



STANTONS WESTERN PACIFIC



**APEC MUTUAL RECOGNITION OF COMPETENCIES FOR
INTERMODAL LOGISTICS MANAGERS - TPT 01/2004**

CONSOLIDATED FINAL REPORT

Prepared by
Mr Kevin Donnelly, Managing Director and Principal Consultant,
Stantons Western Pacific

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1 Havelock Street, West Perth 6005
Western Australia
Telephone: (61 8) 9481 3188 Fax: (61 8) 9321 1204
Email: kdonnelly@stantons.com.au



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PART 1 - EXECUTIVE SUMMARY

SUMMARY OF THE REPORT

OBJECTIVE

The 'Mutual Recognition of Qualifications for the Intermodal Logistics Manager' project (TPT 01/2004) was to trial in selected economies a competency based model of mutual recognition of professional qualifications for intermodal/logistics managers. It was agreed to trial the model in Australia, Canada, the United States and Thailand.

The output of the trial was to establish a Register of Mutual Recognition of Qualifications relating to the intermodal/logistics manager profession within these selected economies. The register was to be used to encourage other Asia Pacific Economic Cooperation (APEC) economies to participate in a framework or like arrangements towards mutual recognition of the qualifications of a number of 'in-demand' transport and logistics professions.

BACKGROUND

The initial model was developed for the APEC Transportation Working Group (TPT-WG) through an earlier research project called: 'Towards Mutual Recognition of Transport Professional Qualifications - Stage 4' for the intermodal logistics manager profession. This project developed a Mutual Recognition of Qualification (MRQ) Model. Details of this earlier project can be found on the APEC TPT-WG website.

The 'Mutual Recognition of Qualifications for the Intermodal Logistics Manager' project comprised the following four phases:

- Phase 1: Information Gathering
- Phase 2: Consultation
- Phase 3: Applying the model
- Phase 4: Evaluation

This consolidated report addresses the deliverables of Phase 1 and 2 (provided as a separate report in November 2004) and Phase 3 and 4 (finalised in early 2006 and reported to the TPT-WG in May 2006), and the results achieved in satisfying each of the deliverables.

In relation to the Phase 1 and 2 parts of the study, the report outlines the approach taken, specific issues raised and the results achieved. In relation to the Phase 3 and 4 parts of the study, the report discusses the barriers encountered when attempting to identify a willing company within the Australian or Canadian economy that was prepared to accept a person from Thailand into their organization in order to validate the competency listing. The report also highlights the problems encountered in gaining commitment to such a study when funding was not available from an external source.



Summary of the Phase 1 and 2 Parts of the Study

Phases 1 and 2 of the study involved investigations undertaken in Australia, Thailand, Canada and the USA in order to identify a list of competencies for intermodal management that could be regarded as suitable for mutual recognition between APEC member economies. This report summarizes the results of the many interviews that were conducted over the latter part of 2004 in each of these economies. The report summarizes the situations that were found to exist in each of the economies and concluded at the end of Phase 2 that of the four economies, Australia was likely to offer the formal training and mutual recognition structure that would most readily accommodate the appointment of an intermodal manager according to the competencies and which would gain industry support for the appointment. Canada was suggested as a second economy that would be suitable for this purpose. It was strongly recommended that the APEC Secretariat should give consideration to expanding the study brief to allow Canada to provide a comparative site for the Phase 3 task.

This report discusses the development of a core listing of thirteen competency areas developed from the initial Australian interviews. This listing was expanded to fifteen competency areas following the interviews in the other economies, plus expanded listings of sub-competencies or skill sets and the reallocation of some sub-competencies between competencies. The listing of the fifteen proposed competency areas is provided at Part 4 of this report. The summarized listing of headings only is as follows:

1. Manage Occupational Health and Safety
2. Manage Security and Risks
3. Manage People
4. Manage Finance and Planning Functions
5. Create a Customer (Service) Focus
6. Develop and Apply Communication Networks
7. Apply Mandatory Regulations within the Facility
8. Capacity Planning and Coordination
9. Manage Equipment
10. Engage with Industry and Apply Industry Knowledge and Experience
11. Managing Performance within the Facility
12. Understand and Employ Negotiation Skills
13. Understanding of Contract Law
14. Understand the Basic Logistics and Supply Chain Concepts
15. Other Personal Skills and Attributes

While these competencies are not ranked in strict priority order, the first five were almost always suggested by respondees and were normally ranked in this sequence, suggesting that across each of the economies, between modes and within organisations of substantially different size, these same five competencies were seen to have the greatest impact on the day to day functions of the intermodal terminal manager. The other competencies were listed on a regular basis and were always accepted as being important, however, there was less consistency in their application or capacity to influence these at the operational level.

During the course of the study, it was found that while there was almost complete acceptance of the base case Australian model as a potential model for employment in



other economies, industry-specific considerations had an impact on the acceptance of the model, as did the degree to which parent organisations already had well developed selection and appointment and career development processes in place. For these reasons, it is recommended that the core competencies should be promoted as that, but that recognition should be given from the outset that there will be room for the development and application of industry or modal specific competencies.

It was also recognized during the conduct of the study that the three dimensional model that had been developed for the brief was somewhat simplistic and that actual application involved a much more complex set of interrelationships. A revised model, shown at Figure 2 (page 29), is suggested as a more appropriate model to take forward into subsequent phases of the study.

Summary of Phase 2 Recommendations

The report made the following recommendations in relation to the Phase 2 deliverables:

- “1. It is recommended that the mutual recognition of competencies and any future training packages should target those organisations and economies that do not have highly established systems, or are willing to adopt the APEC standards on a voluntary basis.
2. Because of related work that has been undertaken by the United Nations Agency for Economic and Social Development in the Pacific, UNESCAP, it is recommended that UNESCAP be considered for the provision of support to APEC in getting the competencies recognized within Thailand and possibly, other countries in the APEC sphere.
3. It is recommended that for ease of administration, a formalized competency-based training structure and mutual recognition framework, Australia should be considered as the willing economy for the Phase 3 study and appointment of an intermodal manager according to the competencies that have been identified.
4. Based on earlier discussions, the merits of having a second willing economy appear very strong, both in terms of allowing a comparative study, to facilitate future acceptance of the process and to gain another perspective towards the project. It is recommended that Canada would represent the most suitable economy for the allocation of efforts to place a second manager according to the competencies.
5. While the appointment of an Australian or Canadian person to a position of intermodal manager according to the competencies within their own economy would be beneficial and should not be ruled out, major benefits would flow to APEC and to Thailand if the appointments could be arranged for Thai citizens on an exchange basis into terminals in the other economies, with the results to be monitored on a comparative basis.
6. The initial model proposed by in the study brief is inadequate in explaining the many relationships that have now been identified by the study. It is recommended that the model now shown at Figure 2, or a version of it, should become the model used to represent the aims of this study.



