrated business processes across the globe, providing visibility to key stakeholders from front line managers to policy makers for scalable accountability.

Recognizing the multitude of benefits that will be delivered to various participant categories, the following represents a few benefits in each category. In short, the main benefit is that ALL BENEFIT.

These benefits can be segregated through (4) main categories:

- **Our World**
- **System Deployers**
- **Public Organization**
- **Private Sector**

# Soft-Infrastructure Overview



## Our World

- Reduce landed import and export costs from a world average of 11% to 6%, resulting in USD 691 billion in annual savings and 15% cost of operation
- Secure our borders and flow of trade against cargo terrorism
- Combined expertise with youthful labor forces thus creating millions of jobs in developed and developing countries triggering a new rapid global market expansion
- Present a six trillion dollar market opportunity to the world's finance, technology and insurance industries

## System Deployers

### Financial Gateways

- Provides seamless integration into the dynamic market for global trade financial activities. This represents a \$5 trillion market opportunity by 2020.
- Allows real-time and dynamic monitoring of transactions, minimizing fraud and reducing compliance reporting efforts. It will also permit dynamic exception reporting, enhanced risk analysis, and ensure better data validation and consistency.
- Links financial institutions to the world's top technology deployers through a global public-private initiative. Together they provide the foundation for a new "stimulus" to the global economy, benefiting everyone.

### Insurance Gateways

- Provides insurers with a seamless integration into the global trade insurance market, projected to be a \$400 billion market by 2020.
- Delivers the technology capability to provide door-to-door competitive insurance premiums by reducing

administrative costs while improving customer service and the speed of response to customer concerns.

- Provides the capability to analyze in a fully dynamic way historic and real-time data about customers and everyone involved in the shipment process. This enables proper risk assessments and accurate premium evaluations.

## Technology Gateways

- Gives IT companies a new business model, with a market opportunity in excess of \$177 billion by 2020.
- Increases the return on investment for their current customer base by enhancing the efficiencies of current "vertical" logistics systems.
- Provides the capacity to add additional features to current customers' in-house vertical systems while also enabling new vertical systems that maximize the success of market expansion.

## Tracking System Providers & Data System Integrators

- Gives tracking and data system business access to a market opportunity projected to be worth \$116 billion by 2020.
- Reduces their operation costs while enhancing the value proposition to their present and future customer base.
- Gives them new capacity to expand their global reach.

*Please consider Page # 10 for detail benefits for Public Organization and Private Sector*



# Benefits Foundation



The global logistics industry needs efficiency and compatibility among all participants in the flow of a shipment. Information technology provides the necessary information “bridge” to achieve these results. Those with the capability of providing efficiency and compatibility, such as large IT logistics companies, have focused on specific corporations in the industry who can afford the high cost of implementation. These efforts have resulted in robust, yet highly localized, vertical systems customized for large organizations. However, corporations have quickly approached the point of diminishing returns whereby further expenditures do not meet the company’s minimum return threshold. This is due to vertical investments in an attempt to achieve optimum horizontal efficiencies.

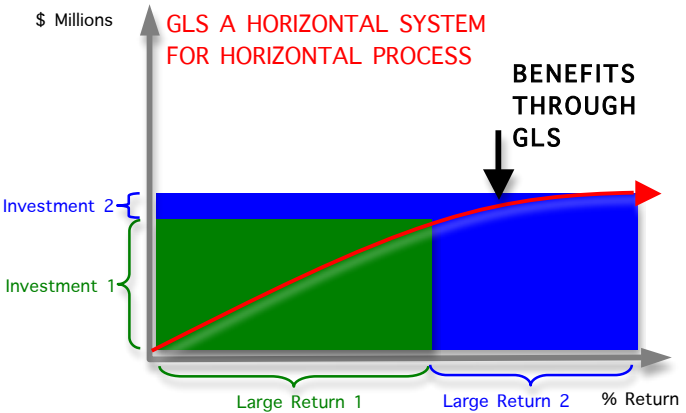
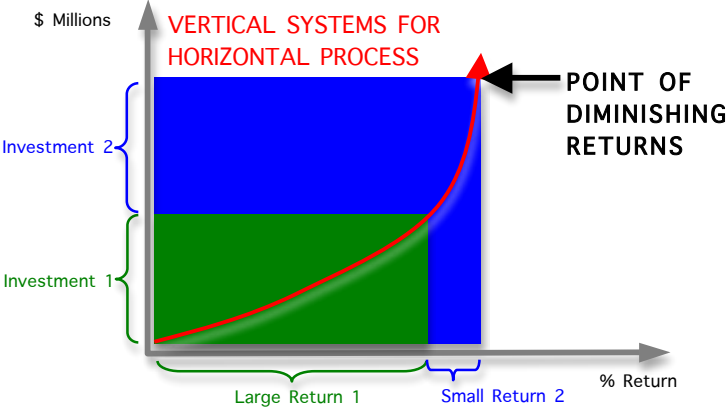
Furthermore, in the flow of shipments, there are still organizations managing important events of the shipment

process and are operating without a system. GLS, the new dimension in global shipping, provides the tool sets necessary to allow new levels of efficiency and cargo security to every participant in the shipping process, leveraging investments already made by organizations who are part of the GLI as illustrated below.

GLS technology standardizes and simplifies shipment processes through sophisticated business applications that enhance the effectiveness and reliability of logistics networks worldwide. We recognize Logistics Service Providers and Trade partners can generally be divided into two extreme categories:

- Competent organizations in a competitive environment GLS will provide;
  - Economic benefits
  - Enhanced efficiency
  - Global cargo security compliance
- Incompetent organizations in a monopolistic environment GLS will provide:
  - All the above
  - Education
  - Monitoring service obligations thus achieving the required level of transparency that will easily identify weak links in the shipment flow providing visibility to key stakeholders from front line managers to policy makers for accountability

GCEL invites you to first appreciate the new levels of efficiency, economic benefits and cargo security compliance that all of your logistics and trading partners will receive at no cost. Since GLS is beneficial to all entities involved, GLS’ benefits to you are enhanced and insured. In short, your main benefit is that ALL benefit.



# Standards Used

remains: How do we overcome this highly fragmented and inefficient logistics pipeline process?

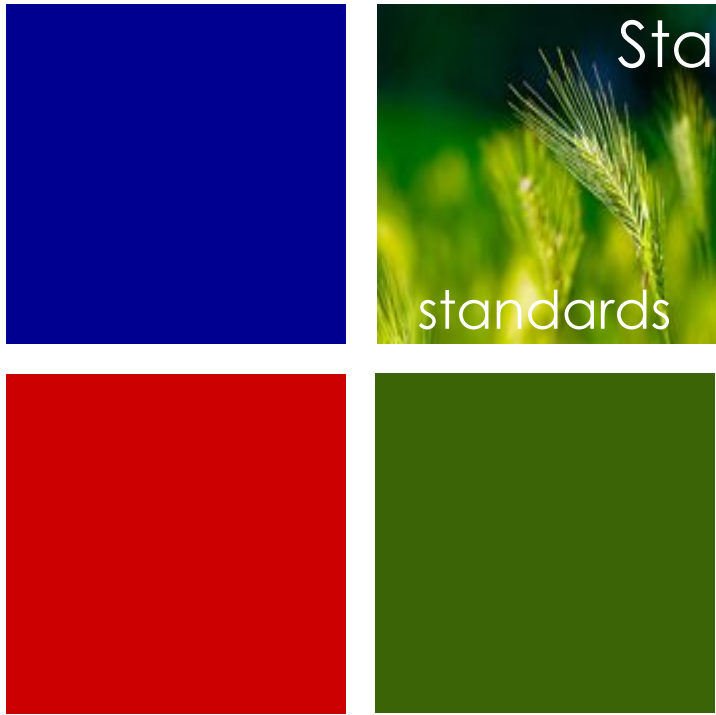
The World Bank's 2007 Logistics Performance Efficiency Index uses 7 main elements to indicate & rank efficiency of trade and logistics in the world. As illustrated in Fig # 1, these 7 indicators are:

1. Customs Clearance
2. Infrastructure & IT
3. International Shipping
4. Competence
5. Track & Visibility
6. Domestic Logistics Cost
7. Time Reaching Destination

For comparison purposes this chart was created to show the performance Index of 4 different countries from four different regions of the world, including Singapore, which is ranked number one in the world. While these elements used by the World Bank are good indicators, some of these elements are beyond the control or jurisdiction of these countries: e.g. the speed by which a shipment reaches final destination. Therefore, GCEL has extracted from these elements 6 comprehensive logistics efficiency metrics and has provided the tools to improve upon. These 6 elements as illustrated in Fig. #2 are:

1. Integration
2. E-documentation
3. Tracking and Visibility
4. Competence
5. Processes
6. Cargo security

As one example, once the efficiency of these elements is optimized, businesses will be able to attract more volume resulting in greater carrier frequency thus improving the timeliness for a shipment to reach its destination.



GCEL uses world-class standards and benchmarks in measuring the benefits that will be achieved through the use of GLS. The Asia Pacific Economic Cooperation's Business Advisory Council report has highlighted the logistics complexities. Through its report, APEC has analyzed the average international trade transaction and reflected the following facts:

- There are 27-30 different parties involved in the supply chain pipeline process, and
- 40 documents are required, with
- 200 data elements where 30% of which are repeated at least 30 times
- And, on top of all this, there is re-keying of 60-70% of all data at least once.

This is quite revealing as to the inefficiencies in the movement of a shipment. Therefore the same question

## WORLD BANK'S 2007 LOGISTICS PERFORMANCE EFFICIENCY INDEX

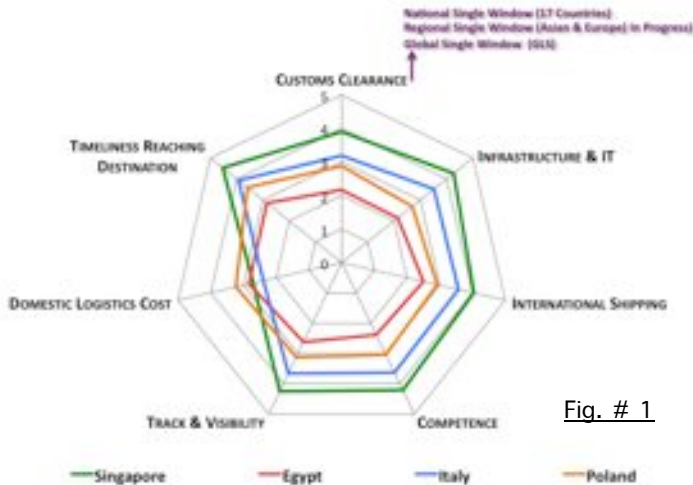


Fig. # 1

## GCEL SHIPMENT EFFICIENCY ANALYSIS

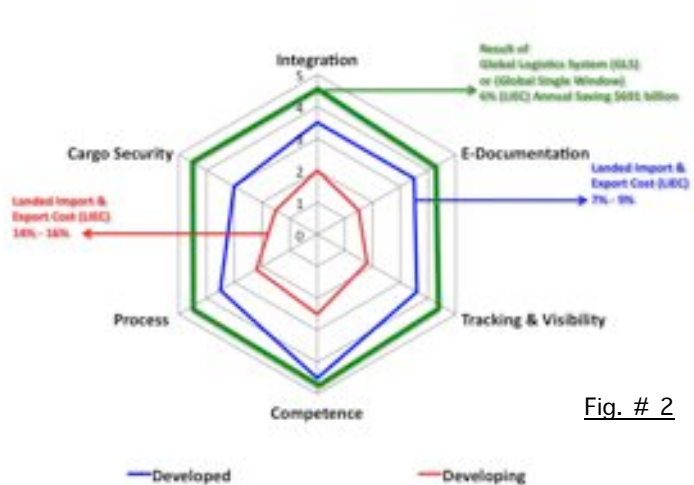


Fig. # 2

# Standards Used

logistics pipelines that businesses are desperately in need for to achieve their objectives.

It is worth noting, that in recognition of its GLS capability and deployment strategy, GCEL was recently awarded in Singapore the Excellence Award for Innovation in Integrated Global Logistics Solution. Singapore ranked # 1 in its trade efficiency is inviting its businesses to join GCEL in order to enhance further its efficiency as a leading global port and trading partner.

In fact, the Asia Pacific Economic Bureau has stated “if we can only transform every participant in the Supply Chain Pipeline from manual documentation to e-documentation we can reduce the landed import/export costs by 15%”. In addition, with the improvement of only one element in the World Bank’s Logistics Performance Index through the use of Single Window programs, the whole world recognizes the immense saving opportunities achieved when reducing even just the cost of goods clearance; Today there are many single window programs for customs clearance in existence. Presently, there are 17 national single window initiatives developed by various nations and there are 2 regional single windows namely the European and the ASEAN Single Window, of which the latter is to be in a more advanced stage. However, there isn't one Single GLOBAL window - until today! Just imagine the savings that can be achieved upon delivering improvements on the other 5 elements within the GCEL Index? As stated by the International Trade Center in Cambodia “GCEL delivers on all 6 key elements and is the Global Single Window ++”

Therefore, GCEL differentiates itself by being the first Global Single Window ++ delivered through the GLS. For further information about Global Single Window please consider the “Global Single Window ++” document from the GCEL E-library that you can find on GCEL’s website at [www.gcel.net](http://www.gcel.net).

Maximization of the efficiency of GCEL’s six elements from shelf to shelf will result in a significant reduction in countries’ landed import and export costs. Therefore, let’s examine the current situation of developed and developing countries as reflected in the Kiviate Fig. # 2.











You will note in the Fig. #1 that the developed countries in blue show that landed import and export costs are averaging 7 to 9% while developing countries in red are averaging 14-16%.











The tools provided through GLS will allow each end user to increase its logistics performance thus enhancing each shipment efficiency indicator resulting in reducing the landed import and export costs down to the previous developed country average of 6% as seen in the green line in Fig. 2. This will lead to global annual savings of up to \$691 billion. With these savings, we will have the efficient and secure











# Features & Process











The following represents the features that will be provided to public and private organizations that are part of the global trade, at no cost to the end user. In addition to the average 30% reduction of the Landed Import And Export Cost, the following features will help to reduce operation costs by up to 15%.











Thanks to the UDE strategy in creating a new era of horizontal validated data, the GLS version 3.0 will present 175 features. We have divided these features per End User category and department.

