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Hoang Anh Nguyen
EXPORTING PROCEDURE FOR AN OUT-OF-GAUGE CARGO FROM
VIETNAM TO AUSTRALIA
Bachelor's Thesis 2015

ABSTRACT

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International Business

NGUYEN, HOANG ANH Exporting Procedure for an Out-of-Gauge Cargo from

Vietnam to Australia

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gauge

Exporting has played a critical role for industrial projects in Vietnam. The developing economy has been opened for many global freight forwarders to join its logistics and supply chain market. As a global freight forwarder in Vietnam, Geodis Wilson has potentials to develop its industrial project operations to meet customers' special demand for handling heavy lift or out-of-gauge shipments.

The research aim was to improve industrial project operating system in Vietnam. This aim was reached by fulfilling the research objective, which was to implement an exporting procedure for an out-of-gauge shipment of ABB, a global customer of Geodis Wilson.

Action research was chosen as a major approach to this study. Data were collected mainly through a course of participatory observations in the project and the commissioner's training program. Other sources of information were based on SCM and forwarding of industrial projects.

The main result of this project was a successful exporting implementation according to the customer's requirements. The strengths and weaknesses were revealed for future projects improvements through reflections, highlighting essential aspects for the commissioner's business development. Further research suggestions were made to enhance industrial project operation in Vietnam.

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1 INTRODUCTION

1.1 Research and Development Problem

Over the past 20 years, Vietnam has achieved dynamic social-economic development. In the era of fast-paced globalisation, there has existed a controversial issue over the global supply chain management for international organisations in a developing country (Blancas, Luis, John, Monica, Hua, and Wendy 2014, 11). Especially, the increasing demand for global Industrial Project (IP) transportation requires strong coordination and collaboration between international logistics service providers, which creates a notable chance for global fourth-party logistics service provider (4PL) to enter Vietnamese supply chain market. As a global 4PL with strong presence in Vietnam since 1998, Geodis Wilson has been successfully handling many Industrial Projects as well as other freight forwarding affairs. (Geodis Wilson 2014b). The application of a newly-born concept - 4PL (Mangan et al. 2012, 158; Rushton and Walker 2007, 352) and the underlying opportunities and challenges to develop IP operation in a developing country have drawn my great interest. Thus, this thesis will provide an insight into an industrial project, which my IP team at Geodis Wilson had done for a global account – ABB, to export an out-of-gauge power transformer (an oversized, overweighed freight) from Vietnam to Australia. From that, critical project evaluations, challenges and opportunities analysis will be presented for future development in this field.

The research problem is an existing need for designing an exporting plan for an ABB's power transformer and its accessories to be exported from Vietnam to Australia. It derives from the request of the customer during the researcher's internship from the 2 June to 29 August 2014 at Geodis Wilson Hanoi branch, which enables the researcher to participate in this project. This project is essential for the commissioner since Geodis Wilson imposes a strong emphasis on enhancing IP Operation for customers with the corporate strategies to expand Industrial Project Operation in 2014 – 2015 period. At an industrial level, the solution to this problem will foster the development of a 4PL in supply chain industry, which is stated to be "the future for supply-chain management outsourcing" (Rushton and Walker 2007, 352).

1.2 Research and Development Objective

The research aim is to improve industrial project exporting system in Vietnam. This aim is reached by fulfilling the research objective, which is to export an out-of-gauge cargo of ABB, a global customer of Geodis Wilson.

1.3 Research and Development Question

The main research question is how an out-of-gauge cargo can be transported from Vietnam to Australia. This question arose from ABB's request to the freight forwarder - Geodis Wilson to export an out-of-gauge power transformer and its accessories on 7 July 2014 (ABB's request for quotation is shown in Appendix 2). Accordingly, this issue raises sub-questions for both the customer and the freight forwarder. For ABB, it is questioning what advantages of using a global freight forwarder are. For Geodis Wilson, there are three main sub-questions including what restrictions and regulations applied on industrial project cargo are, which carriers and routes are the most feasible for exporting an industrial project cargo from Vietnam to Australia, and how to satisfy and create added values for the customer.

2 GEODIS WILSON AS A FREIGHT FORWARDER

2.1 SNCF Group

SNCF (Société nationale des chemins de fer français) is French National Railway Company. It is a French public service entity with five divisions that offer a full range of mobility solutions. The group comprises of 5 branches: SNCF Infra, SNCF Proximites, SNCF Voyages, SNCF Geodis and Gares & Connexions (SNCF 2014). As a multimodal supply chain operator, SNCF Geodis ranks the sixth in the world, the top one in France and the fourth biggest in Europe. In 120 countries, Geodis delivers innovative freight shipment solutions based on complementary means of transports (rail, road, waterways, sea, and air) for end-to-end management of customer logistics plans worldwide (Geodis Wilson 2014b). Geodis is described as one of the top influential logistics services providers (Rushton and Walker 2007, 160). In different tables with different ranking criteria for logistics services providers, Geodis is listed in top 25 worldwide (Armstrong & Associates 2014; Joc 2014; Inboundlogistics

2014; Patrick Burnson 2014; Rushton and Walker 2007, 138). The organisational structure of SNCF Group is shown in Figure 1.

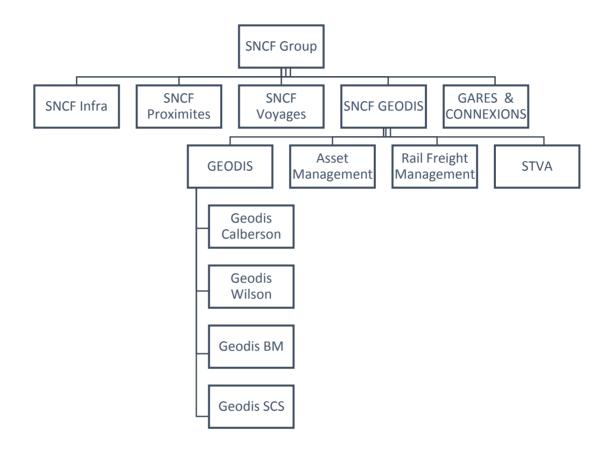


Figure 1. Self-adapted Organisational Chart based on SNCF (2014)

2.2 Geodis Wilson as a Freight Forwarder

Geodis Wilson is the freight management division of SNCF Geodis, a branch of SNCF Group. With an extensive network of offices and air and ocean hubs in over 50 countries, the company has a strong presence in Europe, the Americas and the Asia Pacific region. It has a long history since 1843, being a result of the merger between Geodis Oversea and TNT Freight Management (2007). After the formal acquisition of Rohde & Liesenfeld (R&L) in 2008, the Geodis group became part of SNCF group. The company has the mission: "We help our clients succeed by overcoming their logistical constraints" and the vision: "We are the growth partner for our clients". "Passion, Innovation, Trust, Solidarity and Commitments" are its values (Geodis Wilson 2014b). Key figures of Geodis Wilson are presented in Table 1.

Table 1. Geodis Wilson's self-summarised Key Figures based on Geodis Wilson (2014a)

| Turnover | €2 584 million | |
|-------------|---|--|
| Employees | 7700 employees | |
| Clients | Over 70000 worldwide | |
| Office | +240 Geodis Wilson offices worldwide | |
| Countries | +50 countries with Geodis Wilson presence | |
| Network | +120 countries covered by network | |
| Air freight | 217 683 tonnes air freight | |
| Sea freight | 408 700 (TEU) sea freight | |

Geodis Wilson provides services for 70000 customers worldwide. The services combine 4 elements: Freight Services (move customers' cargo around the globe), value-added services (optimize the flow of the customers' goods), E-solutions (provide customers with full control), vertical market approach (focus on customer's logistics needs). Freight services consist of air freight solutions at different time/cost ratios, sea freight handling both Pipeline LCL (less-than-full container shipments) and Pipeline FCL (full container loads), and sea-air combined services, which is designed to have "better lead time than sea freight, but at a lower price than air freight" (Geodis Wilson 2014b). Value-added services are extra benefits clients can have while the goods are in transit, such as stocktaking, testing, labelling, barcoding, or assembling. E-services (Freight Monitor and Freight Planner) give the clients the overall advanced control through online assess. Competitive solutions for customers are generated through the integration of the above services. These services are demonstrated in Figure 2.



Freight Services
"We move our customers' cargo around the global"



E-solutions
"We provide our customers with full control"



Value-added services
"We optimise the flow of our customers' goods"



Vertical Market Approach
"We focus on our customers' logistics needs

Figure 2. Geodis Wilson's Services (Geodis Wilson 2014a)

Geodis Wilson serves customers globally in various fields, including Aerospace and defence (EADS, Safran, Thales), High Tech (Orange, Seagate), Industry (ABB, Alstorm, Areva, GE, etc.), Retail (Amazon, Auchan, Hermes, H&M, etc.), Automotive (Bosch, Ford, Valeo, etc.), FMCG/Consumer Electronics (Acer, Bic, P&G, etc.). 50 global accounts of Geodis Wilson are indicated in Figure 3. Around the globe, Geodis Wilson has many direct local, regional and global competitors, depending on each of its activities. Those major competitors include DHL, FEDEX, UPS, CEVA, PANALPINA, NIPPON EXPRESS, Norbert Denstresangle, FM logistics, DSV Solutions France, DB Schenker, Kuehne + Nagel, Dasher, ISS (Geodis Wilson 2014a).

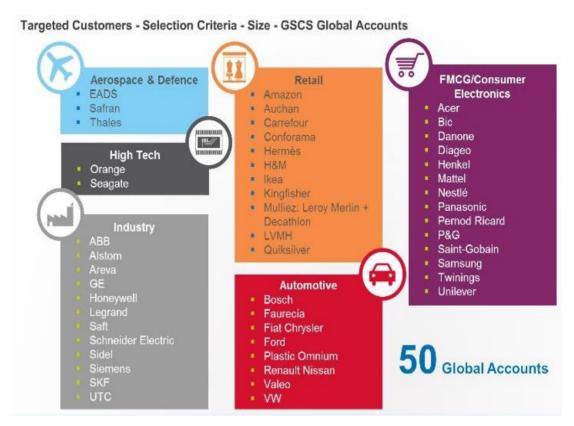


Figure 3. Geodis Wilson's Global Accounts (Geodis Wilson 2014a)

2.3 Geodis Wilson in Vietnam

Geodis Wilson has been operating in Vietnam since 1998. Geodis Wilson have offices in Ho Chi Minh City and Hanoi (48 employees), handling agents in Da Nang, Quy Nhon, Hai Phong, and main Vietnamese provinces (95 office employees in total). All services, administrator activities are complied with Geodis Wilson's regulations worldwide. The activities scope of Geodis Wilson Vietnam covers freight management, customs brokerage, project forwarding, trucking, warehousing and logistics, solutions and special services for specific clients. Key facts about Geodis Wilson Vietnam are indicated in Figure 4.



Figure 4. Geodis Wilson in Vietnam (Geodis Wilson 2014a)

The organisational structure of Geodis Wilson Vietnam in August 2014 is the hybrid structure (shown in Figure 5), which is a combination of different organizational structures and is one of the key characteristics of a fourth-party logistics provider (Christopher 2011, 244).

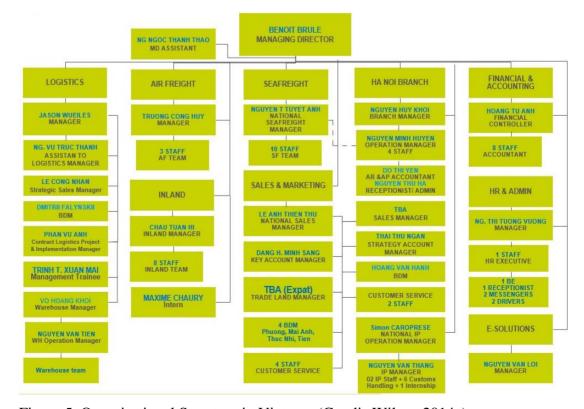


Figure 5. Organisational Structure in Vietnam (Geodis Wilson 2014a)

Geodis Wilson Hanoi branch's departments include Administration, Operations (airfreight, sea freight, inland, and general), Accounting, Sales and Marketing, Customer Service, IP Operation (including Custom clearance and inland handling), Contract logistics & warehouse distribution. In Vietnam, with the four combined element services (Freight services, value-added services, e-solutions and vertical market approach for integrated services), Geodis Wilson has strong local business activities in Fashion Logistics and Industrial Projects Operation. This project was implemented under Industrial Project Operation Department.

Industrial Projects Operation is one of the core services that Geodis Wilson imposes a great emphasis on. According to the company's training guide, Industrial Projects Operation covers the handling of heavy lift, over dimensional, or out of gauge cargos, which demands multi-modal transportation and operating skills, specialised equipment, and a time-specific contract (Geodis Wilson 2014a). With over 400 employees, Geodis Wilson Industrial Projects teams have representatives in 42 countries around the globe. Scope of work covers different segments, including rail, nuclear, oil and gas onshore or offshore, petrochemical, mining, wind energy, and power. With the vertical market approach, Geodis Wilson Industrial Projects division has ABB as a global account (Geodis Wilson 2014b).

ABB in Vietnam is part of ABB group, a market leader worldwide in power and automation technologies Established in 1993 in Vietnam. ABB locates the head office in Hanoi and other offices and transformer factories in Bac Ninh, Da Nang and Ho Chi Minh City. By far, ABB in Vietnam has been one of the most prestigious brands in power and automation technology. Factories in Vietnam are among the ABB focused factories worldwide for manufacturing power and distribution transformers, which have been exported broadly to all over Asia Pacific region (Australia, New Zealand, Japan and Korea) (ABB VN 2014). Geodis Wilson and ABB in Vietnam have had a strong cooperation and experiences in handling these projects. Geodis Wilson's integrated solution of this project is offered to customer ABB. The Head office and Transformer factory of ABB VN's address is Km 9, National Road 1A, Hoang Liet Ward, Hoang Mai District, Hanoi, Vietnam.

3 DEMAND – SUPPLY CHAIN MANAGEMENT AND LOGISTICS SERVICE PROVIDERS

3.1 Demand-Supply Chain Management

3.1.1 Logistics and Supply Chain Management

Logistics and SCM, a widely accepted abbreviation for supply chain management, is currently a fast changing and constantly growing industry (Rushton and Walker 2007, 1). Originally, the term "logistics" is said to have a Greek stem – "Logisticos", meaning "the science of computing and calculating" (Bhatnagar 2009, 88; Mangan, Lalwani, Butcher, and Javadpour 2012, 8). The definition and principles of it has taken almost 100 years to be widely accepted and extended (Christopher 2011, 2). Logistics is defined more systematically as:

"The process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements" (Mangan et al. 2012, 9).

According to the authors, logistics basically requires the managing of material flow (physical flow), information flow and money flow (cash flow). Mangan et al. (2012, 9) also draw attention to the eight rights that logistics involves, including getting "the right product", in "the right way", in "the right quantity and right quality", in "the right place at the right time", and for "the right customer at the right cost". With these involvements, effective logistics management in a multi-channel operation has to reach the four key goals comprising of increased efficiency, improved customer service, increased sales, and improved relationships (Bhatnagar 2009, 89).

Logistics and Supply Chain Management are not new concepts. Whilst these terms are sometimes used interchangeably, they are not the same. Both Christopher (2011, 2) and Mangan et al. (2012, 13) highlight that logistics is part of SCM, which is a wider and boundary-spanning concept. A definition of supply chain management is suggested by Christopher (2011, 3) as the management of multidimensional relationships with both customers and suppliers so as to create a superior integrated solution at less cost to the whole supply chain. Supply Chain Management focus on

the management of such relationships or "multidimensional networks of collaborating entities", which are called supply chains or value chains. Two types of the value chain are suggested by Branch (2009, 13) to comprise of primary activities (inbound and outbound logistics, operations, marketing and sales) and support services (infrastructure, human resource management, technology development and procurement). Thus, it can be implied that the modern integrated logistics is managing the whole value chains. However widely the phrase - supply chain management is used, Christopher (2011, 3) and Gattorna (2009, 388) debate that it is supposed to be "demand chain management". This phrase reflects a broader look over its market-driven principle and represents the complicated evolvement of the shifting terminology from distribution, logistics, supply chain management to currently used demand chain or value chain management (Gattorna 2009, 388).

3.1.2 Global Supply Chain Management and Supply Chain Outsourcing

As mentioned earlier, logistics and supply chain management is currently a fast-changing and constantly-growing industry, with a megatrend of going global. In fast-paced globalisation context of the twenty-first century, the key factors fostering global supply chain management mainly focus on companies seeking more competitiveness and providing more added values for customers (Branch 2009, 13). Rushton and Walker (2007, 19-45) analysed the major global market drivers are global trade, manufacturing moving to low-cost economies, global brands and retailers, information and communication technology (ICT), focus on inventory reduction, consolidation across all industry sectors and new logistics and supply-chain services. Linking the marketplace, distribution network, manufacturing/processing/assembly process and procurement activity to provide a higher level, yet lower cost services for customers is said to be the ultimate goal of global supply chain management (Branch 2009, 2).