7. This listing of fifteen areas of competency should not be regarded as being set in concrete and should not be considered final until the review of the Phase 3 appointments has been completed.
8. Because APEC will be asking organisations to support this task, with questionable benefit to them in the early stages, it is recommended that financial and consultancy resources be allocated to the development of a marketing and information plan that will provide all participating organisations with something of value for the efforts they are willing to put into the study."

These recommendations were accepted by APEC Secretariat as the basis to progress to the Phase 3 and 4 parts of the study, which commenced in December 2004.

Summary of the Phase 3 and 4 Parts of the Study

While it ultimately proved impossible to identify organizations in Australia or Canada that were willing to participate in the original version of the validation process, an alternative internal evaluation model was developed which was applied within QR (Queensland Rail) to validate the competency listing. The results of a trial conducted over a period of approximately twelve person weeks within QR were highly encouraging and are considered to represent a suitable basis for endorsing the competencies as identified in the Phase 2 study report.

Part 8 of this report details the methodology employed for the QR validation process and draws conclusions relating to the deliverables for this study. In summary, the following conclusions and recommendations have been made:

For 4.3.1(a), this aspect was completed in the Phase 2 study and the recommendations are provided at Part 7 of this consolidated report.

On the basis of these recommendations, it was agreed that Australia should be regarded as the primary economy, with Canada to be used as a comparative economy and for the person (or persons) to be appointed into an intermodal facility to be drawn from Thailand.

For 4.3.1 (b), the second deliverable required the identification of one or more people from Thailand who would be willing to visit Australia, and possibly Canada, for a period of around three months to work in an intermodal facility at a senior level. The intention was for the person to have the opportunity to apply the competencies under supervision and to be able to report on their suitability for application in Australia or Canada and for Thailand. This requirement was not achieved due to a range of unforeseen difficulties arising in identifying a suitable person to be seconded to an organization in Australia (or Canada) for this study.

Following recognition that the evaluation plan, as initially specified, was unlikely to be achievable, a summary of the situation along with recommendations for an alternative approach to this requirement was proposed to the APEC Secretariat and the APEC Budget and Management Committee (BMC).

The validation and evaluation methodology that evolved was to identify Australian and Canadian organizations that would be willing to have their own staff validate the model through the conduct of a workplace study involving the maintenance of records over a period of time to assess the extent to which the competencies were applied in the workplace.



QR made this commitment in September 2005, clearing the way for the study to proceed, with the writer working with QR management to implement the validation process. The proposed validation of the model with a Canadian company did unfortunately not eventuate.

Part 9 of this report details the results of the evaluation undertaken within QR. Based on the results of the evaluation, plus some allowance for knowledge obtained during the Phase 2 study, it is considered that the competencies as defined are a suitable list of competencies to be applied within intermodal facilities throughout APEC economies.

In relation to the second aspect of the requirement detailed in 4.4.1, the validation process did not result in the generation of recommendations for the on-going monitoring of the situation or to expand recognition if appropriate.

For this study to have been of any value, it is essential that a mechanism be put in place for the future that will ensure the work that has been done will form part of an on-going commitment of interest and resources to the maintenance of the competency listing and the promotion of the concepts that have been developed.

In addressing 4.4.2, a range of future options for the on-going maintenance of the competency listing and the promotion and development of the competencies were considered. Based on these considerations, it is recommended that:

- The focus of the APEC TPT-WG, at this stage, not be on the development or maintenance of a register of mutual recognition.
- APEC TPT-WG endorse the findings of the study as a valid listing of competencies for intermodal facilities management within APEC economies.
- The listing be linked to the work being undertaken through the University of Denver (Identification of Needed Intermodal Skills and Development of Required Training Programs, Stage I and II) as a reference framework for this aspect of training and development.
- APEC TPT-WG promote the two initiatives hand in hand to the member economies, allowing the economies to adopt the concepts as appropriate and to potentially move to a situation of full mutual recognition of the competencies at a later stage.
- In due course, TPT-WG identify a training organisation in a member economy, possibly Canada or Australia, which would be willing to develop training materials for use in member economies to develop the competency set.

The writer is of the view that at this time, it is unlikely that the processes of competency-based training and mutual recognition between economies are well enough developed in all APEC economies to enable mutual recognition of the competencies to be achieved. The allocation of any further effort as part of this study or any subsequent extension is unlikely to achieve a short-term outcome that would satisfy the initial objectives of this study. A more realistic approach is to recognise the difficulties that would be faced in achieving universal recognition of the competencies throughout all APEC economies and to put in place a structure that can achieve the objectives over a longer period.

In order to achieve this adoption of the competencies by stealth, this structure for the future could best be served by the following actions:

- Articulation of these competencies to the work being undertaken through the University of Denver.



- The commitment to the regular monitoring of the competencies through the APEC TPT-WG meetings.
- Publicity given to the concepts through publications, media releases or the APEC TPT- WG web site.
- Progressive discussions with industry bodies, professional organisations and major intermodal operators in member economies with a view to establishing a level of interest sufficient to justify a the creation of a support network across APEC economies.

It is strongly recommended that any future development of a recognition framework should be achieved through the cooperation of industry groups and professional organisations in member economies and the encouragement of UNESCAP. Such an approach is likely to overcome the problems associated with a very fragmented approach to mutual recognition of competencies within APEC economies at the present time.



PART 2 - PHASE 1 AND 2 METHODOLOGY AND APPROACH

INTRODUCTION

OBJECTIVE

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BACKGROUND

The initial model was developed for the APEC Transportation Working Group (TPT-WG) through an earlier research project called: 'Towards Mutual Recognition of Transport Professional Qualifications - Stage 4' for the intermodal logistics manager profession. This project developed a Mutual Recognition of Qualification Model. Details of this earlier project can be found on the APEC TPT-WG website.