Global Logistics Industry Lane Participants										
Implemented: Phase One										
To Be Implemented: Phase Two / lane 1										
To Be Implemented: Phase Two / lane 2,3,4										
	OPERATION									
Dynamically prompts service providers to meet contractual obligations	X		X	X						
Automates global shipment data requirements based on contract, industry, or country	X	X	X	X	X	X	X	X	X	X
Automates interactions between the shipper, carriers, and LSPs, resulting in less work (fewer keystrokes), increased accuracy, and reduced errors	X	X	X	X	X	X	X	X	X	
Automates the notification of deviations, issues, and risks to the appropriate participants in the shipment flow so that the appropriate action can be taken	X		X	X	X			X		X
Automatically escalates requests for electronic booking confirmations (EBC) when mandated responses to an electronic booking requests (EBR) are not received in a timely fashion	X	X	X	X	X				X	
Automatically generates and distributes Invoices in response to electronic notifications of final delivery, thus triggering the invoicing and providing timely payment cycles	X	X	X	X	X	X	X	X	X	
Combines shipment events with GPS tracking of conveyance, resulting in optimum tracking with minimal cost	X	X	X	X						
Coordinates, manages, and tracks the contracted activity obligations of trading partners and LSPs through an electronic logistics activity matrix	X	X	X	X					X	X
Decreases storage and handling efforts by selecting the local or global carrier that can provide the most effective service, reduced handling, and fastest delivery time	X	X	X	X						
Decreases the administration effort associated with shipment preparation, tracking, payment, and process management	X	X	X	X	X	X	X	X	X	
Deliver direct access of all of the carrier services to shippers globally	X	X	X	X						
Delivers real-time quote responses to the customer	X	X	X	X					X	
Develops shipping forms and documents in a fraction of the time previously required	X	X	X	X	X	X	X	X	X	X
Direct Accesses to logistics services worldwide, i.e. warehousing services, custom brokerage, insurance, and finance	X	X	X	X	X					
Door-to-door global personalized service provided by the selected carrier's agents	X	X	X	X	X				X	
Dramatically reduces the space requirements for the on-site storage of paper documents	X	X	X	X	X	X	X	X	X	
Dynamically monitors each participant in the shipping chain's performance based upon contract vs. forecast vs. actual service, allowing shippers to compare and evaluate LSP services	X	X	X	X					X	
Eases operations work efforts with fewer keystrokes, the reduction of errors, data validation	X	X	X	X	X	X	X	X	X	
Eliminates obsolescence and scrap by employing JIT logistics to minimize inventories	X		X	X						
Enables a more accurate projection of equipment inventories based on the forecasting of booking needs and historical booking trends	X								X	
Enables potential customers to dynamically self-quote from anywhere in the world	X	X	X	X					X	
Enables proactive contingency planning to anticipate and respond to shipment flow disruption or delay	X	X	X	X					X	X
Enables the auto-scheduling of contract shipments with Carriers based upon in-plant inventory levels to optimize the logistics processes, increase dependability, and minimize inventory levels	X		X	X					X	
Enables the processing of a greater number of shipments without increasing staff	X	X	X	X	X	X	X	X	X	
Enables the rerouting of shipments around problem areas caused by shutdowns, strikes or bottlenecks	X	X	X	X				X	X	X
Enables the standardization and distribution of shipping documents to all parties involved in the shipment flow, improving visibility and allowing better control and planning	X		X	X					X	
Free E-mail	X	X	X	X	X	X	X	X	X	

Global Logistics Industry Lane Participants										
Implemented: Phase One To Be Implemented: Phase Two / lane 1	Supply Chain Shipper	Private Market Shipper	3PL	Freight Forwarder	Custom Broker	Surveyor	Stevedoring	Point of Entry	Carrier	Governments
To Be Implemented: Phase Two / lane 2,3,4 Generates automatic booking confirmations when business rules set by the carriers allow it, and when the security risk assessment based on the global data for the shipper has been verified	X	X	X	X					X	
Gives the carrier the ability to post vessel open space to larger geographic areas to maximize vessel capacity utilization									X	
Global cargo security compliance without additional efforts from GLI participants	X	X	X	X	X	X	X	X	X	X
Global shipment tracking and logistics service provider performance monitoring	X	X	X	X				X	X	X
Provides shippers the tools to reach JIT logistics, thus reduce order-to-delivery time and reach JIT inventory levels.	X		X							
Improves LSPs performance based on accountabilities that are inherent in monitoring, recording, and scoring performance	X	X	X						X	
Increases the frequency of deliveries by leveraging multiple contracted carriers service	X		X							
Increases the reliability and dependability of the supply chain allowing the ability to expand the supply base to more distant locations	X		X							
Initiates automated rescheduling of all parties downstream in the shipment flow for re-routed or delayed cargo movement	X	X	X	X	X	X	X	X	X	X
Leverages dynamically, multi-contracted service itineraries against Kanban inventory levels	X		X						X	
Links directly to equipment control systems to update equipment movements captured directly from shipment events	X							X	X	
Provides the tools to LSPs to manage their private markets worldwide without the necessity of the extensive use of personnel	X	X	X	X	X	X	X	X	X	
Minimizes manual transactions and maximizes the ease of communication with all parties involved in the shipment flow	X	X	X	X	X	X	X	X	X	X
Minimizes personnel interaction of manual faxing, e-mailing, postal mail, or phone calls	X	X	X	X	X	X	X	X	X	
Minimizes the introduction of potential errors through the use of redundant data sources	X	X	X	X	X	X	X	X	X	X
Monitors data received worldwide to flag deviations or data anomalies on equipment cycle events	X		X						X	X
Optimizes efficiency of current facilities, reducing the need for facility expansion while providing increased thru-put, thus avoiding congestion and backups	X		X					X	X	
Optimizes shipment flow movement, thus minimizing storage, handling, and inventory carrying costs	X	X	X					X	X	
Optimizes efficiency with minimal physical infrastructure investment, through the use of an advanced information technology readying our logistics infrastructure for an estimated freight volume increase of 460% by the year 2020	X		X					X	X	X
Optimizes JIT inventories by integrating inventory levels with JIT logistics processes	X		X	X					X	
Optimizes resource allocations by delivering timely information regarding shipment movements to the responsible participants	X	X	X	X	X	X	X	X	X	
Populates data fields into required documents for import/export, pre-shipment manifests, and cargo security submission as necessary	X	X	X	X	X	X	X	X	X	X
Promotes paperless offices, reducing storage requirements and the potential of lost files while improving on-line data access	X		X	X	X	X	X	X	X	
Prevents errors from being inserted into the system as a result of the reentry of data, the use of selection lists, and the verification of information entry (i.e. eliminate typos)	X	X	X	X	X	X	X	X	X	X
Promotes notification of transit issues and problems so that the Shipper can re-distribute current inventory, re-direct shipment location, or authorize expedited shipment services	X		X	X					X	
Provides access to a simplified system process for on-line quotes, booking and B/L instructions etc.	X	X	X	X	X				X	
Provides advanced shipment visibility to improve planning for the shipment flow and for shipment customs clearance at POL and POD	X	X	X	X	X	X	X	X	X	X
Provides global information about: weather forecast, roads distance, logistics, and economic information etc.	X	X	X	X	X	X	X	X	X	

Global Logistics Industry Lane Participants										
<b>Implemented: Phase One</b> <b>To Be Implemented: Phase Two / lane 1</b>	Supply Chain Shipper	Private Market Shipper	3PL	Freight Forwarder	Custom Broker	Surveyor	Stevedoring	Point of Entry	Carrier	Governments
<b>To Be Implemented: Phase Two / lane 2,3,4</b> Provides a lane manager the fast means to build a shipping activity structure for a single lane	X		X	X					X	
Provides a toolset to prompt and manage activities based on contractual obligations (UTC)	X	X	X	X					X	
Provides global, automated feedback for arrival, late, misdirected, or cancelled shipments	X	X	X	X		X	X	X	X	
Provides notifications, in advance, of equipment chassis damage so that repairs can be expedited	X		X	X				X	X	
Provides real-time reporting tools that allow Shippers to dynamically adjust their safety stock based on his LSP's performance	X	X	X	X					X	
Provides robust electronic shelf-to-shelf logistics lane management toolsets to quickly plan and coordinate the activities of all enterprises involved in the shipment flow	X		X	X					X	
Provides tools that can be universally used jointly by Shippers, ports and LSPs globally to standardize and optimize the shipment logistic processes	X	X	X	X	X	X	X	X	X	X
Provides a toolset to enhance customer service by identifying and correcting problems before a significant impact can occur	X	X	X	X	X	X	X	X	X	
Reduces port storage and handling by proactively scheduling the next activities in the cargo's movement, thus reducing the time required to stay at the port for customs clearance	X	X	X	X				X	X	
Supplies a means to visualize how to move product to marketplaces in a more effective, faster, reliable, and dependable manner	X	X	X	X					X	X
Supports current supply chain partners, enabling the expansion of new supply chain partners by speeding their integration at lower costs	X	X	X	X	X	X	X	X	X	X
Provides shelf-to-shelf shipment tracking based on minimal technology requirement	X	X	X	X	X	X	X	X	X	X
Tools that can be used universally in multi language by shippers, ports, LSPs and security agencies globally	X	X	X	X	X	X	X	X	X	X
Transforms written contracts into performance metrics and financial control	X	X	X	X					X	
Validates data submitted by any party from multiple data sources prior to loading	X	X	X	X	X	X	X	X	X	X
<b>TECHNOLOGY</b>										
Builds upon global logistics industry and Information Technology standards	X		X	X	X	X	X	X	X	X
Customizes the system web interface	X	X	X	X	X	X	X	X	X	
Data providers will retain control over their data, deciding for themselves when and how their data should be shared	X	X	X	X	X	X	X	X	X	X
Data will be secured and kept confidential with the best technology available in the industry	X	X	X	X	X	X	X	X	X	X
Eases integration of LSPs contracted by carriers	X		X					X	X	X
Increases communication and decision making by simplifying the distribution of information	X		X	X	X	X	X	X	X	X
Increases information security by providing rules-based information access and sharing	X		X	X	X	X	X	X	X	X
Maximizes data storage and access	X	X	X	X	X	X	X	X	X	X
Maximizes manpower utilization by reducing the manual efforts associated with shipment processing preparation, shipment tracking, and delivery movements	X		X	X	X	X	X	X	X	
Minimal work effort will be required by shipment participants to meet the requirements of global cargo security	X	X	X	X	X	X	X	X	X	X
Minimizes the need for internal development of additional applications to maximize the efficiency and security of the shipment flow	X		X	X	X	X	X	X	X	
Provides an open platform allowing multiple tracking technology providers to plug-in, allowing the tracking of a single container crossing multiple technologies	X	X	X	X				X	X	X

Global Logistics Industry Lane Participants										
<b>Implemented: Phase One</b> <b>To Be Implemented: Phase Two / lane 1</b>	Supply Chain Shipper	Private Market Shipper	3PL	Freight Forwarder	Custom Broker	Surveyor	Stevedoring	Point of Entry	Carrier	Governments
<b>To Be Implemented: Phase Two / lane 2,3,4</b> Provides an open platform for tracking methodologies to affordably interface with existing and future technologies	X		X					X	X	X
Provides a scalable solution capable of handling the global data communication and information storage and retrieval requirements of various size organizations	X		X	X	X	X	X	X	X	X
Provides rules-based login, password authentication, and public key infrastructure (PKI) used to provide access control and guaranteed data confidentiality	X	X	X	X	X	X	X	X	X	X
Provides the platform for technology independent solutions capable of incorporating any automatic identification technology, (AID) including RFID, GPS, and others	X	X	X	X				X	X	X
Reduces the hardware, network, and integration costs related to integration with trade partners and LSPs	X	X	X	X	X	X	X	X	X	X
Removes the requirements for point-to-point integration of EDI and other transmitted data, thus providing point-to-world integration	X	X	X	X	X	X	X	X	X	X
Simplifies logins, provides access to tools to improve business operations, and reduces requirements for additional software licensing to optimize the shipment flow	X	X	X	X	X	X	X	X	X	X
Speeds the integration of logistics partners such as agents or stevedores, and facilitates integration of new customers, expanding into new markets	X	X	X	X	X	X	X	X	X	
Supports a simple, single login portal that maximizes all of the functions and activities of cargo movement	X	X	X	X	X	X	X	X	X	
<b>FINANCE</b>										
Tracks freight costs by individual parts or fully assembled components globally so that more accurate accounting can lead to more appropriate cost control	X	X	X	X						
Captures costs associated with each individual activity in a shipment cycle	X	X	X	X					X	
Consolidates billing to reduce customer workloads and contributes to the rapid turnaround of invoices and payments	X	X	X	X	X	X	X	X	X	
Contributes to the lowering of operating costs for private companies, thereby retaining and/or increasing jobs	X	X	X	X	X	X	X	X	X	
Enables electronic payments from the Bank to be distributed on behalf of the Shippers on scheduled dates	X	X	X	X	X	X	X	X	X	
Enables automated payment to Shipper's LSP through a Regional Banking Consortium (Bank) on behalf of the Shipper	X	X	X	X	X	X	X	X	X	
Equipment movement visibility so that storage, detention and demurrage costs can be documented automatically, calculated and sent to the carrier's accounts receivable	X	X	X	X				X		
Final delivery of a shipment triggers invoice and payment processes	X	X	X	X	X	X	X	X	X	
Provides tools for consolidated billing to reduce customer workloads and contribute to verified, rapid turnaround of invoices and payments	X		X	X	X	X	X	X	X	
Increases savings through shorter transit and faster delivery times which help to reduce financing costs and lower opportunity for damage and theft	X	X	X	X	X	X	X	X	X	
Integrates with financial and insurance partners to provide value-added services	X	X	X	X	X	X	X	X	X	
Makes LSP services more attractive to their customers as a result of access to multiple financial services	X	X	X	X	X	X	X	X	X	
Makes Shipper product more attractive to their customers as a result of access to multiple financial services	X	X								
Maximizes control over the global logistics bill	X	X	X	X	X					
Provides a holistic approach that responds to economic demands and reduces landed import, export, and distribution costs	X	X	X	X	X	X	X	X	X	X
Provides historical data to assist in future planning and audit reviews	X		X	X				X	X	
The verification and electronic notification of completed jobs are automatically delivered to the accounts payable department of the customer and/or its financial partners	X	X	X	X	X	X	X	X	X	
Transmits dynamic notifications of service activity completion with required details to financial departments for processing	X	X	X	X	X	X	X	X	X	

Global Logistics Industry Lane Participants										
Implemented: Phase One	Supply Chain Shipper	Private Market Shipper	3PL	Freight Forwarder	Custom Broker	Surveyor	Stevedoring	Point of Entry	Carrier	Governments
To Be Implemented: Phase Two / lane 1										
To Be Implemented: Phase Two / lane 2,3,4										
<b>Cargo Security</b>										
Provides the ability to proactively analyze shipment deviations, mismatches, or other anomalies to flag a suspicious shipments										X
Assesses to the shipper / customer security risks prior to business engagement	X	X	X	X	X	X	X	X	X	X
Avoids unnecessary costs to comply with current and future cargo security initiatives in the U.S. and Internationally	X	X	X	X	X	X	X	X	X	X
Based on preset flagging criteria, providing the ability to send port-of-loading authority a dynamic checklist for flagged shipments for inspection								X	X	X
Cargo security compliance on a global basis, thus minimizing the possibility of cargo flow disruption, enabling faster movement through Customs and Border crossings	X	X	X	X	X		X	X	X	X
Collects and coordinates the data necessary to meet national and international cargo security initiative mandates	X	X	X	X	X	X	X	X	X	X
Data collected will not solely depend on the integrity or capability of a particular data source in point-of-origin country. Rather, it will be collected as part of the shipment process and confirmed through multiple-party transactions										X
Despite differences, reliable data will be provided from any point-of-origin country										X
Dynamic monitoring of shipment movement until final warehouse delivery. An automatic alert will be sent to local authority if the shipment deviates from its projected route										X
Eliminates extra effort needed by the carrier or his agent on the shipment per shipment basis, to be in compliance with cargo security mandates									X	
Enables the complete review of cargo movements by customs officials to identify movement deviations and potential issues										X
Expedites faster Customs processing by ensuring security information is accurate, complete, formatted, and delivered in the most effective and efficient manner	X	X	X	X				X	X	X
Global Advanced Dynamic Data Visibility (GADDV) will be confirmed through data events in the individual shipments, e.g. 14 days in advance through quote, then confirmed through Booking, then Dispatch, B/L instruction, B/L, and Shipment Manifest, etc., until the shipment reaches its final destination										X
Global flagging capability with minimal resources, achieving maximum control while resolving sovereignty issues with foreign countries										X
Provides shipper with cargo security compliance on a global basis, thus minimizing the possibility of cargo flow disruption	X	X	X	X				X	X	X
Enhances the flagging, targeting and isolation of high risk cargo, reducing random inspections										X
Provides a global Emergency Transportation Flow Management that directs and redirects shipment traffic to keep commerce flowing and enhance capacity utilization at all Points-of-Entry	X	X	X	X	X	X	X	X	X	X
Provides data access to global cargo movement activities between all countries										X
Provides Global Advanced Dynamic Data Visibility (GADDV). Data will be dynamically provided up to a year in advance on all air, sea, and land shipments										X
Provides mobile and fixed-based virtual-fencing for air, land and sea, with the ability to identify one suspicious shipment among thousands of shipments, among hundreds of vessels	X							X	X	X
Provides real-time data from the private sector to be used as a cross-check of data received from foreign official sources, thus validating data integrity and consistency										X
Provides the ability to target shipments for inspection at border crossings based on the legitimacy of the shipment and enterprise, through the real-time data access of global cargo movement activities										X
Provides the toolset to control who to share the data with and what type of data to share	X	X	X	X	X	X	X	X	X	X
Provides a centralized management of the business and security data requirements for import and export documents required by governments worldwide	X	X	X	X	X	X	X	X	X	X
Provides early alerts for incident or anomalies, and access to the information and tools necessary for a proper resolution										X
Provides history information regarding every shipment participant to determine the shipper's commercial legitimacy before accepting his shipment for booking										X

Global Logistics Industry Lane Participants										
Implemented: Phase One	Supply Chain Shipper	Private Market Shipper	3PL	Freight Forwarder	Custom Broker	Surveyor	Stevedoring	Point of Entry	Carrier	Governments
To Be Implemented: Phase Two / lane 1										
To Be Implemented: Phase Two / lane 2,3,4										
Secures LSPs' and trading partners' own shipment activities, since their activities legitimacy can effect the Shipper's supply chain	X	X	X	X	X	X	X	X	X	X
Standardized processes (USR – universal shipper ratings) for rating shippers using verified, and continuously updated, global data about shippers' activities and their commercial legitimacy										X
The ability to provide instant global data shipment activities up to five years later										X
<b>LEGAL</b>										
Claims - Enhanced Claims Investigation	X	X	X	X	X	X	X	X	X	X
Claims - Standardized Electronic Claims Process	X	X	X	X	X	X	X	X	X	
Enables the identification of responsible parties for damage claims, and identifies claims trends, fraud, and underperforming LSPs by reviewing the prior histories of all shipping participants	X	X	X	X	X	X	X	X	X	X
Enables all shipment participants to report equipment damage as soon as it is discovered	X	X	X	X	X	X	X	X	X	X
Enhances claims investigations with complete shipment and transaction histories, providing complete tracking of shipment custodies and the activity histories	X	X	X	X					X	
Facilitates data collection and claims processing from logistics partners	X	X	X	X	X	X	X	X	X	
Helps reduce pollution and gas consumption, while lowering traffic congestion from and to points of entry, thus contributing to a better environment								X		X
Identifies deviations between contract obligations vs. actual for cases of damages	X	X	X							
Identifies claims trends, fraud, and underperforming LSPs by reviewing the prior histories of all shipping participants	X	X	X						X	X
Provides a standardized process that facilitates the claims process	X	X	X	X	X	X	X	X	X	
Reduces work efforts for processing claims by eliminating redundant data entry, fewer keystrokes, improving accuracy, reducing errors and providing faster process	X	X	X	X				X	X	

# Benefits Results

## General

The purpose of this section is to highlight some of the benefits that GLS End Users will achieve. The savings and economic benefits in this document are provided through a cost study scenario for simulated organizations as well as through the findings from the Phase I demonstration over one the busiest trade corridors between Canada and the United States. The power of the GLS is its ability to link all participants in the flow of a shipment into a seamless process that provides savings and benefits to all. These savings and benefits will become a powerful tool to attract more participants to the network.