Nowadays, outsourcing supply chain management is no longer a new trend to manufacturers as they realise the competitive costs and services provided by outside Logistics Services Providers (LSP). Van Laarhoven et al. (2000) (cited in Fabbe-Costes, Jahre, and Roussat 2009, 72) stated that the whole outsourcing trend has widespread in the industry since 1980s. The increasing demand for outsourcing supply-chain and the fierce competition in the global market foster the emerging of

many different local and global Logistics Services Providers. Consequently, logistics services providers are said to become more popular, taking on more responsibilities and creating more added values for customers (Fabbe-Costes, Jahre, and Roussat 2009, 72). These outsourcing operations and services are offered by LSPs, including third-party logistics (3PL) and forth-party logistics (4PL) providers, shown in Figure 6. An insight into 4PL will be critically presented in the next part of the thesis.

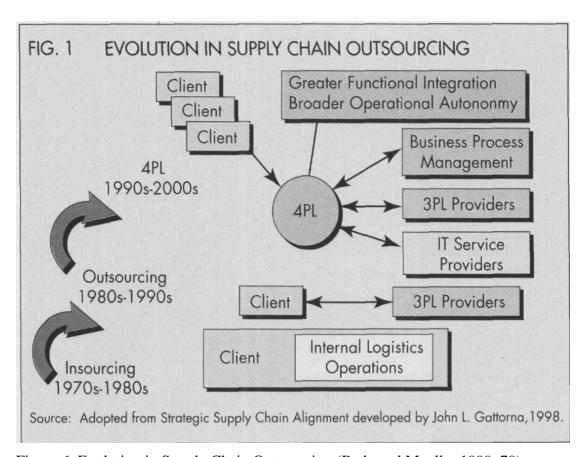


Figure 6. Evolution in Supply Chain Outsourcing (Bade and Mueller 1999, 79)

3.2 Definitions of LSP, 3-4PL

3.2.1 Definitions and Comparisons

Logistics Services Provider (LSP) is an outside party who assists the carriers and customers in handling outsourced logistics activities. LSP is frequently referred to as 3PL (Rushton and Walker 2007, 4). Similarly, Mangan et al. (2012, 154) give a broader view on the categories of LSP, a generic label to depict companies operating in this field. Examples of LSPs are Hauliers or Trucking companies, Freight Forwarders, NVOCC (Non-vessel-owning common carrier), Couriers, or Integrators. However, the authors also confirm the overlap between the pertinent terms of LSP

and 3PL. Fabbe-Costes, Jahre, and Roussat (2009, 76) also reveal that various names had been used to designate LSPs, such as carriers, freight forwarders, forwarding companies, transporters, third-party transport services, subcontracted logistics service partners, logistics operators, supply chain providers, third-party logistics providers (3PLs), fourth-party logistics (4PLs) and other minor terms.

Different people possess different stances on the distinction between 3LPs and 4PLs. (Leuschner et al. 2014, 22; Mangan et al. 2012, 159). Christopher (2011, 223) gives a short description of 3PLs as those offering diverse logistics activities for the customers. Chris Thorby, Managing Director of Container International cited by Branch (2009, 38) stated: "like the traditional 3PL, the 4PL is by definition a service provider; but the 4PLs sphere of activity is substantially more extensive". Fourth-party logistics (4PL) was created and trademarked by Accenture (1996, cited by Rushton and Walker 2007, 352; Mangan et al. 2012, 158) as:

"A supply chain integrator that assembles and manages the resources, capabilities and technology of its own organisation, with those of complementary service providers, to deliver a comprehensive supply chain solution"

Although there is a claim (see Rushton and Walker 2007, 352) that 4PL is only a "refinement" of 3PL, Frost and Sullivan (2004 cited by Win 2008, 676) argue that '4PL has evolved as a breakthrough supply chain solution, comprehensively integrating the competencies of 3PLs providers, leading edge consulting firms and technology providers'. Both Langley et al. (2005 cited in Win 2008, 676) and Rushton and Walker (2007, 354-355) signified a general confusion and dissatisfaction among the terminology of LSP, 3PL and 4PL. According to these authors, significant differences between the two models can be implied and summarised in Table 2.

Table 2. Differences between 3PL and 4PL Models Adapted from Rushton and Walker (2007, 352-353, 367-370) (1) and Win (2008, 684) (2)

| Factors | 3PL | 4PL |
|----------------------------------|---|---|
| Asset basic | Asset based (1) (2) (e.g. warehouse/transport) | Non-asset based (1), (2) (except perhaps information technology systems) |
| Accountability | Part (internally resources or with others) (1) (2) | Total singular accountability (as if internal) (1) (2) |
| Role and target | Logistics (typically), servicing functions such as warehousing, transport or freight (1) (2) | Logistics process, supply & demand chain integration (1) (2) |
| Business impact | Influences time & place utilities (2) | Controls time, place, form, and possession utilities (1) (2) |
| Performance/ Success measurement | Cost (2) | Value creation within client organisation (2) Customer satisfaction and long –term relationship (1) |

The major differences among these various business models lie in the level of organisational relationship. In term of two-tiered relationship structure, 3PL, 4PL and LLP have been segmented and differentiated structurally in Figure 7.

| | Two-Tiere | d Relationship Structure | |
|---|---------------------------|--|--|
| Relationship Attributes | Relationship Structure | Traditional Outsourcing Terms | Service Attributes |
| Partnership Joint Venture Value Based Risk Sharing Few Partners Long Term (5 + years) Common Core Values Alignment and Trust "Coopetition" | Strategic | Fourth-Party Logistics Provider (4PL) Lead Logistics Provider (LLP) Supply Chain Manager (SCM) | Broad supply chain expertise Deep industry domain and consultative skills Advanced technology capability Business process outsourcing, beyond logistics Project management and provider coordination 3PL technology integration Innovation and continual improvement |
| Contractual Fixed and Variable Transaction Oriented Short Term (1 to 5 years) | Tactical | Third-Party Logistics Provider (3PL) Logistics Service Provider (LSP) | Traditional logistics services Modular product offerings Focused cost reduction and service improvement Operating excellence Niche services |

Figure 7. Two-tiered Relationship Structure by Langley et al. (2005, cited by Win. A. 2008, 676)

3.2.2 4PL Model and Classifications

The consulting company Accenture, as the father of 4PL concept, cited by Christopher (2011, 224), lists the key characteristics of a 4PL: Hybrid organisation, typically established as a joint venture or long-term contract, alignment of goals of partners and clients through profit sharing, responsible for management and operation of entire supply chain, continual flow of information between partners and 4PL organisation, potential for revenue generation. Both Christopher (2011, 224-225) and Rushton and Walker (2007, 353) impose an emphasis on four key components of 4PL signified by Accenture to be an architect/integrator, control room (intelligence), supply-chain infomediary, and resource providers. As an integrator and facilitator, a 4PL company offers customers with a total package of logistics solution, from designing, implementing and managing to constantly tracking, improving performance in the supply chain (Ha°kansson & Persson 2004 cited in Sheikh and Rana 2014, 610). Main services and functions of 4PLs are constructed in the following model (see Figure 8), which is alleged to be still evolving.

| Responsibilities | | | |
|-----------------------------|--------------------------|--------------------------------|--|
| 4PL Traditional Model Model | | Supply-chain management layers | Key components |
| | Consultants/ business | Strategy setting & planning | Direction, business model, objectives |
| 4PL | Business | Tactical planning | Demand, supply & inventory planning |
| | | Operational scheduling | Customer order management, distribution scheduling |
| | 3PL | Execution | Inbound, warehousing, transportation, shipping |

Figure 8. 4PL Model (Rushton and Walker 2007, 356)

Taking the commissioner as an epitome, as a freight forwarder, Geodis Wilson describes itself as a 4PL in the market, who 'provides shipping, documentation, customs clearance and brokerage, consolidation, storage and insurance' (Geodis Wilson 2014). In international business law, a freight forwarder is called as the one co-ordinates shipping arrangements with its expertise in global markets, sales, finance, transportation, customs, and other relevant issues (August, Mayer and Bixby 2013, 620-621). From the academic viewpoint, the company should be defined more specifically as a "4PL subsidiary of a logistics group". It is a legally independent firm, which is derived from a logistics group (SNCF group), which contains both LLP and 3PL type subsidiaries in Europe or worldwide (Laurence 2013, 111). Laurence's findings indicate that 4PL can be classified into four groups: 4PL of document engineering for large projects, 4PL of logistics simulation, 4PL subsidiaries of logistics groups and "4PL pure player" (see Figure 9). The first type of 4PL is specialised in document engineering rather than physical goods for large projects (aeronautical, naval, defence, military...). The second group focus mainly on consulting and the simulation of global logistics solutions to develop integrated logistics management programs. Like other firms in the third group - 4PL subsidiaries of a logistics group, Geodis Wilson's activities involves "global, collaborative and flexible solutions for the supply chain, network of partners to provide clients with the benefit of good coordination of outsourced transport flows, visibility and quality, and continuous improvement of budget control". The last group 4PL "pure players" can be referred to as 4PL "perfect pure players", who completely match all criteria of 4PL; and there are very few of them in the real market (Laurence 2013, 112).

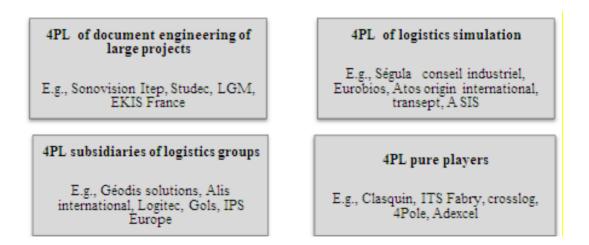


Figure 9. Taxonomy of 4PLs (Laurence 2013, 111)

3.2.3 Advantages and Disadvantages of Using 4PL

Different authors possess different perspectives on the pros and cons of using 4PLs, which can be summarised in the Table 3 based on diverse findings below. A glance at the table of summary reveals that the advantages outweigh the disadvantages and can be classified into four main factors including strategic factors, financial factors, level of service factors and operational factors (Nowodzinski 2010, 116). Strikingly, the three researches (Ha°kansson & Persson 2004; Mason et al. 2007; Persona et al. 2007) cited in both Fabbe-Costes, Jahre, and Roussat (2009, 79) and Sheikh and Rana (2014, 609) share the viewpoint of the most advantageous strength of 4PLs is "their ability to cooperate both vertically with supply chain partners and horizontally with other LSPs". Across the demand and supply chain, 4PL has emerged as an ideal solution for companies in various industries worldwide to have "a single point of accountability" (Win 2008, 675). The author also indicates EVA (economic value added) as the most remarkable contribution of 4PL, which is also seen in the other mentioned papers. At the macro level, not only does the company itself benefit from using a 4PL, but the whole supply chain is also enhanced (Sheikh and Rana 2014, 609). Notwithstanding many benefits of outsourcing to 4PLs, they are hinders in certain cases (Sheikh and Rana 2014, 611). The most notable problem of using 4PLs is a loss of total control, followed by an absence of trust and long term relationship.

Table 3. Advantages and Disadvantages of Using 4PLs based on Fabbe-Costes, Jahre, and Roussat (2009, 78-79) (1); Jun and Malco (2009, 59-63) (2); Nowodzinski (2010, 116) (3); Rushton and Walker (2007, 359-362) (4); Sheikh and Rana (2014, 609-611) (5).

| Advantages | | Disadvantages |
|--|---|--------------------------|
| Strategic Factors | - | Loss of control to an |
| - Allows senior management to focus on core | | outsider (2) (4) (5) |
| competencies (2) (3) (4) | - | Business secrets |
| - Minimising the time and effort spent on logistics | | (sensitive information, |
| (3) (4) (5) | | data, know how, etc.) |
| - Improves customer services (2) (3) (4) | | leak (4) (5) |
| - EVA (economic value added), economies of scale | - | Trust deficiency (2) (4) |
| (1) (2) (3) (4) (5) | | (5) |
| - Building competitiveness (3) (4) | - | Dependency on other |
| - Diverting of risk (3) (4) | | actors in the transport |
| - Provider is a single contact point the management | | and logistics network |
| of multiple logistics providers is handled by a | | (2) (4) (5) |
| single organization (1) (3) (4) (5) | - | Lose relationships with |
| - Allows for provision of broader supply chain | | 3PLs and other |
| services (3) | | providers (4) (5) |
| - Provider can be a resource of a diverse top of class | - | Have to be in long- |
| specialists (3) (4) (5) | | term relationship with |
| Financial Factors | | a 4PL (4) (5) |
| - Saving operational cost, working and fixed capital | - | Risk losing key |
| (1) (2) (3) (4) (5) | | knowledge about their |
| - Reduces capital requirements (1) (3) (4) (5) | | supply chain (4) (5) |
| - Reduces supply chain costs (2) (3) (4) (5) | - | Risk in complex |
| - Increasing revenue(3) (4) | | supply-chain re- |
| - Reduction of liabilities (3) (4) | | engineering project, |
| Level of service factors | | big investment (2) (4) |
| - The freeing of the user company's capital for | - | Hidden costs (2) (4) |
| mainstream use by selling assets (2) (3) (4) | | (5) |
| - The continuous monitoring and improvement of | - | Difficult to make |
| supply chain processes, performance and costs (1) | | customers to pay the |

(2)(3)(4)(5)

- The benchmarking of different supply chain processes against world-class companies (3)
- The continuous monitoring and reassessment of service level achievements
- The development and use of core expertise from all logistics participants (1) (2) (3) (4)

Operational factors

- Data quality, on-time delivery, accuracy in inventory handling, exchange of information electronically etc. (3) (4) (5)
- Simplifies the industrial relations environment (3)(4)
- A new entity makes it easier to eliminate old industrial relations issues (3)
- A new entity should enable the transfer of selective personnel (3) (5)
- A more flexible working environment can be established (3)
- A new company culture can be created (3)

value 4PL create for them due to intangible and highly mobile characteristics of knowledge-based competencies (2)

3.3 Transportation (Freight Forwarder's Perspective)

3.3.1 Multimodal Transportation

Transportation is the physical link between fixed points in the supply chain, which include the customer's sites, suppliers, plants, warehouses and other members in the channels. It is the bridge over buyer and seller gap the physical flow (good flow). (Coyle, Bardi, and Langley 2003, 338). Many factors affect the selection of transport modes namely operational factors, cargo characteristics, transport modes characteristics and cost and service requirements. Firstly, the operational factors or external factors include the nation's infrastructure, market barriers, export control, licences, taxation policy and legislation, financial situation, communication systems, culture, and climate attributes depending on the specific country. Secondly, cargo characteristics influence the routing plan and transport mode depending on the good

value, weight and volume, types of goods, specific terms and conditions (project cargo, heavy lift and out of gauge cargo). Thirdly, different modes of transport offer different advantages and disadvantages, which significantly affect the freight transport. Lastly, the customer cost and service requirements have to be taken into account when selecting the transportation mode.

Multimodal transport service is defined as the combined use of two or more carriers in different transport modes. As different transport modes offer typical advantages and disadvantages, the multimodal or intermodal (in American English) transportation emerges to combine all potential benefits of separate modes of transport (Coyle, Bardi, and Langley 2003, 360). Of all diverse types of multimodal transportation, the dominances are truck-rail, truck-air and truck-sea. In addition, sometimes rail-water, pipeline-water and pipeline-truck are employed. A freight forwarder can enhance the whole integrated supply chains through utilising and coordinating other supply chain members to create the best multimodal system. An ideal multimodal transport system is depicted clearly in Figure 10. As can be seen from the figure, the governmental role critically affects the system, for instance, European countries with deregulated environments show successful multimodal systems, which can hardly be found in the developing economies. Technological advancement, highly adaptive infrastructure and modern integrated logistics in an open economy are the key factors in the ideal system (Zahurul, Dinwoodie, and Roe 2005, 391-392).

In this project, in order to deliver a door-to-door service to ABB, multimodal transportation (truck-sea) was used. It is when the role of Geodis Wilson - a freight forwarder stands out by integrating inland carriers and shipping lines. Sea transportation from port to port turned out to be the best choice in this case. Despite the transit time supply and frequency limit, geographical dependency, sea transport is frequently chosen for the bulk freight, which requires special equipment, container, vessel types and not very time-sensitive.