The 'Mutual Recognition of Qualifications for the Intermodal Logistics Manager' project comprised four phases:

- Phase 1: Information Gathering
- Phase 2: Consultation
- Phase 3: Applying the model
- Phase 4: Evaluation

DELIVERABLES

4.1 Phase 1: Information Gathering

4.1.1 The consultant will perform the following duties for Phase 1:

- (a) Prepare a core set of competency descriptors that would be relevant to all APEC economies.*
- (b) Collate the competencies required in terms of skills, experience, formal qualifications and by economy (where possible this should take advantage of global or other regional agreed criteria).*
- (c) Determine and categorise the differences between the participating economies in terms of analyzing the breadth of courses as well as the depth of study, and*



examining the practical philosophies of logistics teaching and the values that educators adhere to.

4.1.2 *At the conclusion of Phase 1, the consultant is expected to develop a database containing information as per the above requirements.*

4.2 *Phase 2: Consultation*

4.2.1 *The Consultant will perform the following duties for Phase 2:*

(a) *Undertake discussions with relevant education authorities in the participating economies to determine the extent of development of a national framework of core competencies and pave the way for the progressive development of an APEC set of core competencies. Consultations should also address the identified differences. For example, the Australian Vocational Education and Training sector competencies could be used as a possible benchmark when seeking to iron out competencies and/or differences.*

(b) *This will include visits to the economies of Canada, Thailand, and USA for face-to-face interviews.*

4.2.2 *At the conclusion of Phase 2, the consultant is expected to provide a report detailing discussions and recommending solutions to addressing identified differences. At the end of Phases 1 and 2, the Consultant must identify which of the four participating economies, USA, Canada, Thailand or Australia, is the most appropriate to undertake the next phase of the project - applying the model.*

4.3 *Phase 3: Applying the Model*

4.3.1 *The actual implementation of the comparison of qualifications for recognition model will involve both economy led and individual strategies. The conclusion of Phase 3 the consultant will be expected to complete the following:*

(a) *The first strategy (economy led) will require the Consultant to identify a motivated economy that is seeking additional intermodal logistics managers to work within that economy.*

(b) *The second strategy will require the Consultant to identify an individual intermodal logistics manager who is seeking to work in another economy where there is a demand for his/her qualifications.*

(c) *The Consultant will be required to advise the economy and logistics manager on implementing the model.*

4.4 *Phase 4: Evaluation*

4.4.1 *The Consultant will perform the following duties for Phase 4:*

(a) *Evaluate the model and recommend refinement as necessary. Recommendations should also be made regarding ongoing monitoring of the*



situation to ensure changes are recognised, documented and translated into action to expand recognition.

4.4.2 A key deliverable at the end of Phase 4 involves the development of a 'Register of Mutual Recognition of Qualifications for the Intermodal Logistics Manager'. This will clearly document in a simple but formal manner:

- (a) Where mutual recognition has already occurred*
- (b) The essential elements of that mutual recognition*
- (c) The process and means of recognition*
- (d) The means of expanding that recognition.*

PHASE 1 AND 2 METHODOLOGY AND APPROACH

The writer completed visits to Thailand, Canada and the USA, as well as within Australia, to collect information relating to the competencies that are required to manage intermodal facilities in these four countries.

An interim Phase 1 report for this study detailed the outline competencies that had been developed as the base case or core competencies, based on the interviews conducted throughout Australia in July and August 2004. These core competencies were used as the basis for discussions that were held on a face to face basis with a wide number of people involved in the management of intermodal facilities throughout the other three economies.

NATURE OF ORGANISATIONS CONSULTED

Across the four economies, consultations were held with a variety of different organisations, including the following:

- Port authority management representatives - Canada, USA and Australia.
- Stevedoring and port operating companies - Australia, Thailand, Canada and USA.
- Rail operating companies - Australia, Canada, USA.
- Rail/road hub (terminal) operations in Australia, Canada and the USA.
- Freight forwarders - Australia and Thailand
- Inland container depot operators - Australia, Thailand, Canada and USA.
- Road freight operators - Australia, Thailand, USA (indirectly).
- Industry representative bodies - Australia and North America.
- Economic and social development agencies - Thailand (UNESCAP).
- Educational institutions and policy development - Australia, USA.

Facilities ranged from relatively small or specialized through to very large, with some being situated as seaports with others as inland or river ports. Facilities ranged from relatively new to quite old, with some being purpose built to others having evolved from an earlier generation of operation.

Within the relatively restricted time and budget available for this phase of the study, the study was able to obtain views from a very wide and representative range of interested parties in the intermodal industry.



A listing of the organisations and individuals consulted during the course of the study is shown at Annex A to this report.

APPROACH

Based on the initial Australian interviews, a list of thirteen major competency areas was developed. A copy of this listing is attached as Annex B. The initial intention was to form a questionnaire that would be administered to interviewees in the other three economies in order to establish their level of commitment to these competencies, plus the identification of additional competencies or amendments. This approach was changed however, as it became clear during preliminary telephone and email exchanges that individuals were not interested in completing yet another questionnaire and that the only way to obtain information was through the personal approach.

Following this change in approach, all interviews were conducted on the basis of obtaining the thoughts of the interviewee without prompting from the list of competencies, followed by a verbal run-through of the competencies in order to focus the thoughts on issues that might not have been raised in the earlier discussions. This approach worked well, with some interviewees offering very expansive comments on the competencies and the extent to which they were relevant or otherwise in their situation. In some cases, specific competencies were fully endorsed but were deemed to be not applicable for the particular operation.

THE DEFINITION OF INTERMODAL

The initial project brief did not provide a specific definition for “intermodal”, however, the following definition was adopted for the study:

“The integration of shipments across modes through single administrative processes and rates. It is characterized by the transferability of the item between modes by unique systems of administration and billing”. *Terminology on Combined Transport - Jointly compiled by UN/ECE, ECMT and EC, 2001.*

This definition is appropriate for considerations of intermodal transport and related facilities involving road, road/rail and sea, with particular emphasis on the movement of containerized products and, particularly in the US and Canada, where trailers on flat cars, TOFC, has been a specialized form of intermodal freight since as far back as the 1920's.