We have selected a few GLS's features and applied them to the operations of two trade participant categories i.e. Shippers and Carriers. Furthermore, we have extrapolated that the remaining trade participants' categories will minimum recognizes 15% operation cost savings. Please consider that only a few features have been contemplated in the following cost study section:



Organization	Shippers	Carriers	LSP	Points of Entry	Governments
Percent Savings	21%	23%	15%	15%	15%
Based On	Operation Cost *	Operation Cost *	Operation Cost	Operation Cost	Operation Cost
Cost Participation	No Cost	No Cost	No Cost	No Cost	No Cost

\* The percent savings includes both the earnings contributions from market increases as well as cost savings.

Shipper	Section	Cost Savings		Revenue Opportunity
		Recurring	One time	
I.	Integration of trading partners		\$ 220,000	
II.	Process standardization and simplification	\$ 1,216,940		
III.	Co-coordinated logistics activity matrix	\$ 553,111	\$ 1,377,589	
IV.	Lane management tools sets	\$ 691,200		\$ 3,500,000
V.	JIT inventory levels	\$ 370,000	\$ 1,850,000	
VI.	Cargo security mandates	\$ 120,800	\$ 900,000	
VII.	Monitor and track shipments	\$ 146,000	\$ 208,500	
VIII.	Early alerts	\$ 1,781,499		
IX.	Monitor contract obligations			\$13,462,604
X.	Control over global logistics bill	\$ 151,613		
XI.	Data to assist in planning and audit reviews	\$ 73,000		
XII.	Integrate with financial & insurance partners	\$ 693,472	\$ 4,077,083	

<b>Total Savings</b>	<b>\$ 5,797,635</b>	<b>\$ 8,633,172</b>	<b>\$16,962,604</b>
<b>Current Net Profit/Sales</b>	<b>\$ 27,500,000</b>		<b>\$500,000,000</b>
<b>% Savings/Increase</b>	<b>21.08%</b>		<b>3.39%</b>

While no two organizations are exactly alike they can all achieve similar benefits, since GLS employs non-intrusive ease of integration enabling new capabilities from existing in house legacy and proprietary systems.

# Benefits Results

## Revenue and Savings Summary

Using our Sample Ocean Carrier, the following table summarizes the cost savings and revenue opportunities available to carriers. The numbers and percentages shown do not represent total savings or total revenue opportunities, but only a sampling of the total value propositions. We invite readers to review the details to determine how a few GLS features will increase profitability and customer satisfaction.

The savings and benefits represented are not unique to the ocean carrier. All modes of transportation will realize similar results. Also, not shown, are the indirect benefits carrier organizations will receive as other business partners in the supply chain employ the GLS.



Carrier		Section		
		Annual Savings (S) / Revenue (R)		
		(000)	Percent	Code
I. Technology				
	Integration <sup>1</sup>	\$ 220	88%	S
II. Sales				
	Organizing the Private Market	\$ 4,890	8%	R
	Door-to-door Service	\$ 6,020	4%	R
III. Operations				
	Interfacing with Logistics Partners	\$ 1,617	78%	S
	Problem Avoidance	\$ 553	67%	S
IV. Equipment Control		\$ 2,672	18%	S
V. Finance		\$ 692	1%	R
VI. Claims		\$ 586	32%	S
VII. Security		\$ 1,250	10%	S
<b>Total Revenue Increase (R)</b>		<b>\$ 11,602</b>	<b>6%</b>	
<b>Total Annual Cost Savings (S) <sup>2</sup></b>		<b>\$ 6,678</b>	<b>23%</b>	

### Notes:

1. Represents a one-time savings and is not included in the totals
2. The cost savings percentage represents the weighted average of the examples indicated above. The percent reduction in total variable costs will vary depending upon each company's level of automation/integration, and their fixed/variable relationship.

### Scenario for the Benefit Study

In an effort to illustrate the commercial and economic benefits that can be realized from participating in the Global Logistics System (GLS), the following scenario has been developed. The company background information presented in this section is used to detail and highlight the advantages of the GLS solution throughout each section of the document. For the purpose of clarity, the benefits derived by a Shipper are broken down by function and highlight the departments within a company that are affected by benefits associated with that function. These benefits are translated into increased service delivery, business cost savings, and the ability to increase revenue.

While this benefit study represents results gained and their associated value, it is important to recognize that the GLS provides both direct and indirect benefits. One of GLS's core principles is that for any solution to be adopted globally, it must provide commercial benefits and security compliance for every enterprise involved in the flow of the shipment. Therefore, once you, the Shipper, are part of the GLS solution, additional benefits will be extended to your customers and logistic partners. This *cascading benefit effect* by itself presents significant market increases and better services for your customers. This feature alone allows you to reach beyond the typical boundaries of good service and provides value added services to your customers and logistics partners.

### Sample Shipper Profile

GLS has created a hypothetical Shipper to highlight the efficiencies, benefits, and cost savings associated with its solution. The following Shipper profile is provided as a reference and a benchmark. This information can be used by reviewing Shippers to help them determine the affect that the GLS solution will have on their organizations. The actual results obtained by individual Shippers will vary based upon the size of their organizations, their current processes, and their ability to integrate this solution and include their partners.

The hypothetical Shipper used throughout this document generates annual sales of \$500 million of which \$175 million represents international shipments. In addition, the Shipper purchases \$45 million per year from foreign sources. Its logistics management resources handle nearly 16,000 international containers per year with an annual domestic and international freight bill of approximately \$19 million.

The following table provides a detailed profile of our sample Shipper. This information is used throughout this document to calculate expenses, costs, and potential savings. Additional information, when appropriate, is provided to clarify or support a specific section or category. This additional information is also presented in a tabular form to increase and promote understanding and review.

### Shipper Profile for the Benefit Study

M P P P P P P P	Annual Sales---Domestic	\$ 325,000,000
	---International	\$ 175,000,000
	Foreign Purchases	\$ 45,000,000
	International Inventory---Raw	\$ 2,180,000
	---Finished	\$ 9,700,000
	Net income	\$ 27,500,000
	Cost of Capital	20%

O P P P	Annual International Containers ---- Shipped (\$18,519 value ea.)	13,388
	Annual International Containers ---- Imported (\$16,000 value ea.)	2,813
C O P P	Annual Expedite Costs	\$ 1,750,000
	Annual Security Costs	\$ 1,000,000
C O P P P	Lease Cost---Manufacturing (1,450,000 sq. ft.)	\$ 7,795,000
	Lease Cost---Warehouse (435,000 sq. ft.)	\$ 2,400,000
	Annual Freight Bill---Outbound (27,000 containers)	\$ 13,500,000
	Annual Freight Bill ---Inbound (11,000 containers)	\$ 5,625,000

### I. Delivers benefits and savings to trading partners and logistics providers as incentives to integrate into the GLS

The GLS, the new dimension in global shipping, provides the tools that bring new levels of efficiency and cargo security to every participant in the shipping process, benefiting carriers, shippers, logistics service providers (LSPs), ports and government agencies. The savings range about 10-15% and the potential revenue increase represented by GLS will be sufficient to guarantee their participation. Also, do not forget the benefit they will provide to their trade partners and LSPs.

The introduction of horizontal integration across vertical systems/enterprises optimizes and simplifies the exchange of data between organizations, minimizing the need to develop unique and individual point-to-point data translation applications. GLS's global horizontal communication system provides a simple and effective means to integrate once and reuse information often between all trade partners and LSPs. This philosophy can save weeks of effort in the integration of systems for logistics partners.

#### Benefits Proposition

GLS provides functional benefits and savings to a Shipper in many forms. One major advantage of the application is its ability to tie all shipping participants through a single communication infrastructure. This structure:

- Removes the requirement for point-to-point integration of Electronic Data Interchange (EDI) and other transmitted data with multiple carriers, logistic service providers, and/or government agencies
- Supports current supply chain partners, enables the expansion of new supply chain partners by speeding their integration at lower costs
- Provides a scalable solution capable of handling the global data communication and information storage and retrieval requirements of various size organizations
- Optimizes data storage utilization while maximizing global data access
- Reduces the hardware, network, and integration costs related to integration with trade partners and LSPs
- Provides access to tools to optimize efficiency and security in the logistics supply chain
- Minimizes personnel interaction of manual faxing, e-mailing, postal mail, or phone calls
- Validates data entry and reduces repetitive key strokes, minimizing errors and ensuring that information is correct and complete by early flagging and correction of data anomalies
- Provides Rules based login, password authentication, and public key infrastructure (PKI) used to provide access control and guaranteed data confidentiality
- Increases information security by providing rules based information access and sharing

#### Cost study

The integrated electronic exchange of critical business information between shipment partners provides one of the safest and most efficient means to communicate, and is integral to the establishment of efficient and secure logistics processes. While our hypothetical Shipper acknowledges this, the ability to do so is currently hampered by a fragmented industry burdened with antiquated systems and practices. Technology is expected to change on the go and provide the best efficiency at minimal cost. IT departments are clear on the vision but currently lack the system to provide integration of participants across the flow of goods. And, technology department heads are hesitant to go to management and propose system changes at significant cost.

Technology directors are hoping for:

- The ability to effectively and efficiently provide a standardized communication process between themselves and their partners.
- A means to remove the existing requirements for point-to-point interfaces between participants in the flow of goods.
- A centralized data exchange hub that can coordinate and control the exchange of participant information.
- A means for participants of varying IT sophistication to share vital information via a simplified electronic data or portal integration

Integration costs to share electronic data with trading partners can vary widely. Using traditional methods, such as electronic data interchange (EDI), the costs are typically around \$250,000 for 50 trading partners.

With GLS, the traditional costs associated with integration do not exist. Each participating company bears the expense of establishing a one-time integration link with GLS's central network hub. GLS then manages the data exchange between all trading partners. The addition of new trading partners is done at virtually no cost to the shipper or those already linked to the hub.

New EDI installation		Current	With GLS
# Of logistics partners (Carriers and LSPs)		50	Unlimited
# Of EDI message types per trading partner		10	10
Total implementation cost <sup>1</sup>		\$250,000	\$30,000

Additional Trading Partners		
Cost for implementing additional trading partners	\$10,000	\$ 0

Savings		
<b>Initial Implementation</b>		<b>\$220,000</b>
<b>% Savings</b>		<b>88%</b>
<b>New Partner Implementation Savings (each)</b>		<b>\$10,000</b>
<b>% Savings</b>		<b>100%</b>

Notes:

The GLS dramatically reduces the costs of integrating with logistics partners. As a logistics hub, the GLS provides a common environment for companies to link to for sharing data. By establishing a single integrated link with GLS, companies will be able to share data with their current and future logistics partners without the effort and the expense of a point-to-point solution.

**II. Standardizes and simplifies the shipment process through the definition of a minimum set of data requirements that are shared among all participants, achieving maximum efficiency and global cargo security compliance. This set of data requirements is called Universal Data Elements (UDE)**

Universal data elements are data structures specifically designed to simplify and standardize data required to maximize efficiency and cargo security compliance of global shipment flows and are not customized for a country or specific industry. GLS easily integrates with enterprise legacy systems and processes subtracting required data for UDE. Enterprises can continue to utilize their current legacy systems while enterprises without legacy systems are provided additional functionality through a robust portal access that supports GLS.

### **Benefits Proposition**

The definition of Universal Data Elements (UDE) establishes a foundation for the GLS solution to be built upon. The use of UDE is important to a Shipper in that it:

- Builds upon global logistics industry and information technology standards
- Provides tools that can be universally used jointly by Shippers, ports and LSPs globally to standardizing data, identify bad data, and other anomalies)
- Populates data fields into required documents for import/export, pre-shipment manifests, and cargo security submission as necessary
- Minimizes personnel interaction of manual faxing, e-mailing, postal mail, or phone calls
- Enhances the ability to develop shipping forms and documents in a fraction of the time required otherwise
- Enables the standardization and distribution of shipping documents to all parties involved in the shipment flow; improving visibility and allowing better control and planning

### **Cost Study**

According to a study presented to the United Nations Conference on Trade and Development, dated July, 2003, the developed countries have a landed export/import cost equal to approximately 6.11% of the value of the goods shipped. In addition, according to an Asia Pacific (APAC) study dated October, 2002, the use of electronic methodologies to standardize and facilitate the documentation, management and monitoring of the logistics transaction process can save Shippers up to 15% per year in its landed import/export costs. GLS's solution works to address both of these statistics.

For this case study, GLS's ability to standardize and facilitate the documentation, management and monitoring of logistic transactions provides substantial savings for our case Shipper. In our case study the subject Shipper transacts approximately \$220,000,000 in international export and import values per year (i.e. \$175 million in international sales and \$45 million in raw material imports.)

As illustrated in the table below, the ability to achieve process savings in accordance with the savings cited by the APAC study, the Shipper has the opportunity to reduce its annual costs from 1% to 15%. However, based upon our Shipper's current level of modernization and his current supply chain trading partners and the specific countries where they perform business, a conservative rate of 7% for international activity and 3% for domestic activity was realized since our corporate Shipper does enlist some of their own electronic methodologies for a few activities. With the ability to achieve a net 5.37% savings in this example, the Shipper will save approximately \$1.2 million. These savings arise though a reduced work effort by eliminating redundant data entry, elimination of errors by utilizing selection lists, automatic population of data fields from other source documents and rules based data validation.

Current Situation		Int'l Activity	Domestic Activity	Total
	Sales	\$ 175,000,000	\$ 325,000,000	\$ 500,000,000
	Purchases	\$ 45,000,000	\$ 135,000,000	\$ 180,000,000
	Total Value	\$ 220,000,000	\$ 460,000,000	\$ 680,000,000
	Landed Cost/Distribution Rate <sup>1</sup>	6.11%	2.00%	3.33%
	Total Logistics costs	\$ 13,442,000	\$ 9,200,000	\$ 22,642,000
With GLS				
	Landed Cost/Distribution Rate <sup>2,3</sup>	5.68%	1.94%	3.15%
	Total Logistics costs	\$ 12,501,060	\$ 8,924,000	\$ 21,425,060

<b>Savings</b>	<b>Total Logistics costs</b>	<b>\$ 940,940</b>	<b>\$ 276,000</b>	<b>\$ 1,216,940</b>
	<b>% Savings</b>	<b>7.00%</b>	<b>3.00%</b>	<b>5.37%</b>

Notes:

1. The United Nations study cites that average Shipper in a developed country incurs landed import/export costs equal to 6.11% of freight value. Sample Shipper assumption uses this rate for international shipments and a conservative lower rate of 2% for domestic shipments.
2. APAC study confirms electronic documentation provides savings related to a reduction of work effort by avoiding redundant data entry related to documents for import/export, pre-shipment manifests and cargo security submissions. Errors are also reduced with rules-based validation.
3. Personnel interaction time related to manual faxing, e-mailing, postal mail, or phone is also reduced via electronic data interfaces.

### III. Coordinates, manages, and tracks the contracted activity obligations of trading partners and LSPs through an electronic logistics activity matrix

The contracted shipment activity obligations of an enterprise are comprised of specific logistics service commitments at a preset performance and price. Shippers can pay a premium or expect a discount based upon contracted performance agreements. However, many Shippers do not have the correct and timely information to be able to evaluate and ensure that they are being invoiced correctly. GLS organizes these obligations into unit-cost-time tables (UCT) allowing Shippers the ability to plan, manage and monitor service provider activities, performance and cost. GLS provides the ability to utilize the UCT to manage multiple enterprise services that participate in single shelf-to-shelf shipment flow.