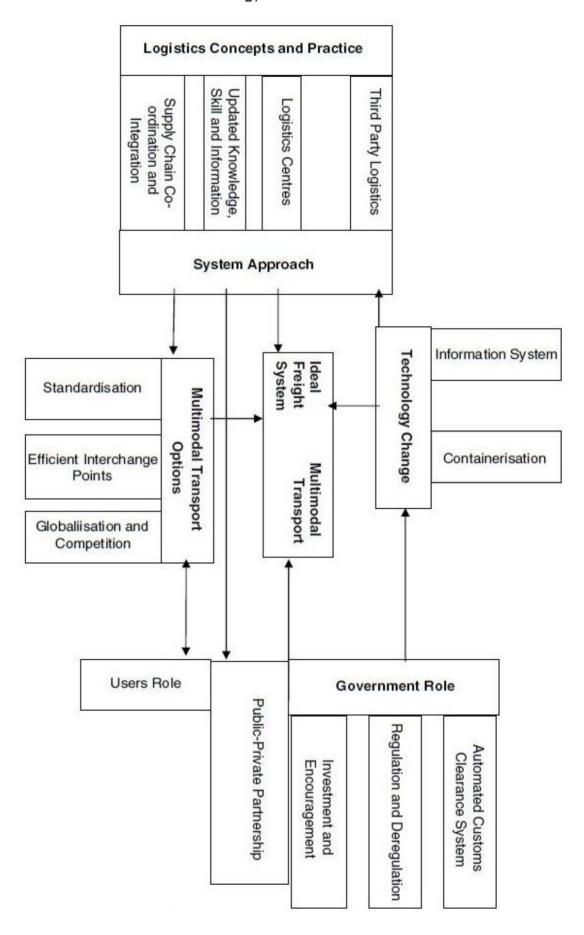


Figure 10. An Ideal Multimodal System (Zahurul, Dinwoodie, and Roe 2005, 392)

3.3.2 Carrier Selection

Identifying a suitable carrier is a key purchasing decision for a freight forwarder since it essentially affects the operation procedure and the firm's reputation. It is vital that the freight forwarder weighs up both the carrier rate (vendor price) and its service performance levels. The lowest transport cost does not equal to the lowest cost for the whole supply chain. After the transport mode is chosen, it is required that a right type of carrier is chosen from common, regulated, contract, exempt or private types (Coyle, Bardi, and Langley 2003, 340-341). The major carrier selection determinants Table 4 reveals that the qualitative evaluation criteria outweigh cost factors, even though cost factors are on top criteria. In the case of an industrial project transportation, the quality factors are far more important since the heavy lift and out of gauge cargo usually requires expertise operating personnel, special equipment and vessels.

Monitoring quality is of great importance for both the carriers and freight forwarders. From the freight forwarder perspective, there are many ways to monitor the shipments. Nowadays, almost all shippers provide all real-time inclusive information of the shipments (E.g. codes, container types, number of lading) via Internet so that the freight forwarders can get access to and keep updated information with every single shipment. These online sites are meant for professional use only and can only be assessable with registered ID. Forwarders then follow the shipment journeys to prepare for custom clearance and notify their customers about possible changes or delays (Portnet, 2014). For instance, for Industrial Project transportation, Geodis Wilson very often use the well-known carrier for ocean freight (AAL, Swires, Maersk Lines, Hapag-Lloyd, MCC) (Geodis Wilson 2014c). The company has a Freight Planner and Freight Monitor for customers to follow the shipment status and Next Gen for internal controls of the shipments with updated information directly from the carriers (Geodis Wilson 2014a).

Table 4. Carrier Selection Determinants Self-adapted from Liberatore and Miller 1995, 87-88 (1); Bardi, Bagchi, and Raghurathan 1989, cited in Coyle, Bardi, and Langley (2003, 344) (2)

| Cost factors | Quality factors | | |
|---|--|--|--|
| 1. Freight costs (1) (2) | 1. Transit time reliability and consistency (2) | | |
| Door-to-door transportation rates (2) Inventory carrying costs (if required in pipeline) (1) (2) Inventory carrying | Total door-to-door transit time (2) Perceived quality of customer services (1) Tracking and tracing capabilities (1) (2) Billing/Invoicing accuracy (1) (2) Electronic Data Interchange (EDI) capabilities | | |
| costs of cycle stock at receiving location (if required) (1) (2) 5. Inventory costs of the | (1) (2) 7. Equipment availability (2) 8. Cargo capacity limitations (1) (2) 9. Service frequency (2) | | |
| required safety stock at the receiving location (1) (2) | 10. Pickup and delivery services and location (2) 11. Line-haul services (2) 12. Quality of carrier salesmanship (1) (2) | | |
| 6. Investment cost (if required) (1) (2) | 13. Long-term relationship potentials (1) (2) 14. Added values (changes negotiation, extra services) (2) | | |
| | 15. Experienced operating personnel (2) | | |

3.3.3 Shipping Documentation

In transporting sea freight, it is essential that related documentation (in either hard or soft format) to be accompany with the freight in order to clarify the detailed information, country of origin, and destination (Mangan et al. 2012, 159). The most important commercial document is the "bill of lading", often referred to as B/L (Ashley 2003, 198; Geodis Wilson 2014b; Coyle, Bardi, and Langley 2003, 382). Different types of B/L are applied in diverse specific cases, such as negotiable

document (to order), non-negotiable document (straight bill of lading), shipped bill of lading, multimodal bill of lading (through or combined bill of lading) (Ashley 2003, 198; Coyle, Bardi, and Langley 2003, 382-384). From a freight forwarder viewpoint, Bill of Lading is issued by the shipping line as proof of carriage and document of title for the cargo shipped. It is used as part of the customs clearance requirement (Geodis Wilson 2014a). B/L marked "clean" means that the consignment was boarded in good condition and B/L marked "claused" indicates that there was something wrong with the goods under inspection (missing or damaged). In case the bill of lading is lost or missing, a "letter of indemnity" is used. Besides the bill of lading, it is usually required a "packing list", providing the consignment details. (Ashley 2003, 198). Packing list is denoted as a shipping document issued by shipper clarifies detailed information about package count, each package's measurement, product counts, etc. (Geodis Wilson 2014b).

3.4 Industrial Project Freights, Containers and Vessel Types

3.4.1 Out-of-gauge and Heavy-lift Freights

An Industrial Project cargo is an out of gauge (OOC cargo), heavy lift (H/L) cargo. For examples, an out of gauge cargo (oversized, overweighed) can be oversized construction equipment, a locomotive, a giant turbine, a part of plane, a factory plant, a wind generator, or a power transformer as it is in this project. According to Geodis Wilson Vietnam, heavy lift and out of gauge cargo is described as the cargo that has external dimensions more than 11.5m length x 2.3m width x 2.2m height and with a weight exceeding 18.5 tons, bulk materials such as pipes, structural steel exceeding 15m in length, or cargo requiring multi crane lifts or lifts considered difficult and/or awkward (Geodis Wilson 2014c). Such OOG freights require special handling methods with technical know-how, modern specific tools and safety and security restrictions (Geodis Wilson 2014b). Handling this typical type demands multi-modal operating skills; and not all LSPs provide this service.

3.4.2 Containers for IP Freights

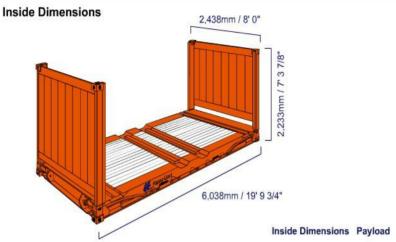
A container is simply defined as a bulk rectangular box offering capacity for commodities holding. Carriers then carry containers instead of commodities.

Nowadays, containers in various sizes and forms have been widely utilised in breakbulk shipping globally (Coyle, Bardi and Langley 2003, 363). Containers, which could be handled by both trucks and ships, were first introduced by Sea-Land in 1905s. Only until late 1960s, did the International Organisation for Standards (ISO) present standardised dimensions for containers. In sea transportation, containers are carried by container ships. The units to calculate container volumes are TEUs (twenty-foot equivalent units) or FEUs (forty-foot equivalent units). For instance, a 40 ft. container is equal to 2 TEU (Mangan, et al., 2012, 20-21). There are many ways to classify container types. Based on purposes, containers can be classified into general cargo containers (20' or 40' standard, hardtop, ventilated), temperature controlled cargo containers (20' or 40' reefer, reefer high cube) and non-containerised cargo containers (Hapag-Lloyd 2014).

In industrial project operation, special types of containers are employed very often, including flat rack, platform, ventilated, open top, hard top, and tank. They are designed with iron-like lashing devices, corner posts and lengthwise rails for non-containerised cargoes (industrial project cargoes) such as out of gauge cargoes, heavy lift or oversize cargoes. Appendix 4 demonstrates the variables of these special containers. In this project, 20' Flat-rack container (20' FR) was used by the chosen carrier - Hapag-Lloyd, one of the largest global container shipping companies. Hapag-Lloyd's containers are all complied with ISO 6346, ISO shipping container dimensions (Hapag-Lloyd 2014). This 20' FR's dimensions are given in Figure 11. Flat-rack containers are premium designs for out of gauge freights and widely used in transport industrial parts, machinery, vehicles, construction materials and other similar components (Shipping Containers 2014).

20' Flatrack





Inside Dimension

| Measure | Length Floor | Length Min. | Width Floor | Width Min. | Height | Height Bottom |
|-------------|--------------|-------------|-------------|------------|-----------|---------------|
| Millimeters | 6,038 | 5,638 | 2,438 | 2,194 | 2,233 | 370 |
| Feet | 19' 9 3/4" | 18' 6" | 8' | 7' 2 3/8" | 7' 3 7/8" | 1' 2 1/2" |

Weight

| Measure | Max Gross | Tare (Weight) | Max Payload |
|-----------|-----------|---------------|-------------|
| Kilograms | 45,000 | 2,900 | 42,100 |
| Pounds | 99,200 | 6,400 | 92,800 |

Figure 11. 20' Flat-rack Container (Hapag-Lloyd 2014)

3.4.3 Vessels for IP Freights Transport

A wide range of vessels are used in sea transportation including bulk carriers, tankers, container vessels, passenger cargo vessels, passengers liners, roll-on roll-off (Ro-Ro) ferries, lighters, barges (Ashley 2003, 197). The type and characteristics of packing of the cargo affect the ship types to be selected (Geodis Wilson 2014c). Especially, there are most frequently used vessels for H/L or OOG cargos, which have been demonstrated in Table 5.

Table 5. Vessels for IP Sea Transport, Adapted based on Geodis Wilson 2014c

| Vessels | Cargo | Suggested ships |
|--------------|------------------------------|---|
| Conventional | Pipes with a high density | A box shaped ship for a safe |
| ships for | (usually small diameter) | optimization of the hold's capacity |
| general | and a high stacking | and there is less broken stowage |
| cargo | capacity | (reduced space utilization) |
| | A mix of unpacked | A multipurpose, tween-deck ship |
| | bulk and packed cargo | provides diverse stowage into |
| | bunk and packed eargo | various holds at the various deck- |
| | | levels. |
| | | Though preferable from a technical |
| | | point of view, it may cause a longer |
| | | overall transit time |
| | Non-stackable cargo such | Some ship owners either refuse to |
| | as steel fabrications that | accept or consider |
| | cannot be stacked result in | dead-freight to be paid for space not |
| | the hold being | utilised |
| | insufficiently employed | uunseu |
| | , , | |
| Self-geared | Heavy lift items | Generally, they have |
| vessels | | hatch sizes that are sufficient to |
| (H/L | | allow under deck stowage |
| carriers) | | |
| Semi- | Heavy lift items, Industrial | Such vessels can offer roll on/roll |
| submersible | Project cargoes | off ramps. It is commercially |
| types | | expensive |
| Non geared | Specific designed and | These are barge, bridge and crane |
| heavy lift | shaped cargoes | carriers with flat tops that need to be |
| vessels | | loaded with shore or floating cranes. |
| Heavy Lift | Cargo transport requires | These are not self-propelled and |
| Barges | short distances in sheltered | require tugs for propulsion. They |
| | waters with draft | are loaded with shore or floating |
| | restrictions at certain | cranes. |
| | destinations | |
| | | |

3.4.4 Vietnamese Regulation Issues

In this project, it is the responsibility of Geodis Wilson trucking sub-contractors to follow and provide feasible documents complied with these regulations. Geodis Wilson has the obligation to check the qualification of the sub-contractor following the regulations. Vietnamese Ministry of Transport imposes specific regulations on handling heavy lift (H/L) and out of gauge (OOG) freights by road transport in Vietnam. The enactment 12, chapter 4 depicts heavy lift and out of gauge cargo. Out-of-gauge freights are those that cannot be disassembled, have the external dimensions (included the up loaded transports) of over 20 m length, 2.5 m width, and 4.2 m height (from the highest point of the road). Heavy lift freights are those that cannot be disassembled and weigh over 32 tons. These freights have to be transported by specialised container transports according to this regulation (Vietnamese Ministry of Justice 2014).

The circular includes detailed description of the regulations impose on H/L and OOG freights and there are major points. First, the license for transporting such H/L and OOG freights via road transportation can be issued only when there is no other feasible transportation plan. Second, once this license has been issued, the responsible authority has to make the road survey and ensure the road quality and provide reinforcement if necessary. Third, in the new roads or newly-upgraded roads, the valid duration of the license is 60 days for one route in each transport project (Vietnamese Ministry of Justice 2014).

3.5 Incoterms 2010

Incoterms, published by the International Chamber of Commerce (ICC), is an abbreviation for International Commercial Terms, which are widely used in international commercial transactions and translated different are into languages. Incoterms are a set of rules defining the responsibilities of sellers and buyers for the delivery of goods under sales contracts for domestic and international trade, which is illustrated in Figure 12 (Export.gov 2014; Geodis Wilson 2014a). Incoterms define the buyer and seller's obligations, delivery costs allocation, and the assumption of delivery risks. In order to use Incoterms, there are four essential aspects that both parties need to remember. Firstly, Incoterms are only rules, not laws. Thus if the contracting parties want the Incoterms to be applied in the contract, they have to be stated clearly in the contract, through such words as: "[the chosen Incoterms rule including the named place followed by] Incoterms® 2010" (Räty 2010, 121). Secondly, it is necessary that the selected terms suitable with the freight types, with the modes of transport, especially with the parties' deliberate obligations. Thirdly, only if the places or ports are indicated precisely, can Incoterms work best. Otherwise, it does not work if names of places are not available. Lastly, whilst Incoterms state the duties and obligations of each contract party, it does not involve pricing, credit terms or compulsory local laws (Geodis Wilson 2014a).

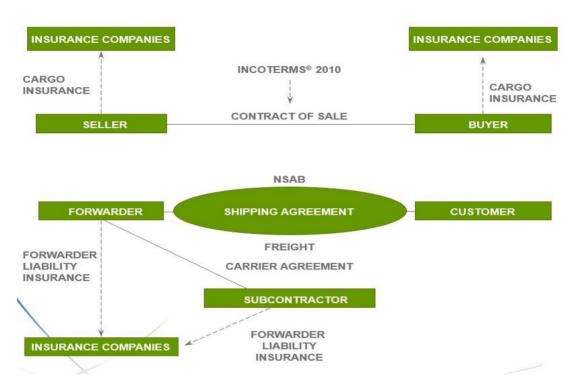


Figure 12. Incoterms 2010 (Geodis Wilson 2014a)

In arrangements for goods transportation with the participation of a freight forwarder, it is the freight forwarder's responsibilities to understand and interpret the application of Incoterms to the clients (August, Mayer and Bixby 2013, 621). Since the creation in 1936, Incoterms have been periodically updated in new revision with the latest version is Incoterm 2010. In this project, Incoterms 2010 are employed. Incoterms 2010 comprise of 11 Incoterms rules including rules for any mode of transport (EXW, FCA, CPT, CIP, DAT, DAP, DDP) and rules for waterway transport (FAS, FOB, CFR, CIF) (see Figure 13). Besides, are used only in sea and inland waterway

transport. Incoterm 2010 matrix is shown in Appendix 3, which indicates diverse obligations and rights for sellers and buyers in specific cases.

Rules for any mode or modes of transport



DAT Delivered At Terminal (insert named terminal at port or place of destination) Incoterms® 2010

DAP Delivered At Place (insert named place of destination) Incoterms® 2010

DDP Delivered Duty Paid (insert named place of destination) Incoterms® 2010

Rules for sea and inland waterway transport



Figure 13. 11 Incoterms 2010 (Geodis Wilson 2014a)

In this door-to-door shipment of account ABB, DDP term is applied: "DDP Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715". DDP - Delivered Duty Paid is the rules may be used regardless of mode or modes of transport. According to ICC According to ICC (Räty 2010, 185), DDP means: "The seller delivers the goods when the goods are placed at the disposal of the buyer, cleared for import on the arriving means of transport ready for unloading at the named place of destination". All the costs and risks involved carrying the goods to the agreed

place of destination must be covered by the seller. The seller is also obligated to clear the goods for import/export, to pay any necessary duty for import/export and to carry out all official customs formalities (Räty 2010, 185).