While airfreight represents a specialized form of intermodal transport, it was recommended that airfreight operations should not be considered further for this study, for two main reasons. Following discussions in Canada regarding air freight systems, the nature of terminal operations and handling equipment, there were compelling reasons not to be drawn into this area, at the possible expense of the other transport modes. These were:

1. It was likely to be very difficult to locate an airline or air freight operator in any of the sample economies that would be willing to appoint a manager to such a sensitive area according to the core competencies developed for the other transport modes.
2. Related to 1, while many of the core competencies were likely to be relevant to air freight, some would not be, while there would be other key competencies that are quite unique to air freight and the aviation environment.



3. While airlines use standard freight modules, the use of the standard container module or road trailer, interchanged between modes and between operators, is not as advanced with air freight, where the modules tend to remain captive to the aviation environment of the airport, the freight terminal and the aircraft, rather than between modes.

It was recommended should there be a need to consider airfreight, that this should be done as a separate study, but possibly based on the findings of this study.



PART 3 - OVERVIEW OF THE INTERMODAL LOGISTICS ENVIRONMENT IN THE FOUR ECONOMIES

THAILAND

The situation in Thailand is typical of an economy that is growing, modernizing and coming to grips with many competing demands for capital. The level of education and training and development is marked by contrasts between highly educated and skilled managers, many of them quite young, who have been educated overseas, compared to many operational level staff who have only basic levels of education and little understanding of English.

The following points summarise the comments provided to the writer and personal observations regarding the Thai situation:

- The seaports are relatively new, efficient and well run, with some heavy involvement from world leaders, such as the Port of Singapore Authority.
- The inland terminals are Bangkok-centric and are operating well above design capacity but require capital investment.
- The rail network has not been able to keep up with demand for container traffic and is not able to fully support the major port at Laem Chabang, with over 70% of the available traffic to the inland container port, ICD, at Lat Krabang going by road.
- There is a strong view that the State Rail of Thailand is not keeping pace with new developments in intermodal freight and lacks a strategic vision for the industry.
- Training in logistics is limited, with one new university level course recently being offered. Most other training is on the job or offered by individual companies, such as P&O.
- There is not a strong central government structure that would be available to support a mutual recognition program for competency-based training, with the industry bodies being required to fill this void.
- The regulatory environment is complex, inflexible and unpredictable, with operators at all levels being frustrated by delays caused through bureaucratic and administrative inefficiencies.
- Management styles are influenced by the country of origin of the owners of the facilities or the country of education or early employment of the managers within the organisation.
- There is no one central group driving change or improvement in supply chain efficiencies across the economy, with many decisions being based on the predominant economic activity of individual regions.
- In the absence of local procedures for road safety, vehicle operations and the like, major Australian companies operating in Thailand, such as LinFox and Toll, are developing systems and procedures that are based on Australian systems, which will benefit those companies but will not be applied across industry as a whole.

In summary, the need for highly qualified and experienced intermodal managers in Thailand is strong and opportunities for influencing the future directions of the industry appear good, however, the lack of common systems and an overarching industry body to support change is likely to hamper the application of mutual recognition of competency concepts in the short-term.



CANADA

Canada has a highly developed intermodal system, similar to the US model but with some notable differences. In many ways, the Canadian model fits between the US and Australian positions, reflecting the relative sizes of the economies, their underlying structure and their heritage.

The Canadian situation can be summarized as follows:

- Strongly influenced by the extent of cross-border trade between the US and Canada and the operation of Canadian railroads and trucking companies into the US, as far south as Florida and to California in the West.
- Membership of the key industry body, the Intermodal Association of North America, IANA, with shared standards with the US, including safety and accident reporting through the Federal Railroad Authority.
- Highly developed infrastructure, often working to on-dock loading and discharge of containers, employing double-stacked rail cars.
- Very high volumes of intermodal freight moving in each direction across the continent, with an almost seamless connection between rail and sea ports at either end.
- Collocation of major road terminals (hubs) within or beside rail terminals.
- Generally high levels of capital investment in seaports, road and rail infrastructure and inland container depots or ports.
- A commitment to training at all levels, but a less developed centralized competency based system than in Australia.
- Tertiary courses in logistics and transportation widely available throughout Canada, with key staff holding appropriate tertiary qualifications, however, promotion from within to levels of Terminal Manager or equivalent remains the most common way to reach senior levels.
- Uniform regulations across the Provinces and at a federal level that impose relatively few cross-border restrictions on operators.
- A very strong influence exerted by the maritime and rail unions that requires micro management in order to achieve the highest possible levels of productivity.
- Highly developed computer-based support systems to control entire freight networks and reporting processes.
- The intermodal service providers have a very strong customer focus and are determined to deliver excellent service to their clients.
- While customer service is paramount, rivalry exists between rail and port operators in relation to the provision of equipment (locos and container wagons) to the ports, where the desire to provide an excellent service by the port operators may be counter to the operating plans for the railroad, who want to see the maximum utilization of their equipment. This is a complex issue and is one that causes some friction between the two participants in the value chain.
- As with Australia and the US, the road and rail operators are facing an ageing workforce, high levels of retirement over the next ten years and a relatively unattractive industry for young people, particularly the most high caliber young people.

In summary, the Canadian situation reflects a highly developed intermodal system, benefiting from the proximity to the USA but having adapted to meet the unique geographical, economic and demographic structures of Canada. The freight companies are very large, employ advanced management practices and supporting systems and



work within a generally uniform regulatory structure. The concept of competency-based training is well known in Canada, however, it does not appear to be as highly structured as the Australian approach, with many companies administering their own systems.