#### Benefits Proposition

The ability for a Shipper to have accurate and timely information regarding contracted obligations means they can:

- Forecast and coordinate shipment schedules and timing based on contractual obligations in advance of shipment departure
- Optimize shipment flow movement thus minimizing storage, handling and inventory carrying cost
- Automate the ability to prompt service providers to meet contractual obligations
- Transmit dynamic notifications of service activity completion with required details to financial departments for processing
- Provide a robust electronic shelf-to-shelf logistics lane management process that combines information communication, through the use of the UDE, with contractual service obligation, through the use of UCT, achieving a control mechanism to plan, manage and monitor shipment flow globally

#### Cost Study

The ability to coordinate, manage and track contracted obligations can achieve significant savings for a Shipper. These savings are gained in many ways. For example, reducing the stock inventory levels at its warehouse provides cost savings. The ability to reduce this stock reduces the overall carrying cost associated with the stock as well as reduces the fixed costs associated with needed warehouse space.

The ability to reduce on-hand stock levels is accomplished through:

- Establishing multiple contracts with numerous LSPs
- Managing performance metrics through an automated system
- Coordinating all shelf-to-shelf activities
- Real-time monitoring of performance based on contract obligations
- Promoting activities for shipment planning
- Integrating data validation
- Enhancing planning and visibility
- Advancing security compliance clearance with proper and prompt documentation
- Increasing reliability and dependability
- Leveraging multiple carriers and itineraries for frequent service

The following two examples provide cost savings for our case Shipper. Each of these savings is based upon GLS's ability to coordinate, manage, and monitor-trading partner's contracts and the obligations associated with those contracts.

#### Reduction in Warehouse Inventory

In this example, the case Shipper's warehouse inventory is able to be reduced by nearly \$1.4 million or 21% with a cost of capital savings of approximately \$275,000. This cost savings is achieved by managing multiple carriers that are able to achieve greater shipment frequency, which in turn results in a reduction in the ocean transit time. By reducing the ocean transit time, a reduction in the inventory levels for the safety stock can be achieved as stock is stored "in-transit" and not at the Shipper's physical location. The ability to increase the shipment frequency also reduces the re-order point, which further facilitates the Shipper's ability to react to required stock levels. The following table provides the details associated with this cost savings:

Assumptions		
SF-1	Shipment Frequency	7days (1 Carrier)
VF	Net Frequency	1.75 days (7 days/4 carriers)
VD	Voyage Duration	12 days
SC	Weekly Shipment Value	2,800,000
CC	Cost of Capital	20%

Formulas		
RP	Reorder Point	Weekly Usage (WU) * Transit Time + Safety Stock
TT	Transit Time-days	Voyage Duration +(Net Frequency-1)
SS	Safety Stock	20% WU* TT (in weeks)
AI	Average Inventory	(WU*TT)/2+SS

Current Situation		Exported Finished Goods	Imported Raw Material	Total
WU	Weekly Usage	2,800,000	900,000	
TT	Transit Time-days	18	18	
SS	Safety Stock	1,440,000	462,857	
RP	Reorder Point	8,640,000	2,777,143	
AI	Average Inventory	5,040,000	1,620,000	6,660,000

With GLS				
TT-1	Transit Time days-new <sup>1,3</sup>	15	15	
SS-1	Safety Stock-new <sup>1</sup>	922,500	296,518	
RP-1	Reorder Point-new <sup>2</sup>	7,072,500	2,273,304	
AI-1	Average Inventory- new	3,997,500	1,284,911	5,282,411

Savings			
<b>Inventory Reduction</b>	<b>1,042,500</b>	<b>335,089</b>	<b>1,377,589</b>
<b>% Savings</b>			<b>21%</b>
<b>20% Cost of Capital</b>	<b>208,500</b>	<b>67,018</b>	<b>\$ 275,518</b>

**Notes:**

1. The use of multiple carriers in connection with shipment pick-up and transit times can result in a reduction of total safety stock to ensure customer delivery times are met.
2. Real time monitoring of activities provides enhanced planning and visibility to increase reliability and dependability.
3. Advanced security compliance documentation also contributes to faster clearance and timely movement of freight.

## Reduction in Warehouse Cost

With a reduction in the need for higher warehouse inventories, the international warehouse space necessary to support the Shipper can be reduced by approximately 21% or 50,000 square feet. This unused or available space can result in a potential cost reduction (or increased space for production or expansion) of \$278,000 worth of value. In our example, the Shipper's warehouse space is located inside its manufacturing facility. If the Shipper plans to utilize this

additional space for more profitable manufacturing operations it is expected to generate an additional \$18.97 net profit per square foot, or approximately \$957,000. If the warehouse space was located outside of the manufacturing facility, the Shipper could reduce or eliminate a current fixed cost.

The following table details the calculations that have resulted in our sample Shipper's savings.

Assumptions			
Total Finished/Raw Inventory		\$	11,873,077
Warehouse Sq. Ft			435,000
Warehouse Sq. Ft. per Inventory \$			0.037
Warehouse Cost/ Sq Ft		\$	5.50
Manufacturing Sq. Ft			1,450,000
Net Profit per Mfg Sq. Ft		\$	18.97

Current Situation			
Int'l Inventory level		\$	6,660,000
Int'l Warehouse Sq. Ft.			244,006
Int'l Warehouse Cost		\$	1,342,032

With GLS			
Int'l Inventory level		\$	5,282,411
Int'l Warehouse Sq. Ft.			193,534
Int'l Warehouse Cost		\$	1,064,439

Savings			
Int'l Inventory level		\$	1,377,589
Int'l Warehouse Sq. Ft.			50,471
Int'l Warehouse Cost		\$	277,593
<b>% Savings</b>			<b>20.68%</b>

#### IV. Provides robust electronic shelf-to-shelf logistics lane management toolsets to quickly plan and coordinate the activities of all enterprises involved in the shipment flow

GLS lane management provides a robust toolset that allows a Shipper the ability to dynamically build a global shelf-to-shelf shipment lane/route, assign shipment activities to a contracted enterprise, and helps to manage and monitor the shipment lane.

#### Benefits Proposition

GLS provides the Shipper with a set of tools that:

- Provides a lane manager the fast means to build a shipping activity structure for a single lane:
  - Assigns specific movement activities to LSPs based on preset contract obligations
  - Provides a toolset to prompt and manage activities based on contractual obligations (UTC)
  - Monitors activity performance of trade partners and LSPs
  - Enables proactive contingency planning to anticipate and respond to shipment flow disruption or delay
- Supplies a means to visualize how to move product to marketplaces in a more effective, faster, reliable and dependable manner
- Increases the reliability and dependability of the supply chain allowing the ability to expand the supply base to more distant locations
- Optimizes resource allocations by delivering timely information regarding shipment movements to the responsible participants
- Maximizes manpower utilization by reducing the manual efforts associated with shipment processing preparation, shipment tracking, and delivery movements
- Allows the reduction of carrying costs through efficient inventory management and the visibility of shipment planning, movements, and delivery
- Decreases the administration effort associated with shipment preparation, tracking, payment, and process management

#### Cost Study

The following case study highlights GLS's ability to support the Shipper in the establishment and management of a shipment lane. Through a robust set of tools, the Shipper is able to more effectively plan and co-ordinate the shipment activities in a fast, reliable and dependable manner that can realize the following benefits:

- A reduction in Employee or 3PL cost
- Purchasing savings through expanded reliable foreign sourcing
- Market penetration with improved reliability and reduced costs
- Avoidance of incremental foreign investments

#### Reduction in Employee or 3PL Cost

The Shipper incurs internal materials management and planning costs or pays an outside third party logistics manager to oversee the shipment activities. These functions are still performed in an antiquated manner with extensive manual efforts. The table below defines the activities required for lane management, how they are accomplished today, and how they are accomplished using GLS:

Activity	Current	With GLS
Identify/qualify carrier	Researching qualifications	History performance
Negotiate/execute contract	Manual preparations	Electronic contract
Integrate carrier	Multiple integrations	One time integration
Planning	After the fact information	Real time information
Execution/management	Increased delays	Prompt service
Monitoring	Multiple queries	System tied to others
Exception processing	Time delays	Management tools/visibility
Financial settlement	Manual input	Automatic/accurate payment

Based upon the reassignment of activities defined above, our Shipper realizes a savings of up to 40% or \$200,000 by reducing the work effort related to the above activities. The results of this savings are based upon the calculations detailed in the following table:

Current Situation	International	Domestic	Total
# Of containers shipped	16,200	22,050	38,250
Logistics management cost per container	\$ 55.00	\$ 35.00	\$ 43.47
Total logistics management cost	\$ 891,000	\$ 771,750	\$ 1,662,750

With GLS			
Logistics management cost per container '1	\$ 35.75	\$ 28.00	\$ 31.28
Total logistics management cost	\$ 579,150	\$ 617,400	\$ 1,196,550

Savings			
Logistics management cost per container	\$ 19.25	\$ 7.00	12.19
Total logistics management cost	\$ 311,850	\$ 154,350	\$ 466,200

<b>% Savings</b>	<b>35.00%</b>	<b>20.00%</b>	<b>28.04%</b>
------------------	---------------	---------------	---------------

Notes:

The Shipper (or the Shipper's third party logistics provider) expends significant time and work effort related to carrier relationships, including contract negotiations, planning and communications, monitoring, exception processing, etc. This effort can be greatly reduced with integrated systems providing real time information and management tools for increased shipment and LSP performance visibility.

**Achieve Purchasing Savings through Expanded Reliable Foreign Sourcing**

Presently the example Shipper imports approximately 2,800 containers per year with a value of \$45 million. With improved foreign vendor delivery reliability -- afforded by more efficient lane management methods and the visibility of shipment planning, movements, and delivery -- it is possible to increase the amount of foreign sourcing by at least 10% or \$4.5 million. Given a 5% reduction in price competitiveness, the Shipper can realize annual procurement savings of \$225,000 from this action.

Current Situation	Import	Domestic	Total
# Of raw material containers	2,813	8,036	10,848
Average value per container	\$ 16,000	\$ 16,800	\$ 16,593
Total purchasing cost	\$ 45,000,000	\$ 135,000,000	\$ 180,000,000

With GLS			
# Of raw material containers <sup>1</sup>	3,094	7,754	10,848
Average value per container	\$ 16,000	\$ 16,800	\$ 16,572
Total purchasing cost	\$ 49,500,000	\$ 30,275,000	\$ 179,775,000

Savings			
# Of raw material containers	281	(281)	-
Total purchasing cost-- (Incr) Dec	\$ (4,500,000)	\$ 4,725,000	\$ 225,000
% Savings			0.12%

**Notes:**

*The increase in reliability and dependability afforded by better planning and visibility management tools allows the Shipper to more aggressively pursue contracts with foreign sources and achieve procurement cost reductions from lower priced markets.*

**Increase Market Penetration with Improved Reliability and Reduced Costs**

The increase in delivery reliability resulting from more efficient lane management also expands the ability to increase market share to other regions. The Shipper's potential customer base is more comfortable increasing their orders from a greater distance when they are confident that their order will arrive in a more effective, faster, reliable and dependable manner. With the ability to prove performance, even a 2% increase in international sales can generate additional sales volume of \$3.5 million, resulting in a net profit of \$192,500.

**Increase Market Penetration with Improved Reliability and Reduced Costs**

The increase in delivery reliability resulting from more efficient lane management also expands the ability to increase market share to other regions. The Shipper's potential customer base is more comfortable increasing their orders from a greater distance when they are confident that their order will arrive in a more effective, faster, reliable and dependable manner. With the ability to prove performance, even a 2% increase in international sales can generate additional sales volume of \$3.5 million, resulting in a net profit of \$192,500.

Current Situation	
# of exported containers	9,450
Value per Container	\$18,519
International Sales	\$175,000,000
International Profit	\$9,625,000

With GLS	
# of exported containers <sup>1</sup>	9,639
Value per Container	\$18,519
International Sales <sup>2</sup>	\$178,500,000
International Profit	\$ 9,817,500

Increase	
<b>International Sales</b>	<b>\$3,500,000</b>
<b>International Profit</b>	<b>\$192,500</b>
<b>Percentage</b>	<b>2.00%</b>

Notes:

1. Increased delivery reliability can result in a Shipper achieving more business with its existing customers or serve as a catalyst to further penetrate the market by adding new customers.
2. The increase in market share is dependent upon many market factors; therefore a conservative 2% increase was utilized.

**Avoid incremental foreign investments**

When a Shipper's customers have an increased visibility of shipment activities and have experienced a more reliable and dependable shipping process, they are less inclined to demand that the Shipper make a significant investment in a new plant and its associated equipment costs near their own facilities. In addition, as the Shipper experiences the need for reduced inventory, warehousing and logistics related costs, new investments in plant and equipment solely for the purpose of customer service delivery requirements will not be necessary and may not be economically justifiable.

### V. Optimizes JIT inventories by integrating inventory levels with JIT logistics processes

Many Shippers are moving to Just-in-time (JIT) inventory technologies. Today, shipping and logistics can be reactionary. The requirements of a Shipper moving to JIT manufacturing demand an automated triggering of stock reordering. The best method of shipping the product to meet delivery deadlines is only examined after the order has been placed. JIT incorporates logistics processes into product orders to facilitate the planning and the reliability and dependability of product delivery.

#### Benefits Proposition

GLS can facilitate a Shipper's JIT Logistic initiatives as it:

- Helps corporate Shippers to utilize JIT logistics to reduce order-to-delivery time and reach JIT inventory levels.
- Decreases storage and handling efforts by selecting the local or global carrier that can provide the most effective service, reduced handling, and fastest delivery time
- Enables the auto-scheduling of contract shipments with Carriers based upon in-plant inventory levels to optimize the logistics processes, increase dependability, and minimize inventory levels
- Uses carrier performance metrics to manage, select, and coordinate product shipments
- Increases the frequency of deliveries by using multiple carriers to increase competition and decrease costs
- Allows the dynamic change of reorder points and the adjustment of logistics scheduling to meet fluctuating inventory requirements
- Eliminates obsolescence and scrap by employing JIT logistics to minimize inventories
- Enhances the ability to plan restocking schedules while minimizing unexpected expedited freight costs
- Increases savings through shorter transit and faster delivery times which help to reduce financing costs and lower opportunity for damage and theft
- Leverages dynamically, multi-contracted service itineraries against Kanban inventory levels at delivery warehouses

#### Cost Study

A Shipper can achieve significant savings through managing its pipeline inventory levels. The timeframe for the LSPs activities from the Shipper to loading at a port and from the arrival at the port to the delivery at a customer can be made more efficient, and subsequently reduce costs. GLS's shelf-to-shelf Lane Management features help to plan, coordinate, manage and monitor global shipment flow, as well as, monitor actual shipment activities against those that have been planned and contracted. Through calculations on our sample Shipper (see table below), it is estimated that approximately 22% or \$1.8 million can reduce the pipeline inventory. This results in a cost of capital savings of \$370,000.

Assumptions	
Int'l Inventory Shipped per Day-	
Finished Goods	\$ 560,000
Raw Material	\$ 180,000
Total Inventory Shipped per Day	\$ 740,000

Current Situation	
# days activity from--	
Shipper to dwell at port	4.0
Dwell until vessel departure	3.0
Vessel arrival thru inland departure	2.0
Port to customer	2.5
Total # elapsed days	11.5

Total Pipeline Inventory	\$ 8,510,000
--------------------------	--------------

With GLS	
# days activity from--	
Shipper to dwell at port	3.0
Dwell until vessel departure	2.5
Vessel arrival thru inland departure	1.5
Port to customer	2.0
Total # elapsed days	9.0

Total Pipeline Inventory <sup>1,2</sup>	\$ 6,660,000
---	--------------

Savings	
Reduction in Elapsed Days	2.5
Reduction in Pipeline Inventory	\$ 1,850,000
% Savings	21.74%
Cost of Capital Savings	\$ 370,000

Notes:

1. The auto-scheduling of contract shipments with Carriers based upon in-plant inventory levels and carrier schedules result in decreased storage and handling efforts providing a faster delivery time.
2. LSP performance metrics to manage, select, and coordinate product shipments allows the dynamic change of reorder points and the adjustment of logistics scheduling to meet fluctuating inventory requirements

#### **VI. Collects and coordinates the data necessary to meet national and international cargo security initiative mandates**

The data and documentation requirements spelled out by national and international cargo security initiative mandates are consolidated within the central GLS database. Unlike traditional approaches to business where every corporate enterprise develops and maintains its own information systems to meet these requirements, the GLS solution utilizes its standardized, Universal Data Elements (UDE) to fulfill the data submission obligations.