Figure 14. DDP Incoterm 2010 (Geodis Wilson 2014a)

Figure 14 illustrates the delivery point in DDP term. In DDP term, the seller bears the most obligations. In contrary to EXW term denoting the minimum obligation of the seller, DDP term indicates maximum obligation of the seller. Because the seller is accounted for all the costs and risks to the agreed destination, it is highly advisory that the parties make clear agreement on the deliver place of destination (Geodis Wilson 2014b). This term is advisory only if the seller is able directly or indirectly to obtain import clearance. In case the buyer wishes to bear all risks and costs of import clearance, the DAP term should be employed. Unless expressly agreed in the sale contract, any VAT or other taxes payable upon import are the seller's account. Unless otherwise agreed in advance, at the place of destination, should the seller incur with costs due to unloading under its contract of carriage, the seller is not obligated to cover such costs for the buyer (Räty 2010, 185). Obligations of the buyer and seller are summarised in Table 6.

Table 6. Obligations on Buyer and Seller, Self-adapted based on Räty (2010, 186-191)

| Obligations | Seller (S) | Buyer (B) |
|--|---|---|
| General obligations (1) | Provide goods and commercial invoice in conformity with the sale contract and any other evidence of conformity. All relevant documents may be provided in equal electronic form. | Pay the price of goods as agreed in the sale contract. All relevant documents may be provided in equal electronic form. |
| Licences, authorisatio ns, security clearances and other formalities (2) | At its own risk and expense, the seller must acquire any export and import licence and other authorisation and carry out all necessary customs formalities for transporting through any country (if applicable). | Assist the seller in obtaining any importing, export licences or any other required authorisation (if applicable). |
| Contracts of carriage and insurance (3) | Responsible for the carriage at its own expense (the right goods at the right place of destination as agreed in the contract of sale). No obligation to the buyer's making a contract of insurance, but provide the buyer (if requested) with necessary information for obtaining the insurance. | No obligation to the seller's making a contract of carriage. No obligation to the seller's making a contract of insurance, but provides necessary information for obtaining the insurance. |

| Delivery | Must deliver the goods by | Take the delivery of goods |
|--------------|---------------------------------|------------------------------------|
| and Taking | placing them at the disposal | when they have been delivered |
| Delivery (4) | of the buyer on the arriving | as depicted in (S4). |
| | means of transport ready for | |
| | unloading at the agreed point, | |
| | if any, at the named place of | |
| | destination on the agreed date | |
| | or within the agreed period. | |
| Transfer of | Bears all the risks until the | Bears all the risks from the |
| risks (5) | goods have been delivered as | time the goods have been |
| | envisaged in (S4), with the | delivered as envisaged in (S4), |
| | exception indicated in (B5). | except for: |
| | | - Buyer fails to fulfil (B2) |
| | | - Buyer fails to give notice as |
| | | envisaged in (B7) |
| | | In that case, the buyer bears all |
| | | the risks of loss or damage to |
| | | the goods, as long as the goods |
| | | have been clearly identified as |
| | | the contract goods. |
| Allocation | Must pay for costs from (S3), | Must pay all costs from the |
| of costs (6) | all costs of delivery until the | delivery point in accordance |
| | delivery point in accordance | with (S4), all costs to take the |
| | with (S4), any charges for | delivery of goods, any |
| | unloading at the place of | additional costs occurred if |
| | destination, (if applicable) | fails to fulfil its obligations as |
| | costs of customs formalities | envisaged in (B2) and (B7). |
| | prior to delivery in | |
| | accordance with (S4). | |
| Notices to | Give buyer any notice needed | Give the seller sufficient notice |
| the counter | for taking the delivery of | thereof, whenever it is entitled |
| party (7) | goods. | to determine the time within an |
| | | agreed period and/or the point |

| | | of delivery within the named |
|--------------|---------------------------------|-----------------------------------|
| | | destination. |
| Delivery | Provide the buyer any | Accept the proof of delivery |
| document, | document needed for taking | provided as envisaged in (S8). |
| Proof of | delivery of the goods in | |
| delivery (8) | accordance with (S4) and | |
| | (B4) at the seller's expense. | |
| Checking- | - Pay all the costs of checking | No obligation for paying the |
| Packaging- | operations (checking quality, | costs of any compulsory |
| Marking | measuring, weighing, | inspection of goods by the |
| (Seller) | counting) needed for the | authority of the import or |
| Inspection | delivery of goods as | export country. |
| of goods | envisaged in (S4) and the | |
| (Buyer) (9) | costs of any pre-shipment | |
| | inspection. | |
| | - Responsible for the goods | |
| | packaging suitable for the | |
| | transport, unless otherwise | |
| | agreed with the buyer prior to | |
| | the sale contract. | |
| Assistance | - Provide or render to the | - Advise the seller, in a timely |
| with | buyer, in a timely manner as | manner, of any security |
| information | requested by the buyer, any | requirements in order to |
| and related | documents and information | comply with (S10). |
| costs (10) | needed for the transport of | - Reimburse the seller for all |
| | the goods to the final | costs and charges occurred in |
| | destination (if applicable). | providing or rendering |
| | - Reimburse the buyer for all | assistance according to (S10). |
| | costs and charges occurred in | - Provide the seller, in a timely |
| | providing or rendering | manner, with any documents |
| | assistance in obtaining | and information for the |
| | documents and information | transport, export and import of |
| | as envisaged in (B10). | the goods through any country. |

4 METHODOLOGY

4.1 Participatory Action Research (PAR)

Action research was chosen as a methodology for conducting this work. It is widely introduced in diverse definitions and models, although there has not existed a universally accepted definition of action research. Kurt Lewin (1946), the first person to bring the term Action Research in English usage (cited in Cohen, Manion and Morrison 2007, 305; McTaggart 1997, 28; Koshy, Waterman and Koshy 2011, 4) demonstrated action research as a spiral process with each step containing planning, acting, observing and evaluating the result of action by. Later, action research is defined comprehensively as a practical intervention and the critical evaluation of such intervention's effects. It is deemed to be a useful means for a small-scale change and improvement (Cohen, Manion and Morrison 2007, 297). Similarly, Kananen (2013, 40) shares the view that action research must be purposeful and practical, bringing about change or development. Principles and characteristics of action research had been suggested by many predecessors and summarised comprehensively by Kemmis and McTaggart (1992) cited in Cohen, Manion, and Morrison (2007, 298), including key principles: improving education, developing through the self-reflective spiral, establishing self-critical communities, giving justification, making critical analyses, starting with small cycles of planning, acting, observing and reflecting, being a participatory, collaborative and systematic learning process and other minor criteria. In action research methodology, emerge three major trends: cooperative action research, participating action research and mere action research (Eskola and Suoranta 1998, 128, cited in Kananen 2013, 43).

The model of an action research is contemplated differently by different people in different settings. On one hand, whilst Lewin (1946, cited in McTaggart 1997, 28) indicated four stages of action research (planning, acting, observing and reflecting), others believed that it can be categorised in two basic stages diagnostic and therapeutic (Cohen, Manion and Morrison 2007, 304). On the other hand, McNiff (2002, cited in Cohen, Manion and Morrison 2007, 305) codified action research into eight steps (review current practice, identify an aspect needs improving, imagine a way forward in this, try it out, monitor and reflect, modify the plan, evaluate the modified action). A more appealing model denoted by Kemmis and McTaggart (2000,

cited in Koshy, Waterman and Koshy 2011, 5) demonstrates that action research is a continual self-reflective spiral, shown in Figure 15. This is the action research model chosen for designing this research.

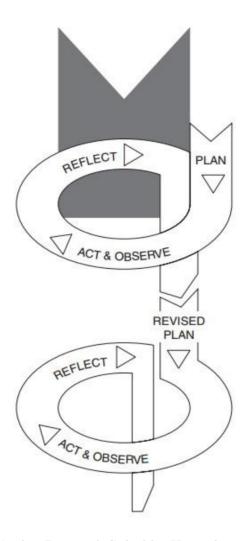


Figure 15. Action Research Spiral by Kemmis and McTaggart (2000, cited in Koshy, Waterman and Koshy 2011, 5)

Recently, another model of action research was introduced by Kananen (2013, 42), depicting a four-stage process, including action planning and objectives setting, action or change, evaluation and follow-up. Despite these variations, all mentioned authors agree that action research does not have an ending point since after all stages, the spiral of action initiates again to enhance the development process. Thus, the action researchers should adopt and adapt the most suitable model accordingly.

Participatory Action Research, one of the three major trends of action research, has been chosen as an approach for this bachelor thesis since it is suitable for the R&D objective to design the most feasible exporting plan for the client. The principle of PAR is a group activity, where different participants come together to work on "a thematic concern", engaging people from both the academy and the workplace (McTaggart 1997, 28-30). To specify, Participatory Action Research (PAR) is a group of people such as informal or formal networks, partners, communities working together to get a work done, through diagnosing a situation, acting to improve it, evaluating effectiveness, reflecting and planning the next steps. Through PAR progresses cycles, even the complicated problem will show improvements (James, Milenkiewicz and Bucknam 2008). Participatory Action Research has been utilised as an improving method in various fields including social works, education, cultural practice, economics, and community development. Thus PAR is adopted differently by different people (McTaggart 1997, 27).

4.2 Research Design

PAR is beneficial and suitable for this research as it contains the mentioned characteristics of a participatory action research. Four stages of this research are illustrated in Figure 16. Firstly, the research problem itself emerged from the working life (practical elements). The need to make an exporting plan for ABB requires continually refined data, methods and interpretation through the whole process. Secondly, as a researcher of PAR, the author participated in this project as an assistant in Industrial Project team at Geodis Wilson Vietnam from July to August 2014 (participatory and collaborative and systematic process). As Kemmis and McTaggart (2000, cited in Koshy, Waterman and Koshy 2011, 4) indicate, participation and self-reflectiveness are in nature of action research. Thirdly, This PAR project objective is to create an integrated exporting solution for the customer and ultimate aim is to foster the development of a 4PL in supply chains industry in Vietnam. Since the major part of this research is based on problem observations, acting, implementing a plan, reflecting and revising for improvements, action research is the most feasible method approach.

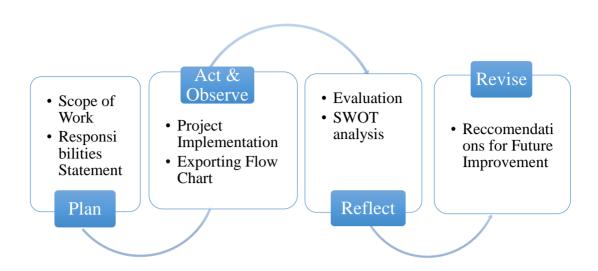


Figure 16. Research Stages

Within the scope of this research, one intervention has been designed according to the action research model of Kemmis and McTaggart (2000), and adapted according to this research strictures shown in Figure 16. In the initial stage, planning, the situation is diagnosed to formulate the scope of work and define general responsibilities for each contracting party. In this stage, desk researches are conducted via Internet, comparing with the previous similar projects and direct information from customers request. In the second stage, the actual exporting plan is implemented under the real time requirements. Data are collected from acting and observing the whole process. In the third stage, the whole exporting procedure is reflected and the results are critically evaluated. The reflection is done from the researcher's viewpoint as a participant in the project and comments from the other team members at Geodis Wilson. That means the reflection combines both self-reflections and peer-reflections. Followed by the reflecting stage, suggestions are proposed for improvements through content analysis of the assembled data. Thus, throughout this practice-based research, primary data are acquired from the participating parties of the project and secondary data are mainly provided by the commissioner.

5 EXPORTING PROCEDURE

5.1 Planning

5.1.1 Scope of Work

The planning initiated with the problem diagnosing on ABB's request. On 7 July 2014, ABB sent a request for quotation for bidding the door-to-door shipment of its power transformer (see Appendix 2). This request indicated the timeline requirements as: Readiness of cargoes at ABB's factory in Vietnam was 17 July 2014 and readiness of site in Australia was 17 August 2014. Geodis Wilson was liable for all risks and responsibilities under Incoterm 2010 DDP agreed in this project. Geodis Wilson offices in Vietnam, Hong Kong and Australia worked together to complete this project. In this thesis work, the presented scope of work are mainly from Geodis Wilson Vietnam side.

The freight was defined as an industrial project cargo which includes a power transformer (a main tank draw is presented in Figure 17) and its accessories. The main tank is out-of-gauge with dimensions as Length x Width x Height: 438x214x363 cm/weight 24.8 tons without oil (+/- 3%). Its accessories were in a 20'DC (Dry Container) and a 40'DC. The cargo was required to be delivered from ABB's factory in Hanoi, Vietnam to site address Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715. The chosen Incoterm 2010 was "DDP Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715".

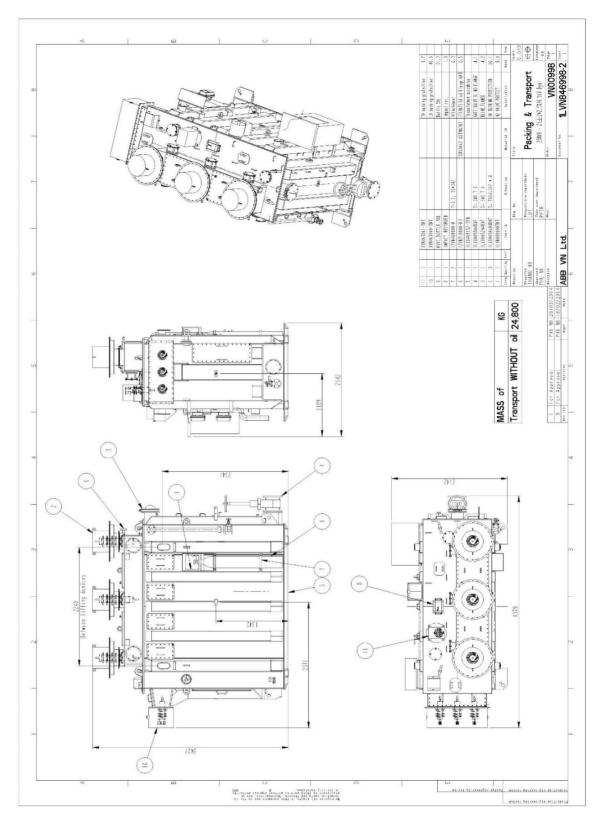


Figure 17. ABB's Main Tank Drawing (ABB VN 2014)

5.1.2 General Responsibilities

Regarding Geodis Wilson's responsibilities, the Project Manager, Mr. Nguyen Van Thang and project team (coordinators and assistant) were responsible for the overall management of the freight forwarding contract, liaising with other Geodis Wilson offices worldwide in Hong Kong (the transit point) and Australia (the final place of delivery). Our project team was responsible for the movement of cargo from Hanoi, Vietnam and liaising with the project management team in Brisbane, Australia. Each global Geodis Wilson office would emulate the procedures identified above in relation to cargo procured from vendors in their specific country of supply and will report back to the Project Manager. Geodis Wilson was liable for all risks and responsibilities under Incoterm 2010 DDP agreed in this project. Responsibilities might change when the procedure would be reviewed prior to implementation or in the course of the project to take into account any changing circumstance.

In the customer side, ABB was responsible for providing advanced information on each shipment relevant to the transformer and its accessories readiness dates, points of delivery, weight and dimensions, in the form of a copy purchase order (PO) or electronic transfer of the PO details as necessary. ABB was liable for assisting Geodis Wilson to obtain vendors shipping documentation, transport and lifting/securing drawings as required and any other relevant information to ensure the safe and expeditious shipment of cargo. Moreover, ABB had to ensure that Geodis Wilson would be informed of any changes, alterations and amendments to the PO, cargo delivery dates and shipping specifications. Advanced information had to be provided on all over dimensional consignments as well as sensitive and critical material to enable Geodis Wilson to plan accordingly. The following information had to be delivered to all parties including: cargo type released for shipment with full description, mode of transport, delivery point, shipping priority, quantities, weight and dimensions, collection address and contact person, terms of delivery, date of readiness, delivery address, hazardous rating (if applicable).

In the carrier side, Hapag-Lloyd's responsibilities included informing advanced notification of readiness of the equipment/material in accordance with the purchase order, confirming proposed location of material, shipping specification and other relevant information. Hapag-Lloyd was obligated to follow delivery conditions and

other shipping and documentation instructions as specified in the purchase order and in accordance with Incoterms 2010. All hazardous aspects had to be identified in advance and provide all necessary documentation for the safe transportation of the transformer. All marking and documentation requirements were made complied with in accordance with the purchase order. In addition, Geodis Wilson had to be provided with all relevant information required to obtain permits, escorts and other transportation requirements. All the necessary shipping documentation, manuals, data drawings had to be provided in the time fame specified in the purchase order or in an expeditiously manner.

5.2 Act and Observe

5.2.1 Exporting Process

As agreed in the contract with ABB, this project was conducted according to the sea-exporting procedure for an Industrial Project cargo of Geodis Wilson. Figure 18 illustrates the sea-exporting flowchart under this Industrial Project operation. From the initial stage, Geodis Wilson was responsible for implementing both communication and work process system according to Geodis Wilson method statement (see Appendix 7). As other sea-exporting project, the project involved the close co-operation of all departments at Geodis Wilson's office, namely Sales and Customer Services, General Operation, IP Operation, and Accounting departments. Collaboration and cooperation enable the whole process to run smoothly.