The USA

The study in the USA demonstrated an economy working at near peak levels, with the intermodal task for all rail operators now being in the top two or three revenue areas within the organisations and operating at near maximum capacity levels. The size and volume of the task being undertaken is at a level substantially above that of the other three economies however, there are many lessons to be learnt from the management of that system. Some of the observations regarding the US system are as follow:

- Within continental USA, the intermodal freight task is dominated by the seven Class 1 railroads (including the two Canadian railroads) and major trucking organisations that span the continent.
- These organisations operate with various levels of centralization of control, employing sophisticated management systems that are all computer-based.
- At terminal (hub) level, the degree of autonomy held by the manager varies from organisation to organisation and depending on the size of the operation, however, because of the integrated management systems employed by the major operators, many of the higher level competencies identified from the Australian survey are carried out at the central head office.
- All rail organisations employ contractors within the hubs to perform all or most of the terminal operations work. The extent to which this takes place varies within organisations and between them, however this has a major impact on the skill sets required of the terminal managers. In some cases, the terminal only employed one or two railroad personnel, with all the others belonging to the contract operator.
- Without exception, Safety was the number one concern for US operators, followed almost inseparably by Security. People management skills normally followed these two, embodying concepts of communication, leadership, staff selection and career development.
- The USA does not have a centralized accreditation recognition system as in Australia however the understanding of competency-based training is widely understood and applied.
- The major road and rail operators and stevedoring companies have highly developed in-house training and development systems that have been created to meet the specific needs of the organisation.
- Above the in-house training systems is a broad structure of tertiary level training offered by institutions across the US, but particularly focused on areas of high economic and logistics activity.
- While the industry cooperates through IANA and there is a high level of cooperation at the working level to make sure that freight moves as freely as possible, the companies do protect their own company methods, systems and other intellectual property and are unwilling to have external concepts imposed on them unless very clear benefits can be obtained.
- In the US there are two contracts that count: the contract between the company and the unions and the contract between the company and the client. A third category would be between the company and the contracted terminal operators. These are generally established centrally, with relatively little freedom for the terminal manager to influence these, however, he or she must know what is in the contract and what it means to them.



- The awareness of the impact of the Longshoremen and the Teamsters Unions is all pervasive and exerts a very heavy influence on the day to day decision making of intermodal managers at all levels.
- Regardless of the sophistication of the US control systems and the generally high standard of intermodal infrastructure, there are constraints on the network, such as the congestion in and around Chicago, and the impact of climatic conditions, such as hurricanes in Florida, which can cause a ripple effect thousands of kilometers away and which can intrude on the efficiencies of the overall system and which pose complex scheduling and coordination problems at the operational level.

The USA offers a model for the management of complex intermodal logistics systems which is very advanced in terms of systems and equipment employed, refined in its global operation and advanced in terms of human resource management and development. As with Australia and Canada, the USA suffers the same problems of an ageing workforce with low appeal to younger people, presenting some potentially major problems in coming years. The independent nature of the major operating companies, their company-centric approach to management and their near-capacity levels of work may make it difficult to gain commitment from within the US on an industry-wide basis for the mutual recognition model to be applied in that country. It may however be possible to achieve an element of support on a company by company basis.

AUSTRALIA

Based on the interviews conducted in Australia, literature searches and prior knowledge, the Australian intermodal logistics environment is characterised by rapid growth, high levels of innovation to suit the Australian environment, pressure for modal change from road to rail, many infrastructure choke-points and a generally ageing workforce. Specific observations relevant to this study include the following;

- The Australian skills development, recognition and accreditation processes are the most systematized, standardized and universal of the four economies studied for this project.
- The level of understanding of competency-based training and selection is generally high, with most managers being able to discuss the issues from both a micro (company) level and a more macro (industry or economy) level.
- The industry is characterized by a relatively small number of national and international companies, with a large number of much smaller local, regional or niche market players.
- While intermodal freight volumes do not approach those of Canada or the USA, the volumes are growing and ports such as Melbourne and Botany are substantial ports, exerting a major economic impact on their host economy.
- Through a variety of public and private funding initiatives, large amounts of money have been committed to capital investment over the next ten to fifteen years to remove infrastructure black-spots and to improve flows across the intermodal freight networks.
- Waterfront reform, rail industry rationalization and integration of transport modes have resulted in productivity improvements that are now being recognized internationally as benchmark performances.
- The gradual elimination of cross-border rivalries and conflicting state regulations is also contributing to improved productivity for the industry and enhanced customer perceptions, as delays are reduced and inefficiencies are eliminated.



- Formal training initiative supported by the industry body, such as the Transport and Logistics Industry Skills Council and Transport and Distribution Training Australia, lead the field within the four study economies in terms of providing universal access to training across the economy, supported by a diverse range of tertiary courses in logistics and related fields of study.
- Notwithstanding the levels of training available to students and potential participants in the transport industry, evidence was provided that it is difficult for transport and intermodal operators to attract well-qualified young people into the industry, as the industry is not seen as an attractive career.
- The ageing workforce means that as more people approach retirement age and leave the industry, much of the skills base will also be lost, unless recruitment and training and development policies allow these people to be replaced. To accommodate this during a period of major growth presents many complex planning issues.

Australian companies operate in an economy that is not overwhelming in terms of other APEC economies, that is supported by very good training and recognition systems and which is relatively advanced in terms of the management and control systems that are employed within the industry. Because of the relative size of the Australian economy, the composition of the industry and the demographics of the population, Australia appears to be a suitable economy for the application of the competency model within the intermodal industry. While problems remain in relation to infrastructure and state-based regulatory environment, these would not detract from the capacity of an Australian company to be a suitable vehicle for developing and applying the competency model.



PART 4 - ANALYSIS OF PHASE 1 AND 2 FINDINGS

INTRODUCTION

This part considers the detailed findings of the study of Australia and the other three economies. For the purpose of analysis, the initial listing of thirteen key competency areas identified in Australia were regarded as the base case, with the comments provided from the other economies being added to these or used to modify them.

The objective of this part was to develop a logical listing of the competencies that could serve as the basis for the following:

- a. The appointment of one or more managers within intermodal facilities according to the proposed competencies.
- b. The evaluation of performance against those competencies.
- c. The refinement of the competencies after an evaluation period.
- d. The future development of training programs to assist in implementing the competency system throughout APEC economies.

CORE AUSTRALIAN COMPETENCIES

The list of core competencies developed as a result of the initial interview schedule conducted around Australia in August 2004 is attached as Appendix B.

This listing was used as the basis for consideration of the following discussion points relating to the core Australian competencies and for the development of the expanded and refined competency listing.