#### **Benefits Proposition**

GLS provides security compliance for all participants without dedicated time or efforts above their normal day-to-day shipment process activities. For the Shipper this:

- Secures the supply chain and participant in the flow of the shipment
- Secures LSPs and trading partners shipment activities, since the legitimacy of their activities can effect the Shipper supply chain
- Expedites faster Customs processing by ensuring security information is accurate, complete, formatted, and delivered in the most effective and efficient manner to all appropriate participants in the shipping process; including governments and customs organizations
- Avoids or reduces unnecessary costs to comply with U.S. and International security guidelines through the use of an application designed and automated to enhance cargo security, and meet current and future security initiatives
- Provides a centralized management of the business and security data requirements for import & export documents required by governments worldwide
- Provides data required to validate the commercial legitimacy of the carrier and LSPs for potential cargo movement
- Helps Shipper to be cargo security compliant on a global basis, thus minimizing the possibility of cargo flow disruption.
- Reduces security surcharges through security / shipment deviation checks
- Aids in the proactive analysis of deviations, mismatches, or other anomalies to flag at risk or suspect shipments
- Enables faster movement through Customs and Border crossings

#### **Cost Study**

The development of proprietary IT systems to meet the information mandates of cargo security is difficult and costly to build and maintain. The GLS offloads the requirements of corporations to implement expensive proprietary cargo security systems with a centralized data base solution that standardizes and simplifies these processes and alleviates the burden of compliance from the corporations.

In the example below, the one time costs to meet compliance requirements is reduced 90% from \$1,000,000 to \$100,000. The cost of annual changes to meet changes in the security requirements is eliminated altogether. In addition, the internal costs for maintenance and reporting are reduced by 25%.

## Baseline

Company Revenue	\$ 500,000,000
IT spend (in % of revenue)	2%
Total IT spent	\$ 10,000,000
% Of IT budget spent in meeting security needs	10%
One time cost to meet security mandates	\$ 1,000,000
Cost to meet additional requirements (annual)	\$ 100,000
On-going maintenance and reporting (hours)	2,080
Tech hourly salary	\$40
Annual On-going maintenance cost	\$ 83,200

## With GLS

One time cost to meet security mandates	\$ 100,000
Cost to meet additional requirements (annual)	\$ -
On-going maintenance and reporting (hours)	1,560
Annual On-going maintenance cost	\$ 62,400

## Savings

<b>One time savings</b>	<b>\$ 900,000</b>
<b>Cost to meet additional requirements</b>	<b>\$ 100,000</b>
On-going maintenance and reporting (hours)	520
<b>Annual On-going maintenance cost</b>	<b>\$ 20,800</b>

<b>Percent one time savings</b>	<b>90%</b>
<b>Cost to meet additional requirements (annual)</b>	<b>100%</b>
On-going maintenance and reporting (hours)	25%
<b>Annual On-going maintenance cost</b>	<b>25%</b>

### VII. Monitors and tracks the real time status of shipments globally

GLS's one system – multiple carriers / LSPs process provides the ability to track and to monitor global shipments based on individual shipment activities in addition to the tracking of conveyances. With this system, the Shipper has the ability to know, in real-time, the location and current status of their cargo worldwide. Furthermore, this real-time tracking provides the ability to define actions that might impact the timing or successful delivery of the cargo through alerts, notifications, and deviations. This information can be critical to a Shipper in ensuring that goods, parts, or materials arrive at the appropriate destination when required.

#### Benefits Proposition

GLS's monitoring and tracking:

- Provides global visibility of shipments for the Shipper
- Allows shelf-to-shelf tracking of shipments with minimal technology requirement
- Provides the platform for technology independent solutions capable of incorporating any automatic identification technology (AIT) including RFID, GPS, and others
- Allows Shippers to improve timing and business decisions with continuously updated information about the shipment
- Avoids production disruption or loss of sales opportunities caused by material delays
- Provides immediate input into the shipping process if cargo should be re-routed, delayed, or cancelled.

#### Cost Study

The ability to have real-time visibility of the movement of a shipment provides many benefits to a Shipper. However, the cost of establishing such a feature can be very high based upon the many lanes, carriers, and service providers that can be engaged in a single move. GLS eliminates these costs by providing this feature as part of its standard application. This functionality provides quite a cost savings to each Shipper that uses it.

The basis for comparison used in this study is the Shipper's use of a proprietary, stand-alone tracking application that is assumed to have been designed, developed, installed, and implemented internally. This application may have abilities similar to GLS's in that it uses GPS to track the location, direction, and speed of conveyances while it performs calculations and records the route that the conveyance has traveled. However, without the orchestrated efforts of the Shipper and all of its logistics service providers, the proprietary application cannot be fully integrated across the shipment participants to enable the real-time collection, processing, or dissemination of critical business information relating to individuals involved in handling the cargo. Without this integration, the Shipper will not be able to receive the actual time of shipment transfer, the ability to inform participants of potential delays, or notifications of the necessity to schedule the re-routing of the shipment to bypass bottlenecks.

The ability of a Shipper to establish such integrated services by themselves is not feasible unless access is attained to the equipment and operations databases of every carrier. While this may be conceivable, the cost of integrating point-to-point with every carrier will be prohibitive for both Shipper and carrier. Additional costs, incurred when integrating additional carriers or conveyances in the future, will continue to be high. With GLS, linked services are managed within a central hub. Upon the implementation of integrated links to the GLS, the Shipper will have access to all of the information necessary to monitor and trace their shipments across all of their logistics partners.

The example provided below is based upon an implementation for a Shipper operating under the following assumptions.

Assumptions:	
# of carriers that move cargo for Shipper	200
GPS Purchase and Installation Cost per unit	\$650
Monthly GPS System service charge per unit	\$40
Loaded cost of Application development resources per hour	\$80
Hours required to build the Tracking system	1,875

One Time Costs:	
GPS Unit installation costs	\$13,500
Tracking Application development	\$150,000
Application Hardware	\$45,000
<b>Total one-time savings</b>	<b>\$208,500</b>

Recurring Costs:	
GPS Unit Service Charge per year	\$96,000
System Maintenance and Licensee fees	\$50,000
<b>Total yearly savings</b>	<b>\$146,000</b>

### VIII. Provides early alerts for incidents or anomalies, and access to the information and tools necessary for a proper resolution

The GLS early alert system monitors the progress of shipment activities and automatically triggers an alert whenever issues or anomalies have been identified. Responses to the alerts can be customized within each corporation to manage the notification of corporate authorities or to initiate an automated response based on pre-defined workflows.

#### Benefits Proposition

Alerts for incidents or anomalies:

- Enhances customer service by identifying and correcting problems before a significant incident can occur
- Provides global, automated feedback for arrival, late, misdirected, or cancelled shipments
- Promotes notification of transit issues and problems so that Shipper can redistribute current inventory, redirect ship-to location, or authorize expedited shipment services
- Initiates automated rescheduling of all parties downstream in the shipment flow for re-routed or delayed cargo movement
- Automates re-routing of shipments around problem areas caused by shutdowns, strikes or bottlenecks to improve reliability and reduce costs associated with plant shutdowns, excess inventory and obsolescence, customer dissatisfaction and loss of business
- Reduces port storage and handling by proactively scheduling the next activities in the cargo's movement thus reducing the time required to stay at the port for customs clearance

#### Cost Study

The Shipper is faced with managing its inventory levels on a just-in-time (JIT) basis to minimize its inventory carrying and storage costs and to improve overall quality of its parts and supplies. The decrease in safety stock levels may require the need to expedite freight in the event of production inefficiencies. Plant shutdowns caused by shipment delays, damage, theft or shortages, are extremely expensive and cannot be tolerated.

The early identification of problems, incidents, or anomalies, and the timely response to them, is essential to maintaining plant throughput and production. With the comprehensive management of the logistics processes, issues affecting the delivery of parts and supplies can be identified and responded to in near real time, giving plant and logistics managers the information they need to optimize their inventories while minimizing the potential for downtime. The result is lower logistics costs and the improved reliability and dependability of the supply chains.

## Reduction in Expedited Freight

Current Situation	
# of containers managed	38,250
# of containers expedited	700
# of containers shipped @ standard rate	37,550
Standard shipment cost per container	\$ 454
Expediting premium cost per container	\$ 2,500
Total transportation costs	\$ 19,125,000
Total expediting cost	\$ 1,750,000

With GLS	
# of containers expedited <sup>1</sup>	350
# of containers shipped @ standard rate	37,900
Expediting premium cost per container <sup>2</sup>	\$ 1,875
Total transportation costs	\$ 18,031,250
Total expediting cost <sup>3</sup>	\$ 656,250

Savings	
<b>Expediting premium cost per container</b>	<b>\$ 625</b>
<b>Total transportation costs</b>	<b>\$ 1,093,750</b>
<b>Total expediting cost</b>	<b>\$ 1,093,750</b>
<b>% Savings</b>	<b>62.50%</b>

## Notes:

1. Identifying and correcting problems before a significant impact can occur can serve to reduce the number of expedited shipments. Prompt notification of transit issues and problems allows the redistribution of current inventory, redirection of ship-to location, or rescheduling of other shipment services
2. Proactively rescheduling of all parties downstream in the shipment flow for re-routed or delayed cargo movement can reduce the overall cost for a particular expedited shipment.
3. The ability to leverage multiple Carriers' itineraries helps to reduce the cost of expedited freight by using the DAPP (departure, arrival, price, performance) criteria to define first to arrive.

### Production Inefficiencies

Real-time visibility of problem events, and prompt notifications of such occurrences, enables the Shipper to quickly adjust production schedules to minimize the incurrance of non-value added costs. Under current conditions, problem notifications may be received several days after the event leading to: labor overtime, additional machine set-ups and re-tooling, premium procurement and expediting costs for in bound raw material, scrap resulting from improper set-ups and untrained labor, additional quality inspections, etc.

Delivering notifications of problem events in near real-time can dramatically impact the need for adjusting production schedules. In the current example, approximately 2% of the Shipper's shipments are involved with expedited freight activity also resulting in "hot" production to meet customer demand. Assuming 10% in production inefficiencies resulting from re-aligning the production schedule, the Shipper could incur as much as \$1 million in production inefficiencies and scrap costs. With 50% of this alleviated through more timely visibility and notification of the related events, the Shipper could save approximately \$500,000 in non-value added costs.

Current Situation		
Average Expediting Cost per shipment		\$ 2,500
# of containers expedited		700
Average Value per Shipment		\$ 18,519
Total Value of Expedited Goods		\$ 12,962,963
Production Scrap and Inefficiencies		\$ 1,037,037
With GLS		
# of containers expedited <sup>1</sup>		350
Total Value of Expedited Goods		\$ 6,481,481
Production Scrap and Inefficiencies <sup>2</sup>		\$ 518,519
Savings		
<b>Total Value of Expedited Goods</b>		<b>\$ 6,481,481</b>
<b>Production Scrap and Inefficiencies</b>		<b>\$ 518,519</b>
<b>% Savings</b>		<b>50.00%</b>

#### Notes:

1. Advanced visibility and notification of a shipment problem can significantly impact the scheduling of a production facilities' resources. The avoidance of expediting activity as well as 2 or 3 days earlier notice of shipment damage or theft can also result in a more effective revised production schedule.
2. With the advanced visibility and notification, production scrap, quality issues, overtime, re-tooling charges, etc. can be avoided which are often incurred when production schedules are changed or accelerated to meet forecasted customer inventory shortages.

## Plant Shutdown Costs

The lack of materials (i.e. steel, plastics, tooling, coolants, machine parts, component parts, etc.) can result in the shutdown of a Shipper's (or its customer's) facility. Delivery delays can result in contract penalties and "supplier hit points" that potentially can threaten future business with that customer. In addition, the Shipper may incur certain daily operating costs, such as labor and other non-controllable costs, which cannot be recovered through overtime activity.

By identifying and correcting problems before a significant impact can occur, plant shut downs can be avoided with significant savings. With an hourly fixed operating cost of nearly \$31,000, the elimination of a single 4-hour plant shutdown as well as reducing the length of shutdowns can result in a savings of approximately \$170,000.

<b>Assumptions:</b>	
Annual Labor Costs	\$ 80,000,000
Annual Variable Overhead Costs	\$ 48,000,000
<b>Total Labor/Overhead Costs</b>	<b>\$ 128,000,000</b>
Daily Operating Costs-260 days	492,308
Hrly Operating Cost-260 days/16 hrs/day	\$ 30,769
<b>Current Situation</b>	
# of plant shutdowns per year	4.0
Average # of hours per shutdown	4.0
<b>Annual shutdown cost</b>	<b>\$ 492,308</b>
<b>With GLS</b>	
# of plant shutdowns per year <sup>1</sup>	3.0
Average # of hours per shutdown <sup>2</sup>	3.5
<b>Annual shutdown cost</b>	<b>\$ 323,077</b>
<b>Savings</b>	
<b># of plant shutdowns per year</b>	<b>1.00</b>
<b>Average # of hours per shutdown</b>	<b>0.50</b>
<b>Annual shutdown cost</b>	<b>\$ 169,231</b>
<b>% Savings</b>	<b>34%</b>

### Notes:

1. Real time communication between the LSPs can serve to avoid the number of costly plant production line shutdowns.
2. The automatic re-scheduling of shipment activity can also serve to reduce the severity of a shutdown by co-coordinating a faster response time to help minimize the length of time of the shutdown impact.

## IX. Monitors and evaluates the performance of trading partners and LSPs (contract vs. forecast vs. actual service obligations)

Trading partner and LSP performance records are based on their contractual obligations as defined in the UCT tables. Data is maintained on every service provider movement. The provider performance activities are provided based on his contractual service obligations, vs. his forecast, vs. actual service. This allows the Shipper to evaluate, on a real-time basis, every participant in the shipment flow.

### Benefits Proposition

GLS's UCT tables:

- Provide a means to monitor the performance of every enterprise involved in the flow of their goods in real time, thus ensuring optimized service.
- Monitor each participant in the shipping chain's performance based upon contract vs. forecast vs. actual service delivered to allow Shippers to compare and evaluate the best and most effective movement of cargo
- Identify deviations between contract obligations vs.

actual for causes of damages

- Improve LSPs performance based on accountabilities that are inherent in monitoring, recording and scoring performance
- Provide real-time reporting tools that allow Shippers to dynamically adjust their safety stock based on their LSPs performance
- Identify damage trends and underperforming LSPs by reviewing the prior histories of all shipping participants

### Cost Study

The use of planned, forecasted and actual activity metrics to review and monitor the activities of LSPs encourages compliance with agreed upon performance standards while, at the same time, serving to identify where performance can be improved. These metrics serve as a foundation to improve overall accountability to ensure end customer service and to protect, and enhance, market share. The avoidance of delivery failures through adherence to performance standards can help prevent the loss of a customer's business. In the case of our sample Shipper, this could mean the retention of \$5 million in sales per affected customer. In addition, improved performance can

Current Situation	
# Of customer shipments per year	27,000
# Of delivery failures per year	810
# Of customers	95
Avg # of customers with delivery failures	8.5
Annual sales per customer	\$ 5,263,158
Sales at risk due to delivery failure	\$ 44,875,346

With GLS	
# Of delivery failures per year <sup>1</sup>	567
Ave. # Of customers with delivery failures	5.97
Sales at risk due to delivery failure	\$ 31,412,742

Savings	
# Of delivery failures per year	243
Avg # of customers with delivery failures	2.43
Sales at risk due to delivery failure <sup>2</sup>	13,462,604
% Savings (Risk Avoidance)	30%

### Notes:

1. The monitoring of the performance of every enterprise involved in the flow of goods in real time helps ensure the best and most effective movement and reduces the number of service delivery failures to customers.
2. The reduction in service failures reduces the risk that a particular customer will seek other vendors and therefore help to retain market volume for the Shipper.

### X. Maximizes control over the corporate global logistics bill

The GLS captures, verifies, and communicates in a timely manner the job's complete status. This is captured for all activities within defined lane management. This information is used to track the shipment and provide dynamic notification of its status. Upon job completion, financial information is provided to appropriate departments for processing. This process simplifies and optimizes the financial control and provides required information for bill consolidation.

#### Benefits Proposition

The ability to automatically capture, verify and communicate a job's complete status:

- Reduces workloads with less data entry, improved accuracy, and faster processing
- Promotes paperless offices reducing storage requirements and the potential of lost files while improving on-line data access
- Includes consolidated, but itemized billing to reduce Shipper workloads to verify and calculate total invoices and payments
- Captures costs associated with each individual activity in a shipment cycle
- Allows ability to track freight cost by individual parts or fully assembled components so that more accurate accounting can lead to more appropriate cost pass through to customers

#### Cost Study

The present trend by Shippers is to reduce the number of service providers so as to leverage volume discounts and to reduce the internal management time required to qualify, contract with, monitor and pay such service providers. With GLS's use of electronic documentation methodologies, the means to manage information for a multitude of service providers is less complicated. Because the GLS system simplifies service provider management, the Shipper can expand its provider base, and receive benefits resulting from the competition, while taking advantage of expanded services available from such providers.