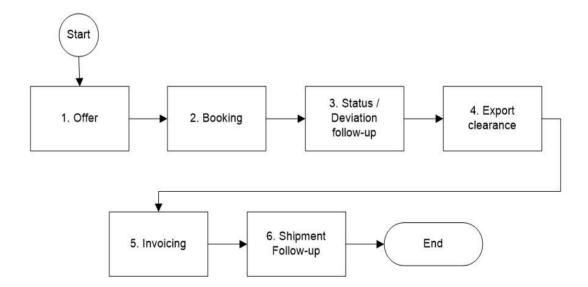


Figure 18. Sea-Exporting Procedure Flowchart (Geodis Wilson 2014)

Firstly, Sales Manager was responsible for keep direct contact with the ABB and offer our quotation in accordance with the Global Sales Process (GSP). When the service request was accepted, Geodis Wilson's Customer Services Department was liable for booking, one of the most essential stage directly affecting the profit margin of the whole project and the smooth operations of the following stages. Customer Services Executives selected the most suitable shipping service to match the lead time requirements of ABB. The selection of container carrier was to be agreed with ABB based on the following factors: Regularity of service from the port of loading, transit time to designated port of discharge, Availability of equipment especially special equipment and flat rack container, routing of cargo (via hubs will cause longer time and additional handling), availability of the carriers' operating time (many carriers operate on weekly basis and have specific close date and time for vessels). Thus, regarding these factors, the booking was made with Hapag-Lloyd as the operating carrier for this shipment (see Hapag-Lloyd quotation for this shipment in Appendix 5). The shipment information was then registered in Geodis Wilson's Freight Planner system. Based on the global service codes, the relevant status was constantly updated in Freight Monitor. Bill of Lading and other additional shipping documents were printed out. As soon as the shipment registration in Freight Planner, all shipment information was sent to ABB. All parties had then the access to the Freight Planner for checking the shipment status.

The next stage involving both IP Operation team and Sea Operation team was the most essential stage of the whole operating process. I was participating with IP Operation team in this stage, which will be presently in detail in the next part of the thesis. When the shipment information was updated into Freight Monitor, a route map was created based on route investigation and agreement. All important events and status were reported through Freight Monitor. Since there was no deviation, the shipment was closed up and two executives of IP Operation team were responsible for doing export clearance according to Vietnamese local system and regulation.

Then, it was the responsibility of the accounting department to complete invoicing. Ms. Yen – the accountant at Geodis Wilson Hanoi branch was liable for invoicing according to the agreement with all related parties, which could be either credit invoices or debit invoices.

In the final stage, IP operation coordinators together with a sea-exporting executive kept following-up till the shipment's closure and matching the estimated costs against accrual. All costs and financing for the subcontractor and agent were split according to "The Global Profit Split Policy" of Geodis Wilson.

5.2.2 Project Implementation

The Project Manager (Mr. Nguyen Van Thang) was mainly responsible for the overall management of the movement of ABB's transformer, liaising with Geodis Wilson Australia office. As an internship assistant in the team, I was assisting the project implementation such as joining the route site survey, site investigations at ABB's factory in Ngoc Hoi, Hanoi, taking photos record, documentation, job file record for internal usage and other multiple tasks. Simultaneously, during the whole process I could observe the project implementation involved the below activities of IP Operation team. Constant interface were maintained with ABB VN representatives on all technical issues relating to the shipment of the transformer and review on all appropriate vendor documentation, transport drawings on the criteria agreed with ABB VN. The progress with information regarding dates of readiness, weights and dimensions were then monitored.

IP manager and coordinators attended meetings at ABB VN transformer factory in Km 9, National Road 1A, Hanoi, Vietnam to discuss shipments and propose lifting arrangements, sea fastening design and special dunnage requirements. The Project Manager presented a detailed logistics plan for the transformer to ABB VN. Transport drawings detailed rigging procedures, rigging drawing plans showing lifting points, lifting instructions for heavy lift equipment and calculations detailing safety.

IP team liaised with a shipper (Hapag-Lloyd), a road transporter (supposed not to be named here) and ABB engineering team to jointly develop the following issues that relate to the out- of-gauge transformer and its accessories: road transport details including wheel/axle loads and total payload, safe sea-fastening design, stowage plan, loading studies, ballasting calculations, sailing plans, stability calculations, health, safety and environment (HSE) procedures. Together with the transporter, IP team carried out and approved route surveys according to agreement with ABB VN, arranged for any remedial work to street furniture including the removal and

replacement of obstructions, arrange the relevant road transport permits (actually obtained by the sub-contractor) and private/police escorts as required.

The IP coordinator and assistant attended pre-shipment inspections of the transformer and its accessories prior to shipment. All special requirements were agreed with ABB VN for cranes, lifting equipment and stevedoring labour as dictated by the out of gauge item to be shipped and local regulations. It also required co-ordinating and liaising with ABB warranty surveyor on technical matters relating to the operation. IP manager and coordinators liaised with Geodis Wilson office in Brisbane, Australia advising on shipment progress and movements of the transformer and accessories to ensure the smooth and expeditious clearance through customs to allow for direct delivery to site according to DDP term.

Transportation drawings were received for review, illustrating lifting and slinging points, overall sizes and dimensions of each item, position of all nozzles and protruding parts, centre of gravity (COG), position of lifting lugs, position of securing/lashing points, spreader requirements, types of slings and lifting equipment required. IP team assessed the feasibility of shipping the transformer on flat rack container of Hapag-Lloyd and discussed the planning of vessels with Hapag-Lloyd to ensure that delivery schedules would not be compromised. It is a critical issue due to the worldwide shortage of heavy lift vessels. Both parties reviewed necessary stowage plans, lifting arrangements, vessel selection, port selection, and lashing/securing arrangements.

Regular meetings were held with our heavy lift and out-of-gauge transport specialist and ABB VN's representatives to discuss lifting arrangements, operations, special dunnage requirements and vessel selection. Pre-shipment inspections were performed prior to loading as required, complied with loading procedures at the port of loading (POL: Haiphong VN). All documentation had been properly completed. All hydraulic trailers, river and sea barges, crane age, specialised lifting equipment and stevedore labour were arranged as specified by local regulations for the receiving operation. All lashing equipment and sea fastenings are provided in readiness for the loading operation. Regarding the specialised heavy lift vessel chartered by Geodis Wilson, a safe and suitable berth was available prior to the vessel's arrival at both the port of loading and discharge.

A stowage plan and loading sequence were approved ensuring that each item was brought alongside in accordance with a pre-arranged schedule. Prior to loading, the following information was to be obtained from the carrier for loading and discharging operations: quay loadings, quay height, tidal data, charts depicting berth location and sea access, recent hydrological survey, plans showing dredging channels, plans showing locations and strengths of mooring bollards, details of any restrictions that might limit certain loading operations. IP team kept daily contact with Hapag-Lloyd regarding vessels position, voyage progress and estimated time of arrival (ETA) at destination and provided count down on ship's arrival at both the Hai Phong and Brisbane port. IP coordinators informed ABB VN at destination of shipment pre-alert advice and agreed the location for discharging the equipment on or off site.

Geodis Wilson Brisbane in Australia would then be responsible for providing a transport supervisor to oversee all transport to the site, establishing the route survey completed in Australia, the precise routing to site, validating all necessary permits and required escorts. As the final step, Geodis Wilson in Australia was arranging suitable road transport for ABB's transformer to the final delivery point at Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715.

For internal records according to Geodis Wilson's rules, this shipping release had a sequentially numbered job file containing all relevant correspondence. This job file remained open until Geodis Wilson had safely delivered the cargo to final destination, appropriate documentation has been issued by the receiver and all financial matters have been agreed and finalised. Coordinators with assistant were recording the job file and the project manager had the responsibility to manage, control and audit all project job files in Geodis Wilson's archives.

5.2.3 Project Results

a. Receiving and picking up cargoes at ABB's factory and inland transportation

In charge of Geodis Wilson Vietnam was Mr. Nguyen Van Thang – IP Operation manager as the controller and Mr. Doan Minh Huan – IP coordinator as the site handler. On 17 July 2014, the transformer and its accessories had been ready at ABB's factory. The transporter's in-charge representatives and Geodis Wilson's IP

coordinator and the assistant were at the site to receive and pick up cargoes for inland transportation from the factory to Hai Phong port on 26 July 2014. Before that, site visit had been performed to confirm crane size requirement and confirm ground compaction for lift loading. The forwarder and transporter were trained at ABB site for safe work method at the factory for about 3 hours. All equipment to be used at ABB's factory include a low bed trailer to load main tanks with capacity over 35 tons, a suitable crane with lifting capacity over 35 tons, and lashing materials in accordance with ABB's requirements. Figure 19, recorded by the author, shows the moment when the transformer was uplifted at the factory.



Figure 19. Picking up Transformer at ABB Factory (Geodis Wilson 2014)

The trailers parked in nominated places at ABB factory for safety loading on 26 July 2014. The loading works was done by ABB Ltd. The drivers and Geodis Wilson's supervisors followed the instructions and regulations of ABB factory when receiving the cargoes. Long bamboo rod were placed & tied, on the top, length ways of the main tank, to prevent the main tank from touching the overhead wires (see Figure 20).

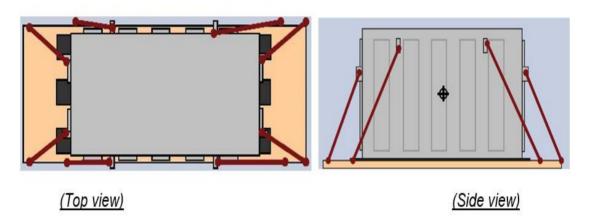


Figure 20. Top View and Side View of the Main Tank (Geodis Wilson 2014)

b. Road transportation to the sea port, Vietnam

The transformer was transported from ABB factory via the National road No. 1, then moved into the Highway No.5 to Haiphong port on 27 July 2014. The distance is about 120 Km. It is the common road route and suitable for transportation (see Figure 21).

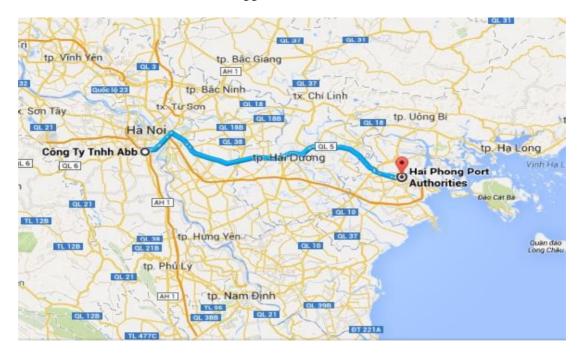


Figure 21. Route Map from ABB Factory to Hai Phong Port

During the transportation, the driver kept the trailer at slow speed, regularly checked the vehicles, equipment if there was any error or loosen at lashing points. The driver also had to check the height clearance all over the transport route like crossing bridge, overhead electrical wires. When the trailers with the main tanks arrived at Haiphong port, off-loading arrangement was followed as the instruction from the port authority and carrier. The carrier cleaned the main tank at the port, unloaded the main tank from trailer onto flat container at CY by 45 tons off-shore crane, and did the lashing as ocean transportation standard. A flat rack container for accessories was delivered to CY in Haiphong port as nominated by Hapag-Lloyd, unloaded from trailer to CY by 45 tons container lifter and reload onto vessel by off-shore crane (see Figure 22 for illustration purpose only).



Figure 22. Transformer at Hai Phong Port (illustration by Geodis Wilson 2014)

c. Export Custom Clearance

Export customs declaration was completed at Bac Hanoi customs department before or at the receiving time at ABB factory. The transferring customs clearance at export port in Haiphong was done by other IP team executives who are responsible solely for customs clearance. It took 1 day for customs clearance and 1 day for customs inspection. Sufficient supporting documents from ABB were required for the export custom clearance. Export custom clearance procedure in Vietnam is illustrated in Appendix 6.

d. Sea Transportation

Based on the dimension and weight of the main tank, container vessel was used; the main tank was loaded onto 20ft flat rack container. The container with main tank was stowed under deck and lashed as standard for ocean transportation. The vessel schedule for accessories is shown in Table 7. Vinacontrol Group Corporation, the most credible inspection organization in Vietnam, was asked by Hapag-Lloyd to inspect the main tank on the flat-rack container, ensuring the conditions of the

cargoes. Vinacontrol survey was done after main tank lashed on board (27 July) and report to ABB VN on 28 July 2014 (see Appendix 9).

Table 7. Vessel Schedule for ABB's Shipment

| Location | Date | Remarks |
|---------------|----------------|---|
| ETD Haiphong | 27 July 2014 | SKY PRIDE v.201N (IMO no. 9312468, built 2005) |
| ETA Hong Kong | 29 July 2014 | (1110 no. 9312 100, built 2003) |
| ETD Hong Kong | 03 August 2014 | CAP FERRATO v.422S (IMO no. 9623673, built 2012) |
| ETA Brisbane | 22 August 2014 | (1110 no. 7023073, built 2012) |

e. At transit port – Hong Kong (29 July – 03 August)

In charge of Geodis Wilson Hong Kong was Mr. Besty Choy, Sea freight Operation Executive. Cargo with container would be unloaded to container yard (CY) storage by gantry crane capacity 70 tons and loaded on the 2nd leg vessel by gantry crane capacity 70 tons. Geodis Wilson Hong Kong would take the pictures of cargo at container yard storage area and send the report to ABB VN.

f. At port of discharge – Brisbane (22 August)

In charge of Geodis Wilson Australia was Ms. Melinda Butler, Project Coordinator Industrial Projects. The subcontractor of Geodis Wilson in Australia was BLIS Logistics Containers with accessories were unloaded from the vessel by gantry crane 60 tons to CY then unpacked at storage area, reloaded to trailer before delivered to site. Geodis Wilson Brisbane was then responsible for oversee all transport activities of the transformer and its accessories to the site. The related documents and pictures were taken and recorded in the system by Geodis Wilson Brisbane. Figure 23 illustrates the transformer at the port of discharge, recorded by Geodis Wilson Brisbane.



Figure 23. Cargo at Brisbane (Geodis Wilson 2014)

g. Inland transportation and delivery at site in Australia (24 August)

Geodis Wilson in Brisbane was responsible for inland transportation and delivery at site in Australia. Site and route survey were carried out on 6 - 8 August 2014. Safe Work Method Statement was delivered on 12 August 2014. Delivery date to the delivery site was 24 August 2014.

Equipment used included 3 axles trailer for main tank, 2 trailers for accessories, and mobile crane 65t at 4.5mR for off-load main tank and accessories at site. The main tank was off-loading by mobile crane 65t at 4.5mR onto provided plinths on site. All accessories were unloaded at storage area. Finally, the transformer and its accessories were delivered at Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715.

h. Health and Safety, Security

Safety points were particularly addressed for the operations and were checked by Geodis Wilson Safety Supervisor assisted by the Project Managers and Transport Superintendent. During the whole process, associated with the work, all instructions on job safety were given and informed to all parties. At ABB's factory, all necessary PPE were worn as needed for the operation as requirement of ABB's OHS policy. All equipment to be used was checked to meet the safety requirement during the whole operating project.

5.3 Reflecting

The project was moderately challenging in the context of the global supply chain management. In order to evaluate the efficiency, effectiveness and differentiation of a supply chain operation network, it is essential to investigate the information flows, the physical flows and the cash flows within the project. The management of these flows determine business productivity, financial performance, service quality, reputation and goodwill of Geodis Wilson. The below evaluations were the author's self-reflections on these flows through the project from the perspective of an assistant in the project and the peer-reflections from Geodis Wilson's executives at Geodis Wilson Hanoi office.

In the first analysis, what was notably good in this project was an agile information network, created by smooth information flows among the chains. During the order and booking processing, Sales and Customer Services executives at Geodis Wilson Ha Noi office confirmed that the information flows were extensively based on Email, direct phone calls and regular customer visits. The smoothly flowing information, real-time updated data in the database system in Freight Planner and Freight Monitor satisfied ABB to trace their shipment's status; and the transporter, the carrier and Geodis Wilson offices in Hong Kong and Australia got the right information in the right timeline requirements. Sales, Customer Services and IP Operations departments showed their essential imitative, agility, business acumen and flexibilities. The information exchange among the supply chains were facilitated with Freight Planner. It is a totally web-based tool, which allows partners to do business with Geodis Wilson. Freight Planner was integrated with EDI (Electronic Data Interchange) and email solutions. It is user-friendly providing the customer with various functions such as cargo booking, shipping documents printing, loading lists producing, etc. High level of responsiveness, good information flows, coordinating all the chain members are the key to success in supply chain management.