THE EXPANDED COMPETENCY LISTING

An outstanding feature of the interviews conducted in each of the three other economies was that no respondent disagreed with the list developed in Australia. While the extent to which particular competencies applied in individual cases, each person interviewed considered the list to be a comprehensive listing of the competencies or skills required to manage their facility. Variations to the extent to which the thirteen competencies could apply at terminal or facility level were caused by the following:

- The level of centralization of support functions compared with decentralization to the operating areas.
- The relative size of the operation as part of the parent organisation.
- The level of systems support provided to the operational area.
- Differences between road, rail and sea specialisations.

Based on the interviews and research concluded, the following is a listing of additional points that were raised within each of the three economies, plus some additional Australian observations. These points are not listed in any particular priority order at this stage, but are in the order raised in interviews.

KPIs

This was raised in Thailand as a major issue for some terminal managers. People don't care for KPIs, don't understand them and don't like applying them. They see them as a



report and not as a management tool. For this reason, there is a need to ensure that the use and application of KPIs is regarded as a separate sub-competency within the Performance Measurement competency.

Understanding of Logistics and the Supply Chain

Again, this was raised in Thailand but is likely to be the case in other APEC economies. There is a lack of understanding of what logistics really means and the role of logistics in the supply chain. There is also a lack of appreciation at the operational level of where the intermodal facility sits within the overall supply chain and with whom it interfaces. The terminal is not the end of the line but is part of a total system. This suggests that there is a need for a new competency to cover this fundamental appreciation of the supply chain concept and the ways in which the intermodal facility interfaces with the other parts of that chain.

Safety

In Thailand, there is not yet a universal safety mind-set. This needs to be created at all levels and requires greater emphasis in selection, training and development. In the other three economies, safety management was seen as the most important single issue for managers, however, the methods of application varied. A fundamental understanding of occupational health and safety is essential for the role of manager, with provision to apply the broader understanding within the local or host environment.

Staff Selection, Training and Development

This was raised as a major issue in Thailand and was raised in each of the other economies, particularly in terms of an ageing workforce and lack of ability to attract younger people into the industry. There is a need for a greater understanding of recruitment, career planning, training and development. An understanding of these skills is essential for the manager in order to plan for the future operational capacity of the facility.

Security and Risk Management

Within each of the economies, it was identified that the manager is now required to observe and implement the new international security standards of the International Maritime Organisation (IMO): the International Ship and Port Facility Security (ISPS) Code, as well as new national, industry and organizational approaches to security. This is now fundamental to operations and must be understood and applied, however, security is also recognized as part of business security and is part of risk management. Accordingly, an understanding of the concepts of risk management and business security is required.

Scheduling and Planning

While specialists within the team will normally apply these systems, the manager is required to understand the concepts and to be able to make operational decisions based on information provided. Within all four economies, individual organisations have implemented or are in the process of implementing new systems to help manage the vital scheduling and planning processes. In many cases, the North American railroads for example, these systems will be large systems that are fundamental to business operations and are driven from central computers and central operational



control areas. At the terminal operational level, there is a need to understand how these systems operate and what their role is in driving the operation of the terminal.

Strategic Planning

While corporate strategic planning was often seen as something done by someone else, it was recognized that to be successful at the terminal level, there was a need to be able to influence strategic planning processes and to have an understanding of these on the operations. Included in this was the capacity to develop and submit justifications for capital expenditure to keep the facility safe, efficient and environmentally compliant. Particularly in Thailand, frustration was expressed as to the inability of the railway authority to take a strategic view of the intermodal system, however, this is beyond the scope of this report.

Coordination Skills and Customer Focus

Within all four economies, it was recognized that at the terminal level, the manager had to be able to adopt a customer service focus, where they could manage issues with their customers to ensure that their service expectations were met. If delays occurred because of problems elsewhere in the system, beyond their immediate control, they had to have the capacity to seek alternative solutions or to at least manage the situation. Awareness, decisiveness and quick reactions were terms used to describe the characteristics required of a manager to manage these situations. As one person stated, his role was to ensure there were no surprises for the client.

People Management Skills

People management skills, including communications and leadership, were frequently linked and were listed after Safety and Security as the key competencies for the manager. Good communication skills were seen as fundamental to effective people management, but also for dealing with clients and other stakeholders. While covered in the initial list of competencies, this suggests a change in emphasis, with communication skills being included as a sub-set of People Management Skills as well as a separate area of competency. Other skills that need to be considered, particularly from the North American perspective, include:

- Managing diversity
- Team building
- Delegation
- Managing workload

The Regulatory Environment

This area is the area that is most diverse between economies, between modes, within economies and within regions. There is no one set of regulations that can be addressed or employed and these could never be taught on a global basis, however, it is essential for the manager to be able to quickly acquire an adequate level of knowledge of the regulatory environment within which their terminal operates and to be able to ensure compliance with those regulations. An appreciation of the framework from both an industry and economy viewpoint is essential for the effective management of the facility. The more detailed the level of that knowledge, the more effective the manager will be, particularly in being able to influence changes to regulations that affect the terminal.



Spatial and Time Awareness

This is related to planning and scheduling. It is conceptual in nature but relates to the ability of a person to be able to appreciate the impact of time delays, time to complete tasks and the space requirements of the arrival of another ship or train or the unscheduled delay in a dispatch. It also relates to planning new lay-down areas or optimizing existing space. This was raised as an important characteristic, rather than competency, by several respondents and is considered to be a very sound capability to look for in a selection process for a terminal manager.

Equipment Management

Equipment management includes the vast range of lifting equipment, mobile plant, rail cars, locomotives and road trucks and chassis that are required to operate intermodal and port facilities. The effective management of this equipment can represent the difference between the profit and loss on a shipment, however, it is often a poorly managed activity or one that is delegated too far down the organizational structure. The manager needs to have knowledge of how their equipment is managed, how it can be optimized and what is taking place to ensure the availability of that equipment when required. It can include such basic actions as ensuring equipment is refueled at the end of a shift so that it is available for the entire next shift or ensuring that servicing takes place when required in a planned manner. The manager must have basic technical skills or knowledge to be able to manage this task.

Product Knowledge and Service Levels

While the manager will not necessarily know the content of individual containers, he has a need to know what the major products are that are moving through the facility, such as auto parts, perishable goods, consumer goods or chemicals. With this basic knowledge, he is able to make decisions that relate to transit priorities, storage requirements, customs inspections and the like. The greater that knowledge, the more effective the manager will be in delivering the excellent service demanded by the clients. The more excellent the service, the less price-sensitive the service will be and the greater the profit margin to the operating company.