While service provider consolidation offers the ability to reduce unit costs in the near term in exchange for greater volumes, this process has served to weaken the service provider supply base and has reduced the number of service competitors. With the threat of competition reduced, it is possible that the service providers will demand future price increases as their costs change and to take advantage of a non-competitive market place. In the example below, the decision to shift the Shipper's business to reduce the number of carriers by 60% over a 6-year period may result in an initial cost reduction of \$1.7 million in its transportation costs during the first three years and \$1.1 million during the next 3 years.

However, with the reduced threat of competition and an 8% price/cost increase during the following period, the savings during the first 6 years could be completely eliminated resulting in a net annual discounted cost to the Shipper averaging \$151,000 year. This cost increase may also arise not just from pricing changes but also from increased operating costs such as expedited freight and production inefficiencies and plant shutdowns caused by not have alternative delivery sources in the event of service failure.

Current Situation		
Annual Transportation Cost		\$ 19,125,000
Current # of Carriers		25
# Of Carriers in year 7		15
3% Volume Cost Reduction Yrs 1-3 <sup>1</sup>		\$ 1,721,250
2% Volume Cost Reduction Yrs 4-6 <sup>1</sup>		\$ 1,147,500
8% Volume Cost Increase Yrs 7-9 <sup>2</sup>		\$ (4,590,000)
Annual Transportation Cost-Year 10		\$ 20,846,250
With GLS		
# Of Carriers in year 7 <sup>3</sup>		25
Annual Transportation Cost-Year 10		\$ 19,125,000
Savings		
Annual Transportation Cost-Year 10		\$ 1,721,250
Average Annual Transportation Cost---NPV		\$ 151,613
% Savings		0.73%

Notes:

1. The reduction in the # of managed carriers can produce near term reductions in transportation costs due to volume based pricing concessions.
2. Future transportation costs are at risk for price increases when there are less carriers competing for a Shipper's business.
3. Reduced carrier management workloads afforded by electronic documentation can allow the ability to more efficiently manage multiple carrier relationships and help maintain cost and service delivery competitiveness.

### XI. Provides historical data to assist in future planning and audit reviews

Historical data is retained for every enterprise in the shipment flow. Reports extracted from this data support and simplify audit activities. The data also provides a basis for analyzing projections and trend analyses to facilitate both short and long range planning.

The GLS system provides real-time field level facts and information and reduces the time associated to investigate each claim incident including the level of effort to seek cooperation from multiple parties. With the pertinent information more readily available, there will be better accountability of those responsible for the damage.

#### Benefits Proposition

##### Standardized Electronic Claims Process

*GLS provides a standardized process that facilitates the claims process that:*

1. Simplifies claims submission
2. Enhances turnaround times for claims
3. Reduces work effort for processing claims by eliminating redundant data entry, fewer keystrokes, improving accuracy, reducing errors

##### Enhanced Claims Investigation

*Claims investigations are enhanced with complete shipment and transaction histories. These histories:*

1. Provide complete tracking of shipment custodies and the activity histories
2. Enable the identification of responsible parties for damage claims
3. Identify claims trends, fraud, and underperforming LSPs by reviewing the prior histories of all shipping participants

### Cost Study – Claims Processing

Damage claims and claims investigations are continuing problems for Shippers. The inventory loss and production impact from such claims, and excess time spent investigating claims, stems from the lack of visibility of the shipment flow activities. A Shipper's ideal system would:

- Provide cargo visibility throughout the shipment flow
- Easily identify responsible enterprises
- Improve the speed of claims processing
- Lower insurance premiums

Frequently, insurance companies expend considerable time to investigate claims and may refuse to settle a claim due to the lack of certain information. The investigations tend to be limited by resources, the time necessary to achieve its completion, and the inaccessibility of critical data.

Electronic data enables the rapid analysis needed to refute or support these claims. The time invested in investigations is also minimized, resulting in lower payment rates and reductions in the work hours required. This in turn can lead to a reduction in insurance rates for the Shipper.

A Shipper may elect to procure additional insurance coverage for its shipments due to the risk of damage or theft within a trade lane, its past experiences with its LSPs, as well as the value of the cargo being shipped. The historical data within the system will help identify the party responsible for such occurrences, reduce the time for the Shippers and its insurance carrier to investigate the claim, as well as providing a risk rating the LSPs for their service performance in the delivery of the shipment.

This information will be a benefit to the Shipper (and its insurance carrier) by providing a means to reduce the costs of claims investigations, shift the claims costs to the responsible LSPs and to better identify which LSPs provide exemplary service as to minimize such claim costs altogether. Given the above, it is expected that a Shipper should be able to experience a reduction in its insurance premiums (and claim costs) of up to 7% annually with a savings of at least \$73,000 per year.

Current Situation		International	Domestic	Total
	Customer Shipments	\$ 175,000,000	\$ 325,000,000	\$ 500,000,000
	Material Purchases	\$ 45,000,000	\$ 135,000,000	\$ 180,000,000
	Total Int'l Activity	\$ 220,000,000	\$ 460,000,000	\$ 680,000,000
	Int'l insurance rate per hundred <sup>1</sup>	\$ 0.290	\$ 0.100	\$ 0.161
	Int'l insurance costs	\$ 638,000	\$ 460,000	\$ 1,098,000
<b>With GLS</b>				
	Int'l insurance rate per hundred <sup>2</sup>	\$ 0.261	\$ 0.098	\$ 0.151
	Int'l insurance costs <sup>3</sup>	\$ 574,200	\$ 450,800	\$ 1,025,000
<b>Savings</b>				
	Int'l insurance rate per hundred	\$ 0.029	\$ 0.002	\$ 0.011
	Int'l insurance costs	\$ 63,800	\$ 9,200	\$ 73,000
	<b>% Savings</b>			<b>6.65%</b>

**Notes:**

1. The insurance rate charged by insurance companies to Shippers is often based on the claims history in terms of frequency and claim value, the identity of the carriers and LSPs involved with the movement as well as the geographic area covered by the shipment. The international rates are often higher than the domestic rates because of the increased risks and uncertainties.
2. The lack of timely investigation and handling of incident reports result in excess numbers of claims being submitted. GLS provides access to the data necessary to manage and resolve reported incidents, and therefore, minimizing the frequency of claim submissions.
3. Documentation, participant visibility, and shipment status' are readily accessible to the carriers, thus reducing the operational costs of investigation and processing. With every enterprise within the shipping chain being monitored, responsible parties are quickly identified resulting in better handling of incidents.

## XII. Integrates with financial and insurance partners to provide value added services

A Shipper often has a substantial investment in its customer receivables, which in turn, requires significant oversight to ensure the accuracy and timeliness of the related billing and collection activities. Shipper receivables are often secured by working capital lines of credit that also require additional management reporting to support the accuracy of the pledged collateral. Timely and accurate electronic invoicing for contracted and non-contracted activities, the reduction of accounts receivable collection times, the reduction of data input and account analyses as well as the efficient documentation of the collateral base and improving the terms for the lines of credit represent substantial benefits to the Shipper companies. GLS provides business functions that can help in these matters.

### Benefits Proposition

#### Final delivery of a shipment triggers invoice and payment processes

*The verification and electronic notification of completed jobs are automatically delivered to the accounts payable department of the customer and/or its financial partners which:*

1. Improves cash flow by automatically generating and distributing invoices in response to electronic notifications of final delivery thus triggering the invoicing and providing shorter payment cycles
2. Includes consolidated billing to reduce customer workloads and contributes to the rapid turnaround of invoices and payments
3. Reduces workloads with less data entry, improved accuracy, and faster processing
4. Promotes paperless offices reducing storage requirements and the potential of lost files while improving on-line data access

#### Prompt payment and increased business

*Automated payment to Shipper through a Regional Banking Consortium (Bank) on behalf of the Shipper:*

1. Enables electronic payments from the Bank to be distributed to Shippers on scheduled dates.
2. Makes Shipper services more attractive to customers as a result of access to multiple financial services

## Cost Study - Receivables

Introducing automation into the logistics and shipping industry provides savings and revenue opportunities that stem from operational efficiencies, the improved accuracy and timeliness of invoicing, and the visibility of the shipment flow activities. The receivables scenario examines the savings attained through optimizing bank rates, improving the billing and invoicing processes, and the reduction in “lost” or “undercharged” bills through electronic processing. With \$500 million in sales revenue per year, the potential savings approach \$700,000 per year.

Assumptions:	Current	With GLS
Sales per year	\$ 500,000,000	
Sales per year-C.O.D.-5%	\$ 25,000,000	
Sales on credit	\$ 475,000,000	
Credit terms-days	40	
Average A/R outstanding	\$ 52,777,778	

Interest Rate Savings		
Rate savings from bank		0.125%
<b>Interest rate cost savings <sup>1</sup></b>		<b>\$ 65,972</b>

Disputed Receivables Collection		
Reduction in contract disputes		0.06%
<b>Increase in revenues collected <sup>2</sup></b>		<b>\$ 300,000</b>

Receivables collection		
Accounting Collection Effort	15	12
Accounting Collection Cost	\$ 450,000	\$ 360,000
Reduction in Accounting Staff Collection Effort		20%
<b>Reduction in accounting staff costs <sup>3</sup></b>		<b>\$ 90,000</b>

Outstanding A/R		
Reduction in days outstanding		3
Reduction in average A/R		\$ 4,077,083
A/R interest rate		6.00%
<b>Reduced A/R interest costs <sup>4</sup></b>		<b>\$ 237,500</b>

<b>Total Increased Profit</b>		<b>\$ 693,472</b>
-------------------------------	--	-------------------

## Notes:

1. Bank rates may be reduced as a result of real time electronic verification of invoicing accuracy and the production of electronic payment receipts.
2. Disputed receivables collection is expected to increase by providing proper documentation of the actual vs. contracted bookings and processes to support billing accuracy
3. The receivables collection effort is reduced as the documentation for operational activities including completed delivery can be readily linked to the contract documents and resulting invoice thus providing evidentiary support to the customer regarding the amount to be paid.
4. As disputes are minimized with the presentment of proper documentation, the collection period will be accelerated resulting in less outstanding receivables and related interest costs.

### Scenario for the Benefits Studies

In an effort to illustrate the commercial and economic benefits that can be realized from participating in the Global Logistics System (GLS), the following scenario has been developed. The company background information presented in this section is used to detail and highlight the advantages of the GLS solution throughout each section of the document. For the purpose of clarity, the benefits derived by a Carrier are broken down by function and highlight the departments within a company that are affected by benefits associated with that function. These benefits are translated into increased service delivery, business cost savings, and the ability to increase revenue.

While this benefit study represents gained results and their associated value, it is important to recognize that the GLS provides both direct and indirect benefits. One of GLS's core principles is that for any solution to be adopted globally, it must provide commercial benefits and security compliance for every enterprise involved in the flow of the shipment. Therefore, once you, the Carrier, are part of the GLS solution, additional benefits will be extended to your customers and logistic partners. This *cascading benefit effect* by itself presents significant market increases and better services for your customers. This feature alone allows you to reach beyond the typical boundaries of good service and provides value added services to your customers and logistics partners.

### Sample Carrier Profile

GLS has created a hypothetical Carrier to highlight the efficiencies, benefits, and cost savings associated with its solution. The following carrier profile is provided in this document as a reference and a benchmark. This information can be used by a reviewing Carrier to help them determine the affect that the GLS solution will have on their organization. The actual results obtained by individual Carriers will vary based upon the size of the organization, their current processes, and their ability to integrate this solution and include their partners.

The hypothetical Ocean Carrier Company used throughout this document operates 12 cargo vessels; each of these cargo vessels can carry a capacity of 1,500 Twenty Foot Equivalent Unit (TEU)'s. The ships call upon a total of 40 ports with an average of 200 TEU's being discharged and loaded weekly at each of the ports. On the average, 70% of the ocean bookings are from large corporate shippers processed under annual contracts, with the remaining 30% originating from smaller shippers seeking quotes for each of their shipments.

The following table provides a detailed profile of our sample Carrier. This information is used throughout this document to calculate expenses, costs, and potential savings. Additional information, when appropriate, is provided to clarify or support a specific section or category. This additional information is also presented in a tabular form to increase and promote understanding and review.

## Carrier Profile for the Benefits Studies

Carrier Profile	Vessels	12
	Ports of call	40
	Vessel Size	1,500
	Total Equipment in Pool	24,000
	Owned Containers	14,400
	Leased Containers	9,600
Market Profile	Annual Containers Shipped	400,000
	% of shipments from corporate shippers	70%
	% of shipments from individual shippers	30%
	Number of containers generated per week per port	200
	Corporate shipper containers generated per week per port	140
	Individual shipper containers generated per week per port	60
	Corporate shipper companies	30
	Individual shipper companies	600
	Avg. freight per TEU	\$500
	Avg. percent freight commission per TEU	6%
Operations Profile	% Capacity Utilization	67%
	Working hours per day per employee	8
	Vessel Operating weeks per year	50
	Average TEU's per booking for corporate shippers	5
	Average TEU's per booking for individual shippers	3
	Avg. administrative hourly salary	\$10
	Avg. Technical hourly salary	\$45

### I. Technology

The integrated exchange of electronic data provides partner organizations with one of the safest and most efficient means to transfer information and communicate business needs and status. This integrated exchange of electronic data is fundamental to the establishment of efficient and secure logistics processes. However, the current global market is hampered by a fragmented industry, antiquated systems and outdated practices. Technology is expected to change on the go and provide the best efficiency at minimal cost. Generally, carrier IT departments understand the need for a global system that provides integration of participants across the flow of shipment. However, they may face both cost constraints and resistance from their LSP's to link directly with them since they work with multiple carriers.

#### Benefits Proposition

##### **Establish standardized communication processes for all participants within the shipment chain.**

*Standardization eliminates redundancy and facilitates the interchange of data between organizations. Standardizing the communications across all participants eliminates the need to develop unique and individual point-to-point data translation applications. GLS's standardized communication tools provide a simple and effective means to integrate once and reuse often between all shipment chain participants. This integrate-once philosophy can save weeks of effort in the integration of systems for logistics partners. The benefits of this proposition:*

- Removes the requirement for point-to-point integration of EDI and other transmitted data
- Speeds the integration of logistics partners such as agents or stevedores and facilitates integration of new customers, expansion into new markets, and communication at lower costs
- Minimizes the introduction of potential errors through the use of redundant data sources
- Enables the processing of a greater number of shipments without increasing staff
- Facilitates data collection and claims processing from logistics partners
- Provides a centralized management of the business and security data requirements for import and export documents required by governments worldwide
- Maximizes data storage and access

#### Additional benefits

The following defines additional benefits from establishing standardized communication processes for all participants. The benefits are highlighted here, but no cost savings have been attached to them.

- **Provides electronic history of transactions, quotes, bookings, movements, and security information for audits.**

*Data access for shipment audits, security audits, and quote management/sales monitoring.*

- Facilitates security / shipment deviation checks
- Aids in the proactive analysis of deviations, mismatches, or other anomalies to flag at risk or suspect shipments
- Supports claims processing investigations
- Simplifies security compliance audits
- Improves data accuracy in audits and reports, and dramatically reduces the space requirements for the on-site storage of paper documents
- **Support of a simple, single log-in portal that maximizes all of the functions and activities of cargo movement.**  
*Integration of GLS into core business systems*
- **Simplifies log-ins**  
*Provides access to tools to improve business operations and reduces requirements for additional software licensing*
- **Data security**  
*Rules based log-in, password authentication, and public key infrastructure (PKI) are used to provide access control and to guarantee the confidentiality of data*

#### Cost Study – Data Integration

Integration costs to share electronic data with trading partners can vary widely. Using traditional methods, such as electronic data interchange (EDI), the costs are typically around \$250,000 for 50 trading partners.

With GLS, the traditional costs associated with integration do not exist. Each participating company bears the expense of establishing a one-time integration link with GLS's central network hub. GLS then manages the data exchange between all trading partners. The addition of new trading partners is done at virtually no cost to the carrier or those already linked to the hub.

New EDI installation	Current	With GLS
# of logistics partners (corporate shippers and LSP's)	50	Unlimited
# of EDI message types per trading partner	10	10
Total implementation cost <sup>1</sup>	\$250,000	\$30,000

Additional Trading Partners		
Cost for implementing additional trading partners	\$10,000	\$ 0

Savings		
<b>Initial Implementation</b>		<b>\$220,000</b>
<b>% savings</b>		<b>88%</b>
<b>New Partner Implementation Savings (each)</b>		<b>\$10,000</b>
<b>% savings</b>		<b>100%</b>

## Notes:

*The GLS Global Logistics System dramatically reduces the costs of integrating with logistics partners. As a logistics hub, the GLS provides a common environment for companies to link to for sharing data. By establishing a single integrated link with GLS, companies will be able to share data with their current and future logistics partners without the effort of a point-to-point solution.*

## II. Sales

The shipping industry today is burdened with a fragmented environment resulting in many non-value-added activities. Today's competitive environment requires companies to meet these challenges or fall by the wayside. Our hypothetical carrier is faced with these same issues. It services a client base that is comprised of 70% corporate shippers and 30% individual shippers. It has a network of sales agents at multiple ports-of-call and is currently providing these agents with sales tools that may not allow them to handle larger and faster ships.