In the second analysis, considering the logistics physical flow during the whole project, it was a lean flow from Vietnam to Australia. The project results indicate that ABB's transformer and its accessories were delivered in the right way, under the right conditions, to the right site, and at the right time. Firstly, the cargo was handled with the right methods applicable for out-of-gauge cargoes to be exported from Vietnam to

Australia. Project implementation was correctly adhere to the standard procedure of Geodis Wilson for Industrial Project cargoes. It was resulted from the expertise knowledge and experiences in Industrial Projects of Geodis Wilson's IP Operation team. Adequate qualified staff met the project management and technical needs. Staffing risks were eliminated as the team has reserved personnel to support unexpected circumstances. Handling plan and Method of Statement (MOS) were comprehensive based on direct investigation of the out-of-gauge transformer and its accessories at ABB's factory and the site route survey to Hai Phong port. Secondly, at the site of delivery, the transformer and its accessories were in good conditions with full functional quality desired by ABB. Special equipment was employed appropriately for the out-of-gauge shipment according to the handling instructions of ABB. For instance, axle trailers, mobile crane were used for loading and inland transportation, Hapag-Lloyd's 20 ft flat rack container was used properly for sea transportation of special cargoes, enabling ABB's transformer and accessories were delivered without any defection. Safety and security requirements were guaranteed by Geodis Wilson Safety Supervisor and were followed by involving parties despite some loosen points. Thirdly, the main tank and its accessories were delivered at Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715, which is the right place of delivery stated according to agreed DDP incoterm 2010. Lastly, the whole process was run in right timeline requirement, which may not be seen in all projects due to delays, unexpected circumstances, or legal strictures. In this project, the established schedule was closely adhere to meet the timeline requirements of ABB. It can be concluded that the physical flows were smooth in the project, which is considered as the ultimate goal of logistics management. When these operation's goals are met, the supply chain management is deemed to be effective.

Last but not the least, invoicing activities were implemented smoothly by the accounting department and the cash flows were confirmed by Geodis Wilson Hanoi to have run as agreements among contracting parties in the whole demand – supply chains. The costs for all agents in the network are split according to "The Global Profit Split Policy" and Geodis Wilson's regulations. Profits margin solely for the Vietnam office was said to be around 6 %. The essential step adding directly to the gross profit of the commission was the right carrier selecting decision. Customer Services executive gives feedbacks on the reasons for choosing Hapag-Lloyd was that

they had available special flat rack equipment at port, suitable vessel schedule and their offer was 3-5% more competitive than other carriers at that time.

Good administrative management, expertise knowledge and organisational collaboration, cooperation and candid attitudes among all team members at Geodis Wilson Vietnam offices are dynamic aspects differentiating the activities of a global freight forwarder. The project represents the critical benefits for ABB to use a global freight forwarder to support their supply chain activities. Geodis Wilson's Customer Services executive reflected through ABB's feedbacks that the customer was really satisfied with the values they received throughout the whole project. The trust and credible level was even more enhanced with ABB, a strategic global account of Geodis Wilson, reflecting a long-term win-win relationship between two parties. For each project done, Geodis Wilson always has an internal evaluation and indication of profit margins. The project evaluation indicated the detailed information about the project, including the cost control, timeliness, responsiveness, quality, innovation, planning, staffing and communicating process. Although specific internal evaluation of project is confidential, Geodis Wilson's internal project evaluation form is provided for reference in Appendix 8. From the customer's perspective, it is stated that ABB was satisfied with the project. In comparison with the advantages of outsourcing to a freight forwarder mentioned earlier in the literature reviews of this thesis, ABB essentially benefited from cooperating with Geodis Wilson. Major advantageous factors include strategic, financial, services and operational benefits (see Table2). From this project, strengths, weaknesses, opportunities and threats (SWOT) for Geodis Wilson Hanoi in developing industrial projects in Vietnam can be seen. SWOT analysis for future operation of Industrial Projects can be concluded in the Table 7.

In a nutshell, the project was a success. Nevertheless, minor improvements need carrying out for further better operations, maximise gross profits for the office, creating more customer satisfaction and maintaining the long-term cooperation between Geodis Wilson and ABB. Geodis Wilson considers ABB as a strategic partner with a long-term relationship, which is said to be one of the ideal characteristics of 4PL model.

Table 8. SWOT Analysis for Geodis Wilson's Projects Operations in Vietnam

- High reputation and credibility as a global freight forwarder in Vietnam.
- Global coverage with strong presence of Geodis Wilson offices and partners network. Geodis Wilson offices in different countries intensively support each other to grow strong as one.
- Strong corporate organisation, administration and communications, high employee morale and cooperation.
- In Vietnam, Geodis Wilson is present in all busiest logistics centres and ports such as Ha Noi, Hai Phong, Ho Chi Minh, Quy Nhon and Da Nang.
- Expertise, experienced and dedicated staffs with continuous training for staffs of all organisational levels via virtual training environment (G-campus).
- Advanced modern operating system (Freight Planner,
 Freight Monitor, and NextGen) with up-to-date IT support tools.
- Flexible and dynamic work environment for all employees.
- Customer strong relations and the vertical markets network offer potentials for extension.
- Corporate business strategies to enhance corporate image and reputation; customer satisfaction is on top priority.
- Integrated solutions, extensive door-to-door solutions for the customers are highly competitive aspects
- Available pool of resources and capabilities to meet special requirements of customers in diverse industries (retail, fashion, automotive, consumer electronics, etc.), especially industrial projects.

Strengths

- The staff capacity is not relative to the scope of work, leading to heavier workload for available employees. - Human resource for Sales and Marketing is not adequate, comparing to the operation level of company. Experienced and skilful sales and business developer are limited. Weaknesses - The prices of services offered to customers are usually high and not competitive comparing to other direct competitors. - Marketing strategies are not holistic and more fortified in Vietnamese market. Lack of breakthrough to enhance the popularity of the corporate brand as a leading forwarder. - Fostering Trade Policies of the Government and the fast growth of a developing economy lead to a great increase in industrial projects, transportation, import and export activities (Blancas et al. 2014, 11). The demand for 4PL's operation is increasing accordingly. - Transport and trading markets have been expanded extensively thanks to liberalisation since Vietnam became members of WTO, AFTA and other bilateral trade agreements (Blancas et al. 2014, 11). - Recently, AANZFTA (ASEAN-Australia-New Zealand Free Trade Agreement) has been established on 26 August 2014 **Opportunities** (Australian Government 2014). - Vietnam has developed as a country for transhipment in Asia with the government's seaport master plan (see Appendix 10). - Good long term relationship with global account and frequently follow up customers' demands for supply chain solutions (Geodis Wilson 2014a). - New Hai Phong- Ha Noi Expressway is constructed and planned to be complete in 2015. Important ports are upgraded, extended and new ports are planned to complete by 2016 in the Northern Vietnam (Blancas et al. 2014, 57)

| - Many global and domestic competitors in the fierce |
|---|
| forwarding logistics market require fast services adaptation. |

- Customer's demands are more complicated and requiring more differentiation of integrated solutions.
- Poor infrastructure in Vietnam (Business Monitor International 2013b, 6)
- Vietnam's export and import activities have seen strong competition from China, making the export and import flows unstable. It leads to fluctuating global supply chain needs.
- The global accounts of Geodis Wilson Vietnam are mostly from global offices worldwide, difficulty in finding new customers.
- Unexpected natural disasters of tropical climate critically affects transportation activities.
- Corruptions and financial mismanagement (Business Monitor International 2013a, 11)

5.4 Revise and Recommendations

5.4.1 Sales and Customer Services Recommendations

This project can be used as an epitomic project, introducing to the future potential customers with special needs for handling heavy lift or out-of-gauge cargoes, since it illustrates the capacity and expertise of Geodis Wilson in handling global industrial projects. It proved that Geodis Wilson has successfully applied Information and Communication Technology (ICT) and Electronic Data Interchange (EDI) in freight management. Investment is suggested to maintain for these systems to run smoothly and upgrade frequently. Freight Planner and NextGen (for internal use only) are excellent examples of how modern ICT is applied in SCM. It is highly beneficial for all internal departments within the company, the subcontractors and client.

The objectives of SCM include costs reduction and the maintenance or improvement of specific levels of customer services. In this project, as stated by Geodis Wilson's

Threats

Customer Services Executive, the company profit was around 6 %, which is not a high profit margin for the company. It should have been higher if Geodis Wilson would negotiate more with Hapag-Lloyds to deduct their cost for freight and equipment for this shipment. Simultaneously, project costs could have been decreased if Geodis Wilson Hanoi dealt with Geodis Wilson Brisbane to reduce DDP charge and relevant handling charges. That would enable the supply chains to be leaner, which would be beneficial to all parties. For future projects, costs deductions with carriers and subcontractors should be considered closely in order to offer better prices of services to customers, which are usually not as competitive as the other competitors.

As shown from project operation, strong partnerships form the basis of successful SCM. Customer Services department should accordingly extend network and interaction with carriers. Relationship network should be planned and built both extensively and intensively at strategic and tactical level. The wider the network, the more choices of road, rail, sea, air operating routes and pricing offers Geodis Wilson may have. The closer relationship with the carriers are, the more credible the services level is. Relationship-based strategies are suggested as a significant strategic approach in managing supply chains (Coyle, Bardi, and Langley 2003, 588-589). Such high-value relationships are ideally full collaboration, dynamic combination of horizontal and vertical collaboration. It requires trust and leverage each other partner in sharing and interchanging information, which maximises performances of all partners.

5.4.2 IP Operation Recommendations

Efficient, effective and competitive supply chain networks and systems can be achieved only if the rules and laws of modern logistics are known and correctly applied. In initial stage of the project, planning was conducted dynamically, which is a good practice for all projects. As observed from the project implementation, IP operations took much time to do route site surveys, to investigate he cargoes and equipment, to prepare relevant documents. Information has to be written completely and correctly with great care and supervision before sharing with other partners since only a single incorrect figure in the cargo details may lead to wrong method application, consequently exacerbating the whole supply chain flows. Preciseness should be on top priority so as to minimise evitable time consuming in processing.

In the global transportation flows, incidences are inevitable. In particular, unexpected cases may occur on the daily basis of handling heavy lift or out-of-gauge shipments, which requires special cares, and sea transportation, which usually takes longer time of transport. It demands the responsible person great care, meticulous follow-up, quick problem solving skills and precise decision making experiences. Thus, it is highly recommended that "Crisis and Risks Management" documents in either files or notes be kept for internal use. It should be prepared well in advance so that operations executives can refer to immediately in case unexpected circumstances might happens. These files should be accumulated of cases, know-how, experiences and practices from contemporaries and can be used for training new employees, particularly those with little experiences of freight operation.

Health, Safety and Environment (HSE) regulations and issues had been taken into consideration, which should be followed even more closely and systematically. As different subcontractors, transporters, and shippers will be employed in certain projects, Geodis Wilson as a coordinator should take initiatives in inducing HSE codes of conduct to all involving parties. It certainly leads to a sustainable business operation, complying with the clients' request on the services safety.

5.4.3 Projects and Business Development Recommendations

In the global value chains, the work of a freight forwarder is both challenging and dynamic as clients demands are diverse and strive for quick adaptation and cultivation in different projects. As a global freight forwarder, Geodis Wilson sees increased requirements to work on project management as a result of the collaboration between countries, regions and divisions within the Geodis community. In order to fulfil the corporate strategies – "being big enough to carry and small enough to care", each project operation must reflect the excellent quality and initiative in operations. Relationship-based strategies are advised earlier not only to Sales and Customer Services but also to the whole company to build a strong value network.

Human resources capacity enhancement should be taken into great consideration so as to fill the gaps of weaknesses and threats might occur to the commissioner. Staff performance is the key factor in running the business effectively and profitably. On the bright side, Geodis Wilson has an e-learning portal for all employees called G-

campus launched in March 2011. It is a wise decision to resolve human resources problem and difficulty in hiring qualified manpower in Logistics industry (especially Sales and Operations headcount). On the other hand, critical evaluations on the effectiveness of the training programs should be considered. Due to the high daily workload, employees may be confronted with having little time budget for learning at the same time. Thus, it is advisory that HR department arrange proper timeline for employees to do their training without gaining too much stress and balance with their working hours. While the competitors offer higher compensation and benefit for experienced manpower, Geodis Wilson should deploy competitive, flexible and proactive total reward system (compensation, benefits, learning and development) to retain talents. In addition, widely recruiting potential graduates as intern or management trainee will be beneficial for the company, as the young workforce are quick-learning, enthusiastic, and dynamic to create values for the company.

5.4.4 Industry Development Recommendations for the Government

At the industrial level, some recommendations are also given for the Vietnamese government for improvement of the macro environment for logistic industry development. As mentioned earlier in this thesis, supply chain management can become a competitive advantage for Vietnam if feasible policies are adopted to support the industry and create a favourable business environment (Blancas, et al., 2014, 11). From the author's perspective, three primary suggestions are given. Firstly, the government should take critical steps to improve the whole national infrastructure. Ministry of Construction and Ministry of Transport should consider investment in upgrading railways system, roads network, specialised airports, ports and strategic logistics centres. It is advisory that competent global consultancy and transparent units be involved in order to eliminate corruptions, bureaucracy, and overlapped projects. With proper improvements of the national infrastructure quality, both transportation performance and other logistics costs and activities will be remarkably improved. Secondly, prompt legal framework for transportation and logistics industry should be critically regarded. For instance, redundant regulations and procedure for customs clearance are eliminated with strict guidelines and adoption will enable the import and export flows to run with more costs and time efficiency. Lastly, together with ICT advancement better human resources capacity are solutions for national logistics costs reducing and supply chains advancement in the long run.

6 CONCLUSIONS

6.1 Summary and Implications for Commissioner

The research objective to fulfil exporting request of ABB was met with the results presented critically in the previous chapter. By fulfilling the research objective and further situation analysing, the societal good aspect is improving industrial project operating system in Vietnam. This study's conceptual basis was based on text books, scientific articles, and academic researches on Logistics, Global Demand-Supply Chain Management, Supply Chain Management Outsourcing, Transportations, Exporting, LSP, 3PL, 4PL, Freight Forwarding, Incoterm 2010, and other related concepts. These sources are acquired mainly from Kyamk library database and G-campus - Geodis Wilson's internal e-learning portal, from which analysis, comparison, contrasts and criticises were made to give a critical understanding of the theoretical framework.

Participatory Action Research turned out to be useful for conducting this work. The exporting procedure of ABB's transformer and accessories has been presented in this thesis from planning, implementation, and following up to evaluation. Key data were provided by the commissioner with the kind support and clear guidelines from all staffs at Geodis Wilson Hanoi branch. Besides, information was also acquired from extensive desk research. Content analysis was utilised and reflection part was done based on self-reflections and peers-reflections from the commissioner.

The work of a global freight forwarder is both challenging and interesting in the fast-paced international business. Investigating the process enabled me to understand how Incoterms and other rules were interpreted in diverse complex situations. Every piece of information has to be precise and all documents have to be written meticulously and double checked. Thus, the work might sometimes get very hectic and impose high pressure on staffs. Combination of expertise knowledge, experiences, high technology, communications and cooperation can be seen as the key to success in the global forwarding. The main implications for Geodis Wilson Vietnam as a commissioner have been stated in the previous chapter of this thesis. From reflecting and SWOT analysis, recommendations have been made to improve Sales, Customer

Services, Industrial Project Operations and business development. All in all, it can be a typical industrial project to be introduce for better potential projects in the future.

6.2 Validity and Reliability

Validity (results consistency) and Reliability (research correctness), are said to be the key factors attributing to the research quality (Kananen 2013, 189). The first issue of a research quality is validity. In all research, the question of validity is whether the evidence reflect the reality under investigation. Specifically, in a participatory action research (PAR), validity can be seen from the "correctness" of method design with the right data elements. A set of questions for considering the validity of a research is suggested by Hesse-Biber (2010, 87) including how well the researcher's findings fit the problem, how well the researcher answers his or her research question and whether the research captures an understanding of the issue. In addition, Kvale (1996, 244 cited in Hesse-Biber 2010, 87) stated that validity can be assessed based on how well the researcher has done in generating theoretical understanding of the addressed problems and whether the final story (data analysis and findings) fits the theoretical frame. Three criteria of validation, validity as quality of craftsmanship, validity as communication, and pragmatic validity as action, can be seen in this research. Quality of craftsmanship is reflected through this action research process, as the original data and findings are meticulously double checked with authorized valid information from the commissioner. There might be experts' disagreement on my viewpoints of the topic; notwithstanding, there is still a room for consensus in the research community or among operation team, which is so-called "communicative validity". The handling plan generated a feasible solution to the research question, affecting the wider context of the study, which is the logistics outsourcing market in Vietnam. It is the pragmatic point of real project validation in this thesis.

Regarding reliability, it is significant to investigate variations including the subject errors (different results on different days), subject bias (try to please researcher), observer error and bias. According to the criteria, a good research should be consistent in various occasions and researchers. In fact, variations are expected to appear in this research because the thesis objective is only applicable in this specific situation of ABB's request and the shipment availability. In different cases, given different requirements of the customers at different times, exporting procedure will be

different. It is due to many variable factors such as the constantly changing carrier choices, available route options, multimodal transportation for OOG cargo, changing national regulations and timeline requirements. Limitations appear under the short time limits of the researcher's internship at Geodis Wilson and the scope of work for this thesis at the university. Above all, the reliability was enhanced with meticulous work in the theoretical study and the credible empirical study as part of the commissioner's real project. Planning of this thesis had been done in advance, which enabled the researcher's participatory observations to be systematic and purposeful. Participatory observation allowed the researcher to obtain diverse and valid information, fostering the authenticity of the project (Kananen 2013, 105).