Financial and Business Acumen

This was listed as a core competency in all four economies, with many respondents stating that while most of the financial systems were centralized, there was a need for them to understand basic profit and loss sheets, budget planning and returns on investment. A number of people observed that while they recognized these requirements and had to perform these tasks, they did not feel well prepared to undertake them. One person observed that he needs to know where he makes the money and where he loses it. There is a need to provide access to training courses that can develop these skills for people moving through to terminal manager level.

Managing Contract Relationships

Three interrelated skill areas fall under this heading, including contact management, negotiation skills and conflict management. The common link for these three skill sets is the need to deal with unions, clients and other stakeholders who have contractual relationships with the terminal. This is particularly important in North America and to a certain extent in Australia, where contracts between the parent organisation and the



other groups are established centrally but administered on a decentralized basis. Terminal managers have a need to know what constitutes a contract, what are their rights, benefits and obligations under that contract and what is negotiable at the terminal level. Negotiation and conflict management are important skills in being able to work within the contractual boundaries at the local level. The emphasis here is not how to form the contract but how to apply and manage the contract once it is in place.

Understanding Community and other Stakeholder Relationships

The intermodal facility is often a focal point within a community, generating employment, economic activity and recognition. It also has the capacity to generate noise, dust, traffic movements, road congestion and delays and adverse impacts on the infrastructure and amenity of the surrounding community. There is a need for the terminal manager to be outward looking, to be able to communicate with the surrounding community, to work with them in problem solving and to be a good corporate citizen.

Industry Knowledge

This was possibly the most contentious issue of the study, with some very firm views being expressed regarding specialists verse generalists. The outcome is probably a mid point, where it can be agreed that while industry knowledge is not essential in order to be an effective intermodal manager, experience in a high-pressure operational environment, such as the oil and gas industry, production or mine management would be appropriate. Under such circumstances, the appointee would have to have the capacity to quickly gain industry knowledge from their team and be able to understand the high-level industry-specific features of the industry. In an integrated road/rail or rail/sea facility, there is a need to be able to look beyond your own area of specialization and to understand the influences on your major transport partner. The more you understand the capabilities of your partners and the other terminals in the supply chain, the more effective the terminal manager will be.

Systems Knowledge

This is linked to Scheduling and Planning. There is a need to understand the support systems that are available and to have the ability to acquire knowledge about the information technology systems that support the operation. Without this knowledge, or the ability to acquire it, the manager of an intermodal terminal would not be able to function. It does not mean that they must have an intimate knowledge of every sub-system, such as load planning or scheduling, but they must know what can be extracted from those systems and how that can aid the day-to-day management of the activity. Increasingly, systems knowledge and computer literacy are essential skills for the terminal manager, as the systems drive the internal work levels and the external relationships of the terminal.

Other Abilities, Aptitudes and Characteristics

In addition to these competencies, many respondents provided thoughts on abilities, aptitudes and characteristics that they considered were essential to the effectiveness of intermodal managers. These abilities, aptitudes and characteristics are more the “soft” competencies that would be tested or considered before appointing a person to the role of intermodal manager. Without attempting to rank these, they include:

- Decisiveness



- Tenacity and perseverance
- Strong inter-personal skills
- Anticipation, planning and foresight
- Open-minded and willing to listen
- Discretion in what you say and how you say it
- Tolerance of ambiguity
- Flexibility with firmness
- Confident and positive approach

CONCLUSION TO ANALYSIS OF FINDINGS

This part has discussed the summarized results of many weeks of interview, discussion and analysis in four countries. It has not attempted to list every view that was provided or every local issue that was raised. Rather, it has attempted to distill a list of common issues raised on a frequent basis during the course of the study or those of such compelling strength that they deserve to be considered for broader application.

While other training reports or training courses in related fields were suggested in the course of the study, the writer has deliberately not been influenced by these, as these materials tend to focus on logistics management in its broadest sense, are related to operational level training rather than management level or have been developed for one specific part of the industry, such as port operations. These materials are valuable, however, they do not focus on the specific competencies this study is attempting to identify. They will be valuable in the future when training to satisfy the competencies becomes an issue for consideration.

The Australian stage of the study resulted in the development of what has proven to be a comprehensive and robust list of competencies, widely accepted within each of the other economies. As planned, that list has now been used to serve as the basis for the development of the universal list of competencies, intended for wider application and for the selection and appointment of one or more terminal managers according to the competencies. The revised list, based on the above analysis, is developed in the following part of this report.



PART 5 - PROPOSED COMPETENCIES

THE PROPOSED COMPETENCY STRUCTURE

Based on the analysis contained in the preceding part, the following competency structure is proposed.

1. Manage Occupational Health and Safety

- Administer occupational health and safety in accordance with all relevant national, industry and corporate occupational health and safety laws, policies and standards.
- Create a safety culture that ensures the facility is managed in accordance with the relevant health and safety laws, policies and standards.
- Apply monitoring and reporting systems that ensure compliance with the relevant health and safety laws, policies and standards.
- Maintain a legally compliant facility.

2. Manage Security and Risks

- Understand and apply national, industry and corporate security processes and systems to ensure:
 - Physical security of the facilities
 - Security of the containers
 - Personnel selection and vetting
- Implement risk management processes in order to ensure corporate risks are minimized or eliminated.
- Implement security and risk management monitoring and reporting systems to ensure a legally compliant facility.
- Create a security and risk awareness culture within the facility.

3. Manage People

Implement and administer systems and procedures that will ensure the people management function is discharged in the most effective manner, including the following tasks:

- Staff recruitment and selection
- Staff training and on the job training
- Succession planning and career development
- Industrial relations
- Task allocation and delegation
- Teamwork
- Empowerment
- Performance measurement and management
- Manage diversity

4. Manage Finance and Planning Functions

Demonstrate an understanding of the systems and processes used to support the corporate finance and planning tasks, including:

- Knowledge of the profit and loss, P&L, and balance sheets
- Budgeting processes
- Reporting processes,



- Developing and submitting capital expenditure proposals
- Financial performance measurement and management
- Strategic planning
- Market growth and development
- Benchmarking and performance improvement
- Ensuring a legally compliant business

5. Create a Customer (Service) Focus

Create a customer (service) focus within the facility through the following:

- Acquire a working knowledge of the industries of the major customers
- Understand the specialised requirements for handling of industry-specific goods or commodities
- Understand the markets of the major customers and where your facility fits into their supply chain, including opportunities for modal choice and local and international competition
- Understand customer expectations and how those expectations are measured
- Facilitate options generation for delivering an excellent service
- Establish effective communication channels with the customer

6. Develop and Apply Communication Networks

Develop and apply communication networks that will enable timely and accurate communications between the manager and the following groupings:

- Staff
- Customers
- The surrounding community
- Other stakeholders

Understand what is being communicated from these groups to the manager.

7. Apply Mandatory Regulations within the Facility

Ensure the facility is operated in a compliant manner in accordance with the following:

- Applicable road, rail, sea and air regulations - state, national and international
- Regulations imposed by national and state authorities, including Customs, Quarantine and other security and health regulatory authorities
- State and national standards for other areas of workplace management, including environmental protection, workplace safety and industrial relations.

8. Capacity Planning and Coordination

Apply knowledge and experience to ensure that the facility operates to the highest levels of efficiency and capacity, including the following:

The application and development of new and enhanced information systems to support scheduling and planning

- Optimum route selection to ensure cost-effective utilization of equipment and customer satisfaction
- Allocation of space within the terminal to ensure the maximum efficient utilization of resources



- In conjunction with corporate head office, develop and apply strategic plans that will ensure future development of the facility is able to cope with growth and changing operational requirements
- Develop and apply operational-level planning to ensure the day-to-day demands on the terminal are met in the most effective manner
- Schedule resources (equipment, human and spatial) to meet operational requirements of the facility

9. Manage Equipment

Develop and apply systems and procedures that will ensure:

- Company-owned or leased equipment is serviced and maintained according to agreed standards and schedules.
- Third party equipment is available as required and is in a serviceable condition at all times.
- Equipment such as chassis, container wagons or prime movers is ordered as required to meet fluctuating operational requirements.
- Empty containers are managed in order to avoid demurrage and unnecessary cost or waste.
- Plans are developed and implemented to ensure terminal equipment is updated and modernized on a regular basis in order to maintain the efficiency and safety of the terminal.

10. Engage with Industry and Apply Industry Knowledge and Experience

Develop and apply industry-specific knowledge that will contribute to the efficient operation of the facility, including:

- Knowledge of the existing physical networks
- Ability to develop and apply an information network to support decision making
- Understand new developments within the industry and plan for these to be accommodated within the facility
- Understand new developments external to the industry that will have an impact on the facility
- Participation at an industry level in influencing change within the operating environment
- Manage inter-terminal operations and requirements
- Appreciate the major characteristics and operational constraints of other parts of the supply chain, including port operations, road and rail networks and shipping services
- Understand the essential characteristics of your specific industry

11. Managing Performance within the Facility

- Understand the use and application of key performance indicators, KPIs, as a management tool within the facility.
- In association with corporate head office and other authorities, develop and apply a range of, which will enable the measures, monitored and managed:
 - Human resource performance, including occupational health and safety and industrial relations performance
 - Equipment utilization and availability
 - Where appropriate, network and inter-terminal performance
 - On-time dispatch and other terminal operational performance measures
 - Customer satisfaction and the achievement of service level agreement targets set in contracts with customers



12. Understand and Employ Negotiation Skills

Understand the key techniques for the conduct of effective negotiations in the workplace, with particular emphasis on:

- Employee relationships
- Customer relationship management
- The application of terms and conditions of contracts
- Resource allocation and optimisation

13. Understanding of Contract Law

Acquire and apply a basic understanding of the law of contract in order to manage contractual relationships within the facility, including:

- Contract theory
- Types of contract likely to be employed in a terminal - labor, equipment hire and freight agreements
- What constitutes the contract
- What can be negotiated
- Sub-contract relationships

14. Understand the Basic Logistics and Supply Chain Concepts

Demonstrate an understanding of basic logistics concepts and supply chain management concepts, including:

- The interrelated functions of the logistics process, including procurement, inventory management, warehousing and transport and distribution networks
- The supply chain management concept, identifying the relationships between the participating organisations in that chain and the opportunities to enhance the value of the chain through efficient relationship management
- Recognition of the pivotal role played by the intermodal facility in the operation of the overall supply chain

15. Other Personal Skills and Attributes

In order to be effective in the role of an intermodal facilities manager, the incumbent should possess a range of personal skills, abilities and attributes that will contribute to their capacity to lead others and to make sound operational decisions. These include:

- Decisiveness
- Tenacity and perseverance
- Strong inter-personal skills
- Anticipation, planning and foresight
- Open-minded and willing to listen
- Discretion in what is said
- Tolerance of ambiguity
- Computer literacy
- Flexibility and firmness
- Spatial and analytical skills
- A problem-solving disposition

These competencies are not ranked in a strict priority order, however, the first five were the ones that were mentioned most frequently and were seen by most respondents as those which were crucial to the effective management of an intermodal facility. The others were listed on a recurring basis but with a different emphasis in terms of



importance, usually reflecting the extent to which the manager of a particular facility could influence that competency or apply it in the facility.

It is considered that regardless of the ranking or the degree to which competencies are applied in individual facilities, this list provides a sound basis for the selection and appointment of intermodal facility managers. Any competencies that are not used on a daily basis in a particular facility would still serve as valuable competencies for use in another environment or for the complete development of a competent intermodal manager.

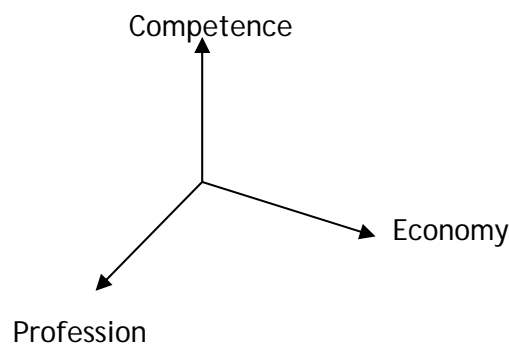


PART 6 - THE MATRIX AND SUMMARY OF OTHER ISSUES

APPLICATION OF THE THREE DIMENSIONAL MATRIX MODEL