It is becoming more and more difficult for carriers to meet the objectives of their customers, the changing face of the freight industry, and still remain profitable. Ships are bigger and faster. Even more important is the consolidation of carriers. Today, 28 ocean carriers manage 80% of global container movement. This consolidation has weakened traditional sales networks dramatically. Carriers are cutting agents loose to avoid conflicts of interest. By representing fewer carriers, these agents have fewer options for generating income. Due to competitive pressures and worldwide carrier overcapacity, shipping rates are also decreasing while commissions have stayed the same. Therefore, agents have to produce much more sales in order to generate the same revenues. As a consequence, many independent sales agents are going out of business. The remaining sales networks must greatly expand the scope of their selling area to reach more shippers. In many cases, carriers have assumed the added expense of establishing their own sales network.

With GLS, the carrier can provide enhanced service to both the Corporate Shipper and the Private Market. The Corporate Shipper represents the consistency and volume needed to plan the future while the Private Market represents the desired year-end profit.

### What the Carrier Provides the Corporate Shipper:

- Services and tools that can assist customers with their core business. Carriers want to be viewed as value-added providers so they are not judged on price alone.
- A means to monitor the performance of every enterprise involved in the flow of their goods in real time, thus ensuring optimized service.
- Tools that can ensure JIT Logistics to help corporate shippers reduce order-to-delivery time and reach JIT Inventory.
- Help to make the shipper cargo security compliant on a global basis, thus minimizing the possibility of cargo flow disruption.
- Tools that can be used universally by shippers, ports, LSPs and security agencies globally.

### Private Market

Quoting and booking is the mainstay of managing global private markets. Its functionality includes all activities necessary to collect, capture, and describe shipment details and requirements; to specify shipper/origin and consignee/destination information; to plan and map out the transport segments of the delivery, and to identify all of the participants and their requirements to facilitate the cargo movement. The quote and customer services brings the carriers closer to the shippers allowing them to improve services, optimize pricing to increase market share, and reduce the non-value-added activities which inflates customer costs. Efficiency gains are attained through business process automation, the reuse of data submitted by customers without retyping, and the implementation of standardized practices.

### Benefits Proposition

#### GLS provides system tools for managing the global private market.

*Carriers can manage the private market worldwide without the necessity of the extensive use of carrier or local agent sales personnel. GLS provides the following tools that:*

- Provide standardized processes (USR – universal shipper ratings) for rating shippers using verified, and continuously updated, global data about shipper's activities and their commercial legitimacy
- Allow carriers to set the rules used to calculate rates based on USR, the shipper volume, forecasted booking per vessel and equipment availability, and provide them to the shippers
- Deliver direct access of all of the carrier services to shippers globally
- Give the carrier the ability to post vessel open space to larger geographic areas to maximize vessel capacity utilization
- Set pricing to maximize profit per space per vessel when antiquated sales processes do not meet carrier objectives

### Automated Quoting:

*GLS provides tools to the shippers to self-quote shipments that:*

- Enables potential customers to dynamically self-quote from anywhere in the world
- Delivers real-time quote responses to the customer
- Assesses shipper security risks and certifications for security compliance initiatives
- Allows carriers to adjust quotes based upon the automatic review of shipper / customer booking behaviors and payment performance histories
- Automatically routes quotes for authorization(s) using carrier business process rules before being sent to customer (depending on shipper rating)
- Allows the application of special discounts for specific customers based on market conditions

### Revenue Enhancement – Organizing the Global Private Market

The scenario presented for assessing the value of global private markets focuses on the dual potential of increasing the number of quotes being generated and the improvement in the percentage of quotes that turn into sales / bookings. Of the 200 TEU's in weekly bookings generated at each port of call, 60 of these bookings (30%) are the result of quotes from individual shippers. Assuming that 4 quotes are written for every booking, an average of 240 quotes must

be produced to book these containers. Annual revenue from these bookings totals \$60 million for our sample company. By improving the access that carriers have to shippers, and by enabling optimized pricing and customer services, it is expected that quote levels will increase by 5% overall. In addition, improvements to the quote-to-booking ratios are targeted at 3%. The result is an 8% increase in annual sales, raising revenue to about \$65 million.

Organizing the Private Market	Current	With GLS <sup>1</sup>
# of quotes generated per week per port <sup>2</sup>	80	84
# of quotes generated per week	3,200	3,360
# of quotes generated per booking received	4	3.88
# of individual shipper bookings received per week	800	865
# of individual shipper containers booked each week	2,400	2,596
Average revenue per week	\$ 1,200,000	\$ 1,297,800
Annual Revenue	\$ 60,000,000	\$ 64,890,000

Revenue Increase	
Increased # of quotes generated <sup>3</sup>	5%
Increased percentage of bookings <sup>4</sup>	3%
<b>Increase in Revenue</b>	<b>\$ 4,890,000</b>
<b>% Increase in Revenue</b>	<b>8.15%</b>

#### Notes:

1. GLS projections are based on the gains in the number of quotes generated and increases in the percentage of quotes that lead to bookings.
2. The numbers of quotes per week are calculated based on the number of containers generated per week for individual shippers and dividing by the average number of containers included in each booking.
3. According to Information System Agreement (ISA), whose members include APL, Crowley, Hapag-Lloyd, K Line, Likes Line, Maersk, Mitsui Lines, OOCL, P&O Nedlloyd, Sea-Land and Yang Ming Line, many companies have reduced their document cycle and improved the quality of information exchange with EDI. 55% of the companies using electronic commerce have shown sales increases, and 46% have shown an increase in profits.
4. By minimizing the non-value-added costs in the shipping process, rates can be optimized to improve the ratio of quotes that lead to booking "wins".

## Corporate Shippers

One of the requests commonly received from corporate shippers regarding their carriers is the door-to-door delivery of their goods. Their desire is to reduce the number of vendors they work with and to process a single bill for the logistics services.

## Revenue Enhancement – Door-to-Door Service

By providing enhanced tools for the carriers to use in managing door-to-door services, the GLS provides an opportunity to meet these requests while creating a path for revenue growth. Existing customers can be expected to contract for expanded services while new customers, attracted to the door-to-door service offering, will sign new shipping contracts.

Customers	
Corporate shipper containers per yr <sup>1</sup>	280,000
% of corporate shippers requesting door-to-door service <sup>2</sup>	10%
Door-to-door serviced containers	28,000
Costs for support of door-to-door service	\$ 50
<b>Door-to-door service revenue</b>	<b>\$ 1,400,000</b>

Business	
Revenue growth due to door-to-door service offering <sup>3</sup>	3%
Number of additional containers per year	8,400
Freight per container	\$500
Additional container revenue	\$ 4,200,000
Additional customer door-to-door service revenue	\$ 420,000
<b>Total increase in revenue</b>	<b>\$ 4,620,000</b>

<b>Total revenue from door-to-door service</b>	<b>\$ 6,020,000</b>
<b>Revenue growth from corporate shippers</b>	<b>4.30%</b>

### Notes:

1. Corporate shippers make up 70% of the 400,000 company-wide shipments.
2. A conservative estimate of the number of corporate shippers that are requesting door-to-door service is provided.
3. Customer requests to reduce the number of logistics suppliers are met with coordinated door-to-door services offered through GLS, resulting in the attraction of new business.

### III. Operations

Our hypothetical carrier has its own internal operations system. However, this system may not be able to adapt to future needs nor be proactive when problems occur in the shipment flow. This situation can sometimes be costly, i.e. short shipment, dead space, or if the shipment arrives at a destination without complete documentation. Sometimes shipments arrive before their documentation, especially in short sea navigation.

GLS provides the following:

- Minimizes the work effort per shipment
- Automates global shipment requirements for cargo security/ commercial processes
- Flags problems early. Provides ample time and the tools necessary to correct or resolve the issue
- Minimizes manual transactions and maximizes the ease of communication with all parties involved in the shipment flow
- Monitors real-time performance with the capability to identify the best performing and worst performing enterprises

The result is a smooth operation, ability to handle more shipments with fewer problems, less cost, better service to customer, and the ability to operate bigger and faster ships.

### Integration

Communication of timely and accurate logistics data is a function that is essential for all participants within the cargo supply chain. Communication interactions transpire between customers (shippers, 3PLs, etc) and the carrier in a critical but time-consuming process. This creates much of the overhead cost incurred by the carrier in the normal course of business. Communications start from the initial quoting of a shipment and continue through its final delivery. Today, the carrier communicates with the shippers and conducts business through mostly manual efforts, (phone calls, faxes, and e-mails.)

The ability to coordinate, control, and automate shipment flow communications provides operational efficiencies within the administrative function by automating processes, reducing the time required for manual work efforts, and utilizing electronically distributed data to communicate between the carrier and the shipper.

### Benefits Proposition

**Data is automatically coordinated, reviewed, and distributed electronically between carriers and logistics partners.**

*Data coordinated from carrier mainframe systems is distributed via the GLS system network to approved customers and logistics partners when appropriate. Customer and partner information is also captured through automated processes or portals from the supply and logistics chains, and is provided to carrier mainframe systems as necessary. This information includes, but is not limited to, organizational, quoting, booking, shipping, and tracking. The benefits provided by this proposition:*

- Reduces work effort by avoiding redundant entry and retyping of data (less keystrokes for carrier employees)
- Prevents errors from being inserted into the system as a result of the reentry of data, the use of selection lists, and the verification of information entry (i.e. eliminate typos)
- Uses data rules to validate and verify that the data is accurate and complete (rules-based validation – missing data, bad data, and other anomalies)
- Increases communication and decision making by simplifying the distribution of information
- Minimizes personnel interaction of manual faxing, e-mailing, postal mail, or phone calls
- Speeds the shipping processes by automating such functions as quoting and booking
- Enhances the automation of form or document preparation – reduces work load
- Develops shipping forms and documents in a fraction of the time previously required

### Cost Savings – Interfacing with Logistics Partners

Cost savings for the automated coordination, review, and distribution of data within our sample Carrier have been calculated based upon the Benefits Proposition defined above.

In order to develop accurate cost savings, the number of communication interactions and the average time spent communicating with customers has been measured and documented in the table below. The use of the GLS solution has been shown to reduce the number of interactions or reduce the average time needed to manually communicate with customers. The ability to reduce the data entry error rates was not measured and thus no cost savings for this function have been provided in the table below.

For this proposition, the benefits from using the GLS are seen in the reduction of the interactions and in the length of time spent in these activities.

ons:	
f quotes generated per booking received	4
f individual shipper bookings per week per port <sup>1</sup>	20
f corporate shipper bookings per week per port <sup>1</sup>	28
il # of bookings generated per week per port	48
f quotes generated per week per port	80
f quotes completed automatically with GLS	50%

Business Operations	Interactions		Time per interaction (minutes)	
	Current	GLS	Current	GLS <sup>4</sup>
	1.5	1	10	10
	1.5	1	10	5
ding	2	1	10	5
A Status <sup>3</sup>	3	10	10	0.25
	1.5	1	10	5
	2	1	10	2

**Notes:**

1. Individual and corporate shipper bookings are calculated by dividing the number of containers generated per week by the average size of the booking in number of containers.
2. The quote process includes the initial entry of shipment data, data validation, and the confirmation of the shipment requirements.
3. ETS / ETA queries are driven by customer needs to assess the status of their shipments. With GLS, shippers have increased access to this information without creating a workload for the carrier. As one aspect of their customer services, the carrier can review the queries to help evaluate the needs of the customer.
4. Processing time is reduced via automation, validation, and integration of needed data elements between functional activities.

	Current		
	#	Interactions	Hours
Quote	3,200	4,800	800
Booking	1,920	2,880	480
Bills of Lading	1,920	3,840	640
ETS / ETA Status	1,920	5,760	960
Invoicing	1,920	2,880	480
Follow-up	1,920	3,840	640
Total hours per week			4,000
Total hours per year			208,000

	With GLS		
	#	Interactions	Hours
	1,600	1,600	267
	1,920	1,920	160
	1,920	1,920	160
	1,920	19,200	80
	1,920	1,920	160
	1,920	1,920	64
			891
			46,315

Annual Cost	\$ 2,080,000
-------------	--------------

	\$ 463,147
<b>Savings</b>	<b>\$ 1,616,853</b>
<b>Percent Savings</b>	<b>78%</b>

## Booking

### Automated booking processes

Tools are provided to improve vessel capacity management and automatic booking functions that:

- Generate automatic booking confirmations when business rules set by the carriers allow it, and when the security risk assessment based on the global data for the shipper has been verified
- Automatically escalates requests for electronic booking confirmations (EBC) when mandated responses to a electronic booking requests (EBR) are not received in a timely fashion
- Notify the POL agent to enhance the personalized service provided to the shipper
- Populate data fields into required documents for import/export, pre-shipment manifests, and cargo security submission as necessary
- Assign equipment to the shipments

### Automated distribution of booking details are sent out using rules-based listings

Detailed booking information is sent electronically to the POL and POD agents, the accounts receivable departments of the POL agent and the carrier headquarters, the headquarters equipment control office, the equipment depot, and other offices that are part of the flow of the shipment, such as LSP. These functions:

- Improve personalized services
- Ease operations work efforts with fewer keystrokes, the reduction of errors, data validation
- Provide advance shipment visibility to improve planning for the shipment flow and for shipment customs clearance at POL and POD

## Lane Management

Lane management provides shipping participants the ability to define, monitor, and manage contracted or ad-hoc shipping routes across all modes of transport, and describes the workflow activities associated with them. For the carriers, lane management delivers process-driven technical efficiencies to improve the delivery of customer services and to expand on the services being offered.

## Benefits Proposition

### Tools for carriers to improve and increase door-to-door services

The GLS solution provides unique business tools to optimize the door-to-door service provided by Carriers. GLS's tool set:

- Eases integration of LSP's contracted by carrier
- Simplifies the creation of door-to-door lanes
- Transforms written contracts into performance metrics and financial control
- Provides continuous real-time monitoring and evaluation of LSP performance based on contract vs. forecast vs. actual service delivery in trade lanes
- Makes potential new commercial opportunities visible to carriers
- Automates interactions between the shipper, carriers, and LSP's, resulting in less work (fewer keystrokes), increased accuracy, and reduced errors
- Eliminates the need for internal development of additional applications

### Proactive flagging of deviations, issues and risks

Potential problems are identified and flagged early in freight movements based upon continual information review against defined business rules. The benefits of proactive flagging of deviations, issues and risks:

- Enhances customer service by identifying and correcting problems before a significant impact can occur
- Enables the rerouting of shipments around problem areas caused by shutdowns, strikes or bottlenecks
- Allows multiple transport modes to be used to provide complete door-to-door delivery in the event that a problem occurs
- Automates the notification of deviations, issues, and risks to the appropriate participants in the shipment flow so that action can be taken

### Cost Study – Problem Avoidance

Lane management, as discussed earlier, provides shipping participants the ability to define, monitor, and manage contracted or ad-hoc shipping routes across all modes of transport and describe the workflow activities associated with them. For the carriers, lane management delivers process-driven technical efficiencies to improve the delivery of customer services and to expand on the services being offered. One of the major advantages of using Lane Management is its ability to deliver benefits in the reduction of cargo movement issues or problems. GLS provides the tools to:

- See all cargo movement activities
- Automate data distribution using workflow management
- Manage logistics across all shipping participants

As a result, continuous improvement, accountability, and performance are emphasized leading to a more proactive approach to issue identification and a reduction in problem occurrence rates. An example of this illustrates the point; Assume that an average of 8,000 containers are handled per week. About 1% of these, or 80 shipments, has some sort of problem. If each problem requires an average of 4 hours of work effort to resolve, company staff will spend approximately 320 hours per week in problem resolution. Even with greater cargo visibility, data automation, and logistics management, issues and problems will occur. However, due to the more proactive nature of GLS's risk identification, many of the issues can be rectified or avoided altogether without the work effort being placed on the carrier staff. In circumstances when a resolution can not be provided, a list of possible solution alternatives can be provided to the carrier staff or appropriate representatives to help in the critical decision making process. This can greatly reduce the time required to collect information, evaluate alternatives and contact appropriate representatives. In the following example, we estimate that, with GLS, 1/3<sup>rd</sup> of the issues can be avoided or resolved through the system's automation. Furthermore, 50% of the work effort for resolving the remaining issues can be reduced resulting in an annual savings of more than \$500,000.