6.3 Suggestions for Further Research

The first suggestion is that a training program about Industrial Project Operations for employees of all level be designed since the study also reveals that the company should put human resources development as a key strategy. Creating a special training program about Industrial Project operations, heavy lift and out-of-gauge handling methods is a niche for a global logistics service provider in a developing country like Vietnam. It is supposed for all employees from entry-level with little or no experiences to managerial positions. Further research needs to be carried out to investigate the content the training program, the way to implement, test and evaluate.

In addition, it is highly recommended that future researcher look at the best global freight forwarder operating in Vietnam as a benchmark investigation for an ideal supply chain model. Valuables benefits can be learned and weaknesses can be eliminated for the future operation since benchmarking is a beneficial method to evaluate and improve performance for a project operating optimisation.

Furthermore, studying Vietnam's supply chain vulnerability to make a risk management plan for a global freight forwarder would be an interesting topic. It would be great to include an extensive research into heavy lift or out-of-gauge shipment and equipment availability in the real market. As the increasing demand for the industrial projects are clearly seen, that research would be beneficial for the clients, freight forwarders, transporters, carriers and other parties in the supply chains. It would bring about Vietnam's supply chains development in the globalisation era.

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Top 25 Global Freight Forwarders

Source: Anon, 2014. [online] Available at:http://www.3plogistics.com/Top_25_Global_FF.htm [Accessed 25 Nov. 2014].

| | Top 25 Global | Freight Forward | lers | |
|-------------|---|---------------------------|-----------------|------------------------|
| | Largest Providers by 2013 Gross Rev | venues and Freig Gross | Ocean | Air |
| A&A Rank | | Revenue (US\$ Millions) | Freight TEUs | Freight Metric Tons |
| 1 | DHL Supply Chain & Global Forwarding | 31,432 | 2,807,000 | 2,215,000 |
| 2 | Kuehne + Nagel | 22,587 | 3,578,000 | 1,134,000 |
| 3 | DB Schenker Logistics | 19,732 | 1,891,000 | 1,092,000 |
| 4 | Panalpina | 7,293 | 1,495,400 | 825,100 |
| 5 | Sinotrans | 7,738 | 8,668,000** | 396,100 |
| 6 | Nippon Express | 17,317 | 776,576 | 668,522 |
| 7 | Expeditors International of Washington | 6,080 | 916,168 | 764,376 |
| 8 | SDV (Bolloré Group) | 7,263 | 790,000 | 522,000 |
| 9 | CEVA Logistics | 8,517 | 730,750 | 513,000 |
| 10 | DSV DSV A/S | 8,140 | 772,142 | 259,365 |
| 11 (tie) | Hellmann Worldwide Logistics | 3,433 | 684,156 | 549,948 |

Top 25 Global Freight Forwarders Largest Providers by 2013 Gross Revenues and Freight Forwarding Volumes* Gross Ocean Air A&A **Freight Freight** Revenue **Provider TEUs Metric Tons** Rank (US\$ Millions) 11 5,492 450,000 775,000 (tie) UPS Supply Chain Solutions KWE 12 2,718 493,000 924,000 Kintetsu World Express 13 4,441 547,000 368,000 UTi Worldwide 14 3,212 791,535 226,626 Damco 15 2,546 1,753,547 224,865 (tie) Pantos Logistics 15 4,042 550,000 310,000 (tie) Yusen Logistics 16 12,752 515,000 115,000 (tie) C.H. Robinson 16 2,575 774,000 278,000 (tie) Kerry Logistics 17 420,000 375,000 4,415 Agility 18 5,828 420,000 210,000 **GEODIS** (tie) Geodis

494,493

6,266

104,740

18

(tie)

TOLL

Toll Holdings

Top 25 Global Freight Forwarders

Largest Providers by 2013 Gross Revenues and Freight Forwarding Volumes*

| A&A Rank | | Gross Revenue (US\$ Millions) | Ocean Freight TEUs | Air Freight Metric Tons |
|-------------|-------------------------|-------------------------------------|--------------------------|-------------------------------|
| 19 | Logwin | 1,620 | 530,000 | 143,000 |
| 20 | NNR Global Logistics | 1,745 | 120,137 | 252,068 |
| 21 | DIMERCO Dimerco Express | 481 | 128,000 | 176,000 |

*Revenues are company reported or Armstrong & Associates, Inc. estimates and have been converted to US\$ using the average exchange rate in order to make non-currency related growth comparisons. Freight forwarders are ranked using a combined overall average based on their individual rankings for gross revenue, ocean freight TEUs and air freight metric tons.

**TEUs shown are a combination of freight forwarding, NVOCC, booking agent and custom broker

activities.

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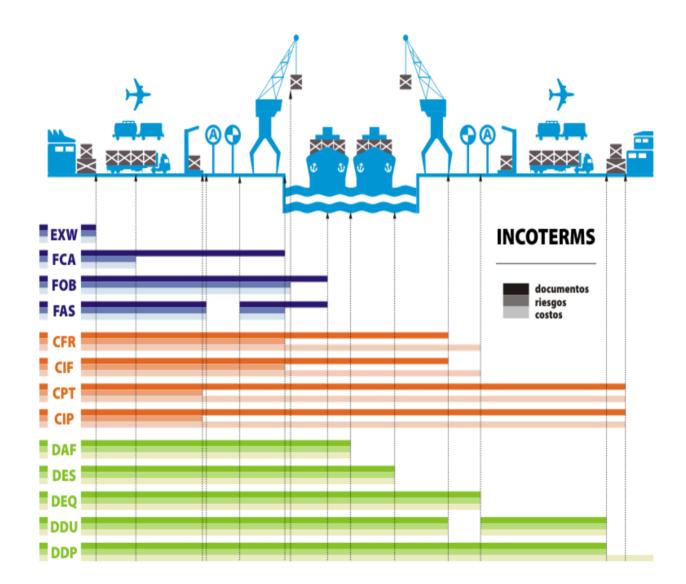
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ABB's Request for Quotation (Geodis Wilson 2014)

| | | QUOTATION | | | | | | | | | |
|-----|---------------------------|-----------|---|----------------------------|---|-----------------------|---|--|-------------------------|--|--|
| | | | | | | Location: | ABB HANOI | | | | |
| | | | | | | Date: | 7/7/2014 | | | | |
| 1 | General Information | | | | | | | | | | |
| | Project name: | VN998 | | | I | | | | | | |
| _ | | Tung ngu | yen thanh | | Email: | tung.nguyenthanh | | | | | |
| 1.3 | Transportation type: | | Sea Fre | | Delivery term: | Qld 4715 | | Station, Callide Dam Road, Mount Murchison, Bilo | | | |
| 1.4 | Destination: | From: | Haiphong port, ' | | Vietnam | То: | Murchison, Bil | Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715 | | | |
| | | | | | | | Callide Power Station, Callide Dam Road, Mount Murchison, Biloela Qld 4715 | | | | |
| 1.5 | Readiness of cargo | EXW | | about 17 July | y, 2014 | Expected arrival date | DDP (includin | g offloading) b | efore 17 August, 2014 | | |
| 1.6 | Bid closing date | 15h00 | on | 14/July/2014 | | | | | | | |
| 1.7 | Route Survey Required: | Yes: ✓ | | No: | | | | | | | |
| 1.8 | MOS required: | Yes: ✓ | | No: | | | | | | | |
| | Cargo Spec Accesories: | | 1 Main ta | nk. | 01 unit LxWxHx1 | 38x214x363cm - 24 | 4 8 tons/unit (+- | 3% without oil) | - Attached drawing, Pls | | |
| | cargo open reconstruction | | | | give MOS.(01x20 Including offload f | FR OOG OH) | i,o torio, ariit (i | 070, IIII.10at 0) | radened diaming,i io | | |
| | | | 2 Access | sories: | 01x40'DC+01x20' | 'DC/unit | | | | | |
| | | | 3 Other | | Note that: Curre | ncy of offer must | be Viet Nam Dong.(VND). | | | | |
| 2 | Quote price by FF: | | | Туре | Currency | Value | | Note by F | WD: | | |
| | VND: ☑ USD: ☐ | | O/F for 2 | | | | 1 2 | | | | |
| | 03Б. 🗆 | | O/F for m | | | | 3 | | | | |
| | | | | rges in AU | | | 4 | | | | |
| | | | (lump sum, including offloading) | | | | | | | | |
| | | | | me for O/F | | | 5 | | | | |
| | | 6 | Transit time for DDP service (including offloading) | | | | 6 | | | | |
| | | 7 | , | nt availability | | | 7 | | | | |
| | | 8 | Vessel fr | equency | | | 8 | | | | |
| | | | | of quotation | | | 9 | | | | |
| | | | | to confirm transit port | | | 10 11 | | | | |
| | | | (mandato | | | | '' | | | | |
| | | 12 | Report at destination (mandatory) | | | | 12 | | | | |
| | | 13 | Others | | | | 13 | | | | |
| 3 | Approved by FF: | FW | name & a | address: | | | | | | | |
| 3.1 | Prepared by: | | | | | | | | | | |
| | Date: | | | | | | | | | | |
| | Signature: | | | | | | | | | | |
| 3.2 | Checked by: | | | | | | | | | | |
| | Date: | | | | | | | Colour co | | | |
| | Signature: | | | | | | Yellow | To be fill by ABI | 3 | | |
| | orginature. | | | | | | Light green | To be fill by FF | | | |

Incoterm 2010 Matrix

Source: Hanleyqbastaraches, 2011. *Godwin heald: Incoterms 2010 Wallchart*. [online] Available at: http://hanleyqbastaraches.blogspot.fi/2011/09/incoterms-2010-wallchart.html [Accessed 8 Oct. 2014].



Hapag-Lloyd Non-containerised Cargo Containers

 $Source: Hapag-lloyd.com, \ (2014). \ \textit{Tailor Made Solution (non-containerized cargo) - Hapag-Lloyd.}$

[online] Available at: http://www.hapag-

> 20' Open Top

> 40' Open Top

lloyd.com/en/fleet/not_containerized_cargo_containers.html [Accessed 8 Oct. 2014].

Flatrack Platform Ventilated > 20' Flatrack > 40' Flatrack High Cube Platform > 40' Platform Tank Tank

> Tank Container

> 20' Hardtop

> 40' Hardtop

> 40' Hardtop High Cube

Hapag-Lloyd's Quotation (Geodis Wilson 2014)

QUOTATION CONFIRMATION Q1405HAN00022



GEODIS WILSON VIETNAM CO., LTD SUIT 3.11.1, FLOOR 3, OCEAN PARK BUILDING, 1 DAO DUY ANH STR., DONG DA THANH PHO HA NOI VIETNAM ATTN: MR/MS

QUOTATION NUMBER: Q1405HAN00022 / 1

Rate Validity:

Valid From Date: 9th July 2014 Valid To Date: 31st July 2014 Offer Expires At: 31st July 2014

DEAR MR/MS

Thank you for your recent enquiry. Hapag-Lloyd is pleased to offer the following rate for your consideration.

Shipment Details:

All rates below are per container.

Commodity: OOG AS PER REMARKS

From: Haiphong, VN (Port) via Hong Kong, HK

To: Brisbane, QL, AU (Port)

| Charge | Curr | 20'STD | 40'STD/HC | 20'FR OH | Notes |
|----------|------|--------|-----------|----------|-------|
| Lump Sum | USD | 550.00 | 1100.00 | 3500.00 | |

These rates include the following assessorial charges:

Bunker Adjustment Factor Carrier Security FEE

Unless otherwise specified, above rates are subject to all surcharges as they are valid at time of shipment.

The currently applicable surcharges are:

| Charge | Curr | 20'STD | 40'STD/HC | 20'FR | Notes |
|-----------------------------------|------|------------|------------|------------|-------|
| Terminal Handling Charge Orig. | VND | 1920000.00 | 2980000.00 | 1920000.00 | |
| Terminal Security Charge Dest. | AUD | 6.00 | 6.00 | 6.00 | |
| Terminal Handling Charge Dest. | AUD | 288.00 | 288.00 | 288.00 | |
| Port Charges Destination | AUD | 101.50 | 220.40 | 101.50 | |
| Equipment Transfer Charge Dest | AUD | 76.00 | 93.00 | 76.00 | |
| Equipment Maintenance FEE | AUD | 10.00 | 12.00 | 10.00 | |
| Sealing Charge AT Origin | VND | 146160.00 | 146160.00 | | |

Notes:

Subject to Destination Documentation FEE: AUD 65.00 per Bill of Lading

Subject to Document Charge: VND 700000.00 per Bill of Lading

Remark:

-01x20FR for main tank: Dim LxWxH 438x214x363 cm/ weight 24, 8 tons without oil (+/- 3%)

All quotes regarding freight are valid for 30 days unless specifically specified otherwise herein. All charges, fees, commissions and tolls are subject to change.

Hapag-Lloyd is operating under the Terms and Conditions of its Bill of Lading or Sea Waybill (depending on which document will be issued for the shipment) and the Hapag-Lloyd Tariff Terms and Conditions effective at time of shipment apply to this quotation. The applicable Terms and Conditions and the Tariff will be provided to you upon your request or may be viewed at any office of Hapag-Lloyd AG or its agents or under www.hapag-lloyd.com. Please take notice that, according to the Hapag-Lloyd Bill of Lading / Sea Waybill Terms and Conditions, there are limitations of liability, which deviate from the statutory German law.

This quotation is subject to space and equipment availability and subject to compliance with all applicable cargo weight restrictions.

All Hazardous cargo is subject to approval at time of booking, subject to inspection at Port of Loading and subject to an additional surcharge.

Hapag-Lloyd AG gathers, processes, stores, transmits and uses personal data of its contractual partners only if and insofar as such data are required for conducting a contractual customer relationship (e.g. conclusion, execution and management of the contract, accounting purposes).

As from January 2015 all shipping lines will be affected by tightened Low Sulfur Fuel Regulations on trades crossing North Europe / Baltic, US and Canada.

The Sulfur content in fuel has to be reduced from max.1% to max. 0.1% with an extensive increase in bunker costs. California applies stricter rules already today and will further tighten these in January 2014.

For all Freight rates with a validity into 2015, customers have to amend their bunker formulas to cover the increasing costs for Low Sulfur Fuel otherwise Hapag-Lloyd reserves the right to charge an increased LSF surcharge separately once all cost components are confirmed.

We would like to thank you for your kind interest in Hapag-Lloyd's services and look forward to receive your valuable support.

Best regards NGUYEN, TRANG SALES EXECUTIVE

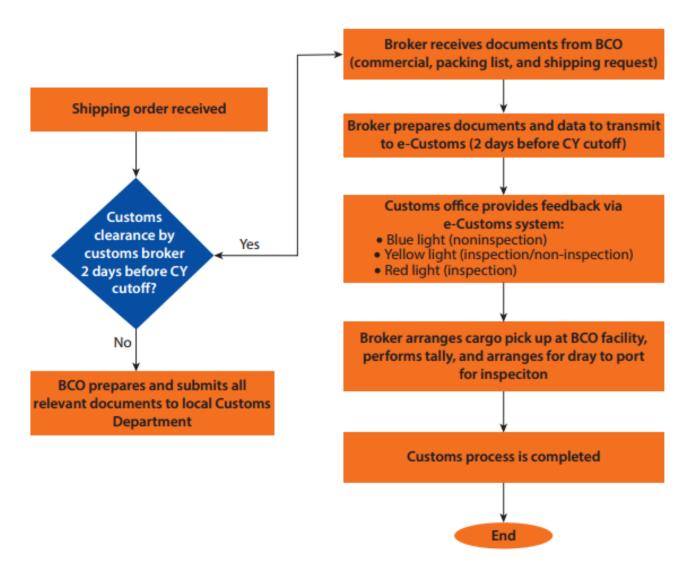
HAPAG-LLOYD (VIETNAM), HANOI BRANCH 4TH FLOOR, 1C NGO QUYEN STREET, HOAN KIEM DISTRICT HA NOI CITY VIETNAM Tel: +84 4 39366206

Fax: +84 4 39366205

For additional voyage information and transit times please also take a look at our Interactive Schedule under: http://www.hapag-lloyd.com/en/services/liner_services.html

Hapag-Lloyd (Vietnam) Ltd. - Hanoi Branch - 1C Ngo Quyen - Hoan Kiem - Hanoi - Vietnam

Vietnam's Export Custom Clearance Procedure (Blancas, et al., 2014, 169)



Geodis Wilson Standard Method of Statement (Geodis Wilson 2014)



METHOD STATEMENT

It will be GEODIS's responsibility during the initial or pre-award phase to implement a system both in terms of communication and work processes which are compatible with GEODIS requirements and project aspirations.