Current	Current	With GLS <sup>3</sup>
Number of containers per week <sup>1</sup>	8,000	8,000
Problem incidence rate <sup>2</sup>	5%	3%
Avg Number of problems per week	400	268
Avg time per problem for fix (in hours)	4	2
Avg hours per week to fix problems	1,600	536
Annual cost to fix problems	\$ 832,000	\$ 278,720

Savings	
Hours saved per year	55,328
Savings @ avg wage of \$10 per hr	\$ 553,280
% Savings	67%

Notes:

1. With 40 ports of call, each generating 200 containers per week, there is an average of 8,000 containers handled per week across all ports.
2. Excess incidents occur as a result of the manual handling of freight data, the utilization of companies that operate outside of the control of the carrier, and the lack of complete, validated data. With GLS, processes are automated, data is validated, and participating company activities are visible, providing the means to reduce the number of problems and decrease the time required reaching a resolution.
3. Management tools, provided at no cost to logistics participants through GLS's portal access, allow the real-time monitoring of performance and activity as well as improved efficiency over manual processes such as phone or fax communications.

#### IV. Equipment Control

The improved management of the flow of equipment is one aspect of the GLS Global Logistics System that directly impacts operating costs. Combining equipment needs with forecasted trends enables the intelligent management of equipment inventories and allows carriers to reduce their port-side equipment inventories and dwell times.

To accomplish this, projected equipment requirements for every port of call are correlated to assess inventory surpluses and deficits. Quote submissions and their associated equipment needs can reflect these needs with pricing optimized to move the containers. Furthermore, bookings feed directly back to equipment control to update equipment inventory availability and forecasts.

#### Benefits Proposition

##### **Real-time Global visibility to enhance equipment control**

*In the GLS global network, equipment movements are updated on a real-time basis. This real-time information access:*

- Enables a more accurate projection of equipment inventories based on the forecasting of booking needs and historical booking trends
- Allows quotes to be adjusted using forecasted equipment needs at the final destination
- Provides equipment movement visibility so that storage, detention and demurrage costs can be documented automatically, calculated and sent to the carrier's accounts receivable department.
- Monitors data received worldwide to flag deviations or data anomalies on equipment cycle events
- Reduces the work effort of the carrier's local agent, empty depot, and port gate employees in the production of equipment reports by avoiding redundant typing of data (less keystrokes) and typing errors with electronically distributed data
- Links directly to carrier equipment control systems to update equipment movements captured directly from shipment events (future enhancements)

##### **Centralized reporting of equipment damage from any party involved in the shipment flow**

*Reports of damaged equipment can originate from any source within the shipment flow which:*

- Enables all shipment participants to report equipment damage as soon as it is discovered
- Provides notifications, in advance, of equipment chassis damage so that repairs can be expedited

#### Cost Study- Global Equipment Management

This cost savings analysis is focused on the utilization of leased containers in the shipment flow. In this scenario, the average numbers of leased containers that are stored on shore are reviewed and are subsequently removed from the container inventory. The redistribution of containers occurs during the course of regular business resulting in the numbers of the leased containers in storage remaining consistent with the percentage of containers on-board ships. In the example provided below, the carrier is holding a stored inventory of 4,000 containers with 1,600 of these containers leased. The result of removing these 1,600 containers from the global inventories is a 4% decrease in the percentage of leased containers with a cost savings exceeding \$2.6 million. Furthermore, the number of leased containers is reduced from 40% of the total inventory to 36%, resulting in an overall savings of 18.3% of the equipment costs.

Equipment Inventory	Current	With GLS <sup>2</sup>
Vessels	12	12
Avg vessel capacity (TEUs)	1,500	1,500
Avg capacity utilization	67%	67%
Avg TEUs on board	1,000	1,000
Avg container discharge / load per port	200	200
Avg 'on-hand' containers stored per port	300	260
% Containers owned	60%	64%
% Containers leased	40%	36%
Container inventory – Total <sup>1</sup>	24,000	22,400
# Owned containers	14,400	14,400
# Leased containers	9,600	8,000
Container inventory - on ship	12,000	12,000
Container inventory - on shore	12,000	10,400
On-shore containers engaged with shipments # waiting to be loaded per port * 40 ports	8,000	8,000
Stored Container inventory	4,000	2,400

## Notes:

1. The total container inventory includes 12,000 TEUs on board ships (12 ships with 1,000 each) and 12,000 on shore (40 ports with 300 TEUs at each)
2. Improving the management and visibility of the container inventory reduces the need for leased containers. GLS provides a global picture of current and anticipated equipment needs by combining quote information and historic utilization with an accurate real-time view of global equipment inventories and forecasted bookings.

Equipment costs	Current	With GLS <sup>2</sup>
On/Off Hire Rate for leases (annual)	\$ 0.50	\$ 0.50
Daily lease rate (per TEU)	\$ 2	\$ 2
Daily insurance rate	\$ 0.50	\$ 0.50
Daily Storage costs at depot	\$ 2	\$ 2

Daily costs (lease rate + insurance * # of containers)		
Owned containers	\$ 7,200	\$ 7,200
Leased containers	\$ 24,000	\$ 20,000
Annual costs - Owned containers	\$ 2,592,000	\$ 2,592,000
Annual costs - Leased containers	\$ 8,640,000	\$ 7,200,000

On/Off Hire lease costs		
Owned containers	0	0
Leased containers	\$ 480,000	\$ 400,000

Storage costs (for stored inventory)		
Stored containers - Owned	2,400	1,543
Daily storage costs - Owned containers	\$ 4,800	\$ 3,086
Annual storage costs - Owned containers	\$ 1,728,000	\$ 1,110,857
Stored containers - Leased	1,600	857
Daily storage costs - Leased containers	3,200	1,714
Annual storage costs - Leased containers	\$ 1,152,000	\$ 617,143
Total Storage costs	\$ 2,880,000	\$ 1,728,000

Total Cost for Containers	\$ 14,592,000	\$ 11,920,000
---------------------------	---------------	---------------

<b>Savings</b>	<b>\$ 2,672,000</b>
<b>% Savings</b>	<b>18.3%</b>

## V. Finance

A commercial carrier often has a substantial investment in its customer receivables, which in turn, requires significant oversight to ensure the accuracy and timeliness of the related billing and collection activities. Customer receivables are often secured by working capital lines of credit, which also require additional management reporting to support the accuracy of the pledged collateral. Timely and accurate electronic invoicing for contracted and non-contracted activities, the reduction of accounts receivable collection times, the reduction of data input and account analyses as well as the efficient documentation of the collateral base invoicing and improving the terms for the lines of credit represent substantial benefits to the carrier companies. GLS provides business functions that can help in these matters.

### Benefits Proposition

#### Final delivery of a shipment triggers invoice and payment processes

*The verification and electronic notification of completed jobs are automatically delivered to the accounts payable department of the shipper and/or its financial partners which:*

- Improves cash flow by automatically generating and distributing invoices in response to electronic notifications of final delivery thus triggering the invoicing and providing shorter payment cycles
- Includes consolidated billing to reduce customer workloads and contribute to the rapid turnaround of invoices and payments
- Reduces workloads with less data entry, improved accuracy, and faster processing
- Promotes paperless offices reducing storage requirements and the potential of lost files while improving on-line data access

#### Prompt payment and increased business

*Automated payment to carrier through a Regional Banking Consortium (Bank) on behalf of the shipper:*

- Enables electronic payments from the Bank to be distributed to carriers on scheduled dates.
- Makes carrier services more attractive to shippers as a result of access to multiple financial services

#### Cost Study - Receivables

Introducing automation into the logistics and shipping industry provides savings and revenue opportunities that stem from operational efficiencies, the improved accuracy and timeliness of invoicing, and the visibility of the shipment flow activities. The receivables scenario examines the savings attained through optimizing bank rates, improving the billing and invoicing processes, and the reduction in “lost” or “undercharged” bills through electronic processing. With \$200 million in sales revenue per year, the potential savings approach \$.7 million per year.

Assumptions		Current	With GLS <sup>6</sup>
Sales per year		\$ 200,000,000	\$206,000,000
Sales per year-C.O.D.	40%	\$ 80,000,000	\$ 82,400,000
Sales on credit		\$ 120,000,000	\$123,600,000
Credit terms-days		40	40
Average A/R outstanding		\$ 13,150,685	\$ 13,545,205

Interest Rate Savings <sup>1</sup>			
Rate savings from bank			0.250%
<b>Interest rate cost savings</b>			<b>\$ 33,863</b>

Disputed Receivables Collection <sup>2</sup>			
Reduction in contract disputes			0.125%
<b>Increase revenues collected</b>			<b>\$ 257,500</b>

Billing of Change Orders <sup>3</sup>			
Increased "change order" billings			0.125%
<b>Increase service billings</b>			<b>\$ 257,500</b>

Receivables Collection <sup>4</sup>			
Accounting Collection Effort	20%	10	8
Accounting Collection Costs		\$ 208,000	\$ 166,400
<b>Accounting Collection Savings</b>			<b>\$ 41,600</b>

Outstanding A/R <sup>5</sup>			
Reduction in days outstanding			5
Reduction in average A/R			1,693,151
A/R interest rate			6.00%
<b>Reduced A/R interest costs</b>			<b>\$ 101,589</b>

<b>Total Increased profit</b>			<b>\$ 692,052</b>
-------------------------------	--	--	-------------------

Notes:

1. Bank rates may be reduced as a result of real time electronic verification of invoicing accuracy and the production of electronic payment receipts.
2. Disputed receivables collection is expected to increase by providing proper documentation of the actual vs. contracted bookings and processes to support billing accuracy
3. The improved billing of change orders is based on the real-time information of service changes and results in timely documented billings.

## VI. Claims

Damage claims and claims investigations are continuing problems for carriers. The overpayment of claims and excess time spent investigating claims stem from the lack of visibility of the shipment flow activities. A carrier's ideal system would:

- Provide cargo visibility throughout the shipment flow.
- Easily identify responsible enterprises.
- Improve the speed of claims processing.
- Lower insurance premiums

The GLS system provides real time field level facts and information and reduces the time associated to investigate each claim incident including the level of effort to seek cooperation from multiple parties. With the pertinent information more readily available, there will be less overpayment of claims that are not the responsibility of the carrier.

### Benefits Proposition

#### Standardized Electronic Claims Process

*GLS provides a standardized process that facilitates the claims process that:*

- Simplifies claims submission
- Enhances turnaround times for claims
- Reduces work effort for processing claims by eliminating redundant data entry, fewer keystrokes, improving accuracy, reducing errors

#### Enhanced Claims Investigation

*Claims investigations are enhanced with complete shipment and transaction histories. These histories:*

- Provide complete tracking of shipment custodies and the activity histories
- Enable the identification of responsible parties for damage claims
- Identify claims trends, fraud, and underperforming LSP's by reviewing the prior histories of all shipping participants

### Cost Study – Claims Processing

The overpayment of claims is illustrated below. Assuming that the carrier investigates damage incidents on approximately 1% of its 400,000 corporate shipments, an average of 4000 incidents would be reviewed annually. It is also assumed that the company pays claims on 20% of these incidents.

Frequently, overpayment occurs when the claim cannot be substantiated. The claim would be substantiated if it were investigated properly. The investigations, however, tend to be limited by resources and the time necessary to achieve its completion.

Electronic data enables the rapid analysis to refute or support these claims. The time invested in investigations is also minimized, resulting in lower payment rates and reductions in the work hours required.

Assumptions:	
Shipments per year	400,000
Shipment incident rate	1.0%
# of incident reports per year	4,000
% of incidents that become claims	20%
# of claims per year	800
Avg value of claims deductible per incident	\$ 2,000
Total of claims deductible payments	\$ 1,600,000

Savings in Claims Paid with GLS	
Reduction in the % of incidents that become claims <sup>1</sup>	30%
Projected # of claims	560
Projected value of claims deductible payments	\$ 1,120,000
<b>Projected Savings in claims deductible payments</b>	<b>\$ 480,000</b>

Operational Costs of Investigations & Processing	
Avg incident investigation time (hrs)	3
Total incident investigation time (hrs)	12,000
Avg time to process claim (hrs)	12
Total claim processing time (hrs)	9,600
Total cost per year for incident & claims processing	\$ 216,000

Savings in Operational Costs of Investigating / Processing Claims <sup>2</sup>	
Projected reduction in incident investigation time	50%
Projected reduction in time to process claims	25%
Projected hours per claim for processing	9
Projected annual incident investigation time	6,000
Projected annual claims processing time	5,040
Projected total cost per year for incident & claims processing	\$110,400
<b>Estimated savings per year for claims processing</b>	<b>\$ 105,600</b>
<b>Project Total Savings</b>	<b>\$ 585,600</b>
<b>Projected % savings</b>	<b>32%</b>

## Notes:

1. The lack of timely investigation and handling of incident reports result in excess numbers of claims being submitted. GLS provides access to the data necessary to manage and resolve reported incidents, and therefore, minimizing the frequency of claim submissions.
2. Documentation, participant visibility, and shipment status<sup>3</sup> are readily accessible to the carriers, thus reducing the operational costs of investigation and processing. With every enterprise within the shipping chain being monitored, responsible parties are quickly identified resulting in better handling of incidents.

## VII. Security

One of the major challenges faced by global carriers today is the necessity of complying with current and emerging security initiatives, which are being implemented worldwide. The failure to meet these requirements will result in inspection delays while berthing, and/or the risk of the ship being denied entry into the port. In addition, security issues and cargo inspections cause delays port-side when unloading or reloading are curtailed by physical inspections. These delays prevent compliant ships from reaching their berths on schedule as the whole system backs up.

Today's bigger ships are more difficult to fill. Carriers are under pressure to accept bookings from shippers they know little about. Yet, until today, there has been no way to evaluate or rate shippers. No way to know if the shipper represents a high risk or low risk. Carriers are also faced with the problem of remaining aware of new initiatives and compliant with updates to current initiatives.

GLS will provide the following:

- A means to be compliant without investing in new systems or doing more work.
- A single system that provides global compliance...not a different system for each port-of-call.
- Cargo visibility for enforcement agencies diminishes the likelihood of portside unloading or reloading because of physical inspections.
- The ability to evaluate the risk of doing business with a particular shipper
- A system that can be easily used by all participants in the flow of goods.

## Benefits Proposition

### Automated processes guarantee cargo security compliance

*The burden for security compliance does not rest only with the carriers. Data submissions from all of the participants in the shipment flow are used in risk assessment and to meet compliance standards. Therefore, the ability to provide an automated, guaranteed security compliance:*

- Eliminates extra effort needed, by the carriers or his agent on shipment per shipment basis, to be in compliance with cargo security mandates
- Validates data submitted by any party from multiple data sources prior to loading
- Provides history information regarding every shipment participant to determine the shippers commercial legitimacy before accepting his shipment for booking
- Enables the complete review of cargo movements by customs officials to identify movement deviations and potential issues
- Improves the identification and targeting of higher risk cargo, reducing random inspections
- Reduces the possibility of ship loading errors if used with RFID or Axioseal (3d bar code made of paper placed on shipment)

## Cost Study - Security Compliance

This benefit section examines the cost of shipment delays at the ports. Both the carrier and shipper are affected by these delays. For this study, the costs associated by both carrier and shippers are highlighted.

The daily cost of operating a ship is assumed to be \$50,000 while the average value for a container is \$60,000. Savings are measured by the reduction of lost ship days for the carriers and the inventory financing charges incurred by the shipper.

Options	
Daily Ship costs	\$ 50,000
Value of Container Contents	\$ 60,000
Interest rates for inventory	6%
Rate of port delays (Underdeveloped countries)	20%
Rate of port delays (developed countries)	5%
Percentage of port calls (developed countries)	50%

Port Costs	
Number of port of calls (total)	2,000
Days of delays <sup>1</sup>	250
Cost of delays - ship costs	\$ 12,500,000
Interest on inventory (per ship day)	\$ 9,863
Excess Interest on inventory (total)	2,465,753

Total Cost to Carriers	\$ 12,500,000
Total Cost to Shippers	2,465,753

Savings	
Reduction in delay days <sup>2</sup>	10%
<b>Carrier Savings</b>	<b>\$ 1,250,000</b>
<b>Shipper Savings</b>	<b>246,575</b>

## Notes:

1. The average number of delay-days has been calculated across developed and underdeveloped countries.
2. Ship delays are often attributed to problems with the processing of cargo being unloaded or loaded, the availability of berths, or offshore boarding of the vessel by government agents. The enhanced visibility of shipment data and the associated participants, the transparency of the vessel contents, and the history of the shipment movement provides the tools necessary to improve port operations and reduce the frequency and length of delays at ports.



foundations



standards



benefits



process

# GCEL.NET

## ATTACHMENTS:

Phase I : Secure Cargo Anti Terrorism Coalition (SCAC) Report

Phase II: Humawealth Global Deployment Program Overview

Global Single Window ++

*Provided upon request: [info@gcel.net](mailto:info@gcel.net)*