Upon receipt of purchase order information GEODIS will contact the Operator and obtain confirmation from them that:

- They have received the original purchase order from CUSTOMER.
- They fully understand all instructions for documentation, packing and marking of goods.
- They can comply with the availability date(s), manufacturing schedule(s) and on site requirement date(s).
- They fully understand their responsibilities as to their contractual terms of delivery.
- They are conversant with safe seaworthy packing and cargo protection.

The CUSTOMER's Operator will be requested to provide the following information to GEODIS:-

- Key contact names and numbers, including after-hours contacts for urgent communications.
- Working hours.
- Anticipated weight and dimensions of cargo and proposed packing specifications, cargo characteristics, tier limitation, hazardous nature, stackability.
- Limitations on access to Operator's premises and access roads and platforms.
- Lifting/loading arrangements.
- Transport drawing, centres of gravity for calculation of dynamic forces.
- Availability of goods for inspection of packing, location of all certification relative to the manufacture and/or inspection of the goods.

- Sample documentation relative to the shipment of the goods for the purposes of verifying the correctness of all paperwork to be supplied.
- GEODIS will make such arrangements with Operators as may be necessary to support the
 inspection of packing and/or crating of cargo and to determine any specific handling methods
 which may be required.

Physical Cargo Handling and Pre-Planning

Upon receipt of a notification from either GEODIS or Operators concerning abnormal loads, i.e. those with considerable out of gauge dimensions or weights, GEODIS will immediately verify both handling and route alternatives as well as on carriage aspects.

Criteria for transportation drawings will be laid down and discussed with Operators, including centre of gravity, lashing/lifting points, footprint layout etc. Such data will then be submitted in the required format to the Road Traffic Authorities under whose responsibility the pre-selected transportation route falls.

Transportation applications will be lodged and its progress will be monitored in a sufficient timely fashion in order to enable an immediate uplift upon readiness of such abnormal cargo items.

Should the cargo item in question be of such abnormal nature and requiring the removal of street furniture, bypass graduation or other technical requirements, GEODIS would initiate same with the appropriate authorities and bodies in such manner to enable a prompt cargo uplift following completion of cargo.

GEODIS will submit for each such movement to CUSTOMER an individual method statement. Such individual method statements will describe the route selected/proposed, submit a route survey, copies of transportation application (if required), and details as to technical preconditions for transport (removal of street furniture etc.).

Suitable transport will be selected to meet all transportation requirements from established and well known specialist companies.

Release of Materials

GEODIS will maintain a regular contact all Operators and monitor goods availability compliance with purchase order requirements and disciplines and progress to MMT (Materials Movement Ticket) stage of development. The MMT will define mode of transport, collection point, delivery point, dates and

documentation requirements. GEODIS will monitor all such orders and will maintain an ongoing interface with project team members at CUSTOMER

The expediting function is a key feature of GEODIS's involvement. This requires a daily input by GEODIS in house operators in order to maintain the service structure as outlined above and as per GEODIS requirements.

Operator visits as to physical inspection of cargo, standard and method of seaworthy packing, and verification as to lifting arrangements are undertaken if requested by CUSTOMER or if GEODIS has any reason to believe that Operators lack any expertise in this important area. Such visits will be standard and automatic for any abnormal or heavy cargo items carried by GEODIS or their designated and competent subcontractors.

Documentation is a key service aspect.

GEODIS will issue, monitor and check where applicable all documents issued by all parties as to content and compliance with the Project requirements.

Apart from checking the format, content and presentation, the timely issue and correct distribution of documents falls within this important GEODIS duty.

GEODIS will verify all Operator documentation in compliance with the above as well as P/O and MMT data. GEODIS will provide guidance as to documentary aspects as indeed to any facet of shipping cargo including hazardous shipments, etc.

In this context, GEODIS representatives will liaise with all parties with an input regards the entire documentary process and closely monitor same within the required time frame constraints:

- Operators
- Pre-transportation carrier
- Customs & Excise
- Main carriers
- · Chamber of Commerce
- Embassy
- · Survey Reports.

All data as required will feature where applicable in GEODIS documentation and reports including P.O. numbers, Requisition numbers, MMT (Material Movement Ticket) numbers together with all relevant information.

Efficiency and instant accessibility to all information in respect of current and completed files enhances control, transparency and saves time and requires GEODIS's fastidious approach to the documentation process of the contract.

Upon release of consignments to GEODIS for shipment, a sequentially numbered Material Movement Ticket (MMT) will be raised.

The MMT or any type of Reporting named by the Operator will include Standard and/or Specific required information:

- · Operator name
- · Operator contact name and numbers
- Operator ref(s)
- Purchase order number(s)
- Requisition number(s)
- Item number(s)
- · Quantities, weights and dimensions
- · Location of cargo
- Required on site date (R.O.S.) Contractual delivery terms.

In line with this project requirement as to timing and delivery, GEODIS shall review the shipping options for the cargo and shall, subject to any required GEODIS prior approvals, make all necessary shipping arrangements appropriate to the volume and dimensions of the cargo concerned.

Call Forward Procedure

Each transaction will have a separate documentary file which upon completion will hold copies of each document/report issued and identifiable by reference numbers issued in connection with P.O.s and MMTs. Such files will include evidence and information covering the entire history of each transaction from initial receipt of P.O. details to copy of P.O.D.

Dependent upon the contractual delivery terms, GEODIS will either collect the cargo from Ex Works, or call forward the cargo to the relevant airport, port or marshalling yard upon issue of the MMT.

Ex-works shipments will be taken care of by GEODIS from Operators supply base and either delivered directly to a pre-booked carrier or to GEODIS marshalling facilities for consolidation.

Irrespective of destination, suitable inland transportation means will be provided on a selected and tailored basis and as a response to details and cargo configuration extracted from Operators. As with each transportation phase/ component, all relevant data will be fed into the established tracking system in the agreed format.

All cargo received, whether ex works or at GEODIS's marshalling points will be inspected for condition of packing and correctness of marks, numbers and quantity of packages. (This inspection is optional and depends on the form of the actual contract option selected by the Operator).

Incorrect or insufficient marks, or packing inconsistent with the proposed transit mode will be identified and reported to both the Operator and GEODIS. Immediate corrective action will be taken to prevent delays to the shipment.

Consistent with CUSTOMER requirements and in accordance with our current contract, all consignments received at our marshalling/consolidation points shall be opened and checked for quantity and type upon request. All receipt information shall be entered to the computerised tracking and tracing system "MEPAW". Overages, Shortages and Damage (O.S. &D) resolution shall be undertaken by GEODIS in the first instance. In cases where GEODIS and the Operator are unable to resolve an O.S. &D the issue shall be referred to CUSTOMER with full case history notes for final resolution.

Upon notice of any damage to the goods or external packing damage on arrival, a damage report will be issued to both the Operator and CUSTOMER.

Cargo receipt notes will be issued suitably endorsed. In addition to the initial report, GEODIS will liaise with CUSTOMER regarding any technical inspection or in depth damage survey to be undertaken by a qualified engineer to assess the damaged goods and/or advise on remedial action.

GEODIS will advise suppliers for and on behalf of CUSTOMER, hold all relevant parties liable for the damage and provide such information as may reasonably be requested to support any future claims by CUSTOMER.

The cargo will not be shipped

Unless either remedial action as requested by GEODIS has been undertaken and a subsequent inspection been conducted or GEODIS has received confirmation in writing from GEODIS to ship the cargo.

Irrespective of the delivery term, GEODIS will monitor the progress of consignments to the nominated delivery point and record such data in line with the project reporting procedures.

GEODIS will provide experienced personnel to witness and supervise load outs at ports and airports of critical, fragile and high value consignments, as appropriate.

All cargo will be booked at earliest possible time thus enabling GEODIS to secure the required space always on the first vessel sailing opportunity. All vessels are subject to GEODIS's vessel selection criteria mentioned within this proposal.

If air charter is required, GEODIS will remain as prime Contractor with CUSTOMER, thus maintaining maximum protection.

Marshalling/Consolidation Facilities

GEODIS will arrange for or provide packing, crating and marshalling facilities in key supply areas in order to containerize and/or otherwise consolidate cargo to enhance safety and protection, cost reduction, and facilitate improved shipping frequency where possible.

Such marshalling/consolidation facilities will have modern security devices, crane age and forklifts. Cargo received will be:

- Examined for breakages, shortages, packing, marking & numbering.
- Received at an interim transit storage area at a designated warehouse.
- Logged into warehouse stock report. Daily warehouse intake report shall be issued to meet agreed procedures (as already covered within the general method statement).
- Inspected for packing whether suitable for multiple handling and consistent with the requirements of CUSTOMER.
- Analogue to all non-compliance, short comings of any nature or omissions, GEODIS will notify CUSTOMER...
- The marshalling yards are instructed to endorse Operators delivery orders or in extreme cases reject acceptance of cargo subject to GEODIS discretion.
- Issue warehouse receipts for goods received in satisfactory manner based on above criteria.

Geodis Wilson's Internal Project Evaluation Form (Geodis Wilson 2014)

| GW Industrial Pro | | | | Document no. | Version |
|---|--|----------|--------|---|--------------------------|
| Project Evaluation | 1 | | | | 2.01 |
| General | | | | | |
| Business unit Project owner | | | | Customer name Project name Frame agreement Start of the relationship date: Date of bid answer date: | |
| Binding amount | | | | Expected bid award date: Has any claim in the past with this client | |
| Contract status | | | | Contract value 0 k | * |
| Project Information | | | | | |
| Project scope | | | | | |
| Name of competitors GW Strenghts / Weaknesses | | | | | |
| Strategic relevance / Other | | | | | |
| Volume (approx) Complexity Origin(s) Destination(s) | | | | ☐ Air ☐ Ocean ☐ Overland | Logistics Customs Others |
| | | | | Heavy Lift | |
| Timelines and Milestones | | | | | |
| Start date | • | Duration | months | E | End date |
| • | | | | | |
| Milestones Peak | start no no | no | no no | no no no | |
| Milestones of the project | 1- 2- 3- 4- 5- 6- 7- | | | | |
| Income Statement | | | | | |
| '000 | TOTAL | | | explanation / assumption | |
| Net sales | | | | | |
| Gross margin | | | | | |
| gross margin % | | | | | |
| Direct staff Other direct | | | | | |
| Net margin net margin % | • | - | - | | |
| Indirect staff Other indirect | | | | | |
| EBITDA EBITDA% | • | | - | | |

| Working Capital and Cash flow | | | | | | | | | |
|--|-------------|----------|-----|-----|--------|--------------|---------------|--------------|------|
| '000 | | | | | | | | | |
| Working Capital Requirements | | | | | | | | | |
| Operating Receivables | | | | | | | | | |
| Operating Payables | | | | | | | | | |
| Operating WCR | <i>'</i> . | <u> </u> | . ' | . ′ | - ' | | <i>'</i> . | <u> </u> | - |
| Operating WCR variation | <i>'</i> . | <u> </u> | - ' | - " | - ' | - | ٠. | | |
| | | | | | | | | | |
| | | | | | | | | | |
| '000 | | | | | | | | | |
| Invesments expenses | | | | | | | | | |
| Investment 1: | | | | | | | | | |
| Investment 2 : | | | | | | | | | |
| Total Investments outgoing payments | • | , , | - | • | , | • | , | , , , , | |
| Total investments outgoing payments | - | | | | | | | - | |
| | | | | | | | | | |
| '000 | | | | | | | | | |
| Operating Cash Flow Synthesis (excl. inc. | tay eyn) | | | | | | | | |
| EBITDA | . tax exp., | | | | | | | | |
| (-) WCR Variation | _ | _ | _ | - | _ | _ | _ | _ | _ |
| (-) Investments | _ | - | - | _ | _ | _ | | _ | _ |
| Operational Cash Flow (excl. inc. tax exp | pense) - | | | | | | | | |
| Cumul. Cash Flow (excl. inc. tax expense | | | - | | | | | - | |
| · · · · · · | | | | | | | | | |
| Opportunities, benefits and earnings for G | GW Network | | | | | | | | |
| Business Unit Des | scription | | | | | '000 | Net Sales | Gross Margin | % GM |
| Business one Business | romparon | | | | | 000 | 140t Oulos | Oross Margin | |
| Contract terms and risk assessment | | | | | | | | | |
| risk (event) | Description | | | | impact | likelihood | actions to mi | tinato | |
| Legal Risk | Description | | | | Impact | IIIVOIIIIOOU | actions to mi | ilgate | |
| Responsibility & Liability | | | | | | | | | |
| Penalties | | | | | | | | | |
| Insurance & Legal review | | | | | | | | | |
| Name of validators | | | | | | | | | |
| Date of validation | | | | | | | | | |
| Currency invoicing issues | | | | | | | | | |
| | | | | | | | | | |
| Cash requirements & Treasury | | | | | | | | | |
| Perfomance bounds | | | | | | | | | |
| Other | | | | | | | | | |
| Credit Management | | | | | | | | | |
| 0.0 | | | | | | | | | |
| Other | | | | | | | | | |
| | | | | | | | | | |
| Attachements | | | | | | | | | |
| | | | | | | | | | |
| Document id | Description | | | | | | | | |
| Document id. | Description | | | | | | | | |
| Tender | Description | | | | | | | | |
| Tender Contract | Description | | | | | | | | |
| Tender Contract Appendix 1 | Description | | | | | | | | |
| Tender Contract | Description | | | | | | | | |



Vinacontrol Haiphong

80 Pham Minh Duc, Haiphong.

Tel: 84.31 3760453 Fax: 84.31 3760103

E : vinacontrolhp@hn.vnn.vn www.vinacontrol.com.vn

Branches in all main ports of Vietnam

SURVEY REPORT

Date: 28 July 2014

Applicant : HAPAG-LLOYD (VIETNAM) LTD

Commodity : MAIN TANK Quantity : 01 UNIT

Loading port : NAM HAI PORT IN HAI PHONG, VIETNAM

Date of request for survey : 27 JULY 2014

RESULTS OF INSPECTION

This is to certify that,

At the request of HAPAG-LLOYD (VIETNAM) LTD, we - the surveyors of VINACONTROL HAIPHONG, did attend at Nam Hai CY in Haiphong city in order to perform the inspection on condition of stowage and lashing of 01 main tank stowed on 01 x 20' FR containers, results:

At the time of our inspection, we found FR container No. HLXU 2687916 was in normal condition. The main tank code project No. VN00998 was stowed on the floor of container and well lashed to the lashing rings of container with steel cables and special tools.

In view of the above, we are of the opinion that the stowage and lashing of the main tank checked above meet requirements for sea transportation.

Measuring the dimension of the main tank and FR container we found:

Dimension of main tank (L x W x H):
 441 x 216 x 363 cm

OOG condition:

Over width to the right side: 10 cm Over height: 140 cm

Place of inspection: At NamHai CY in Haiphong city.

Date of inspection: On 27 July 2014

Surveyor,

Manager,

THAY MẬT CÔNG TY
VINGCON/OI

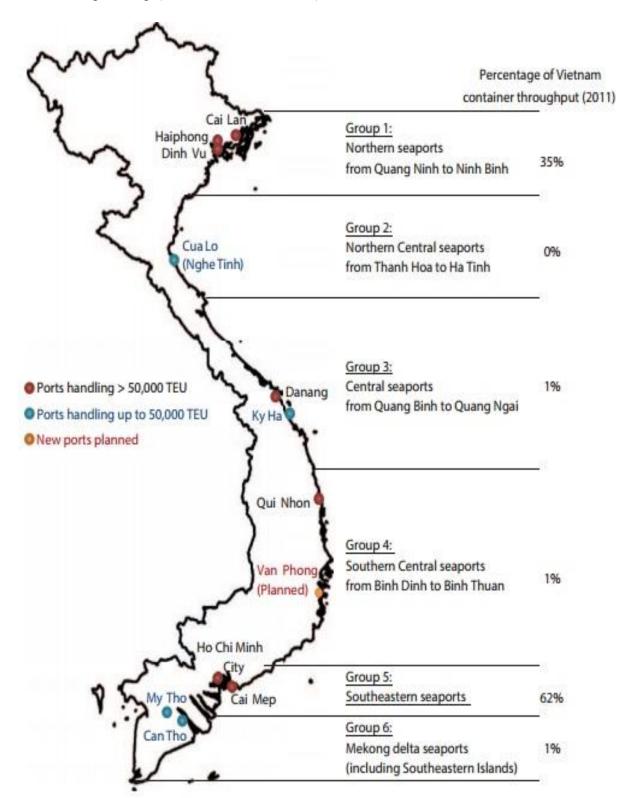
Pham Hong Son VNC 0546

Tran Thuan VNC 0559

Improve quality, toward success



Vietnam's Seaport Map (Blancas, et al., 2014, 27)



Source: Liner Research Services. Note: TEU = 20-foot equivalent unit container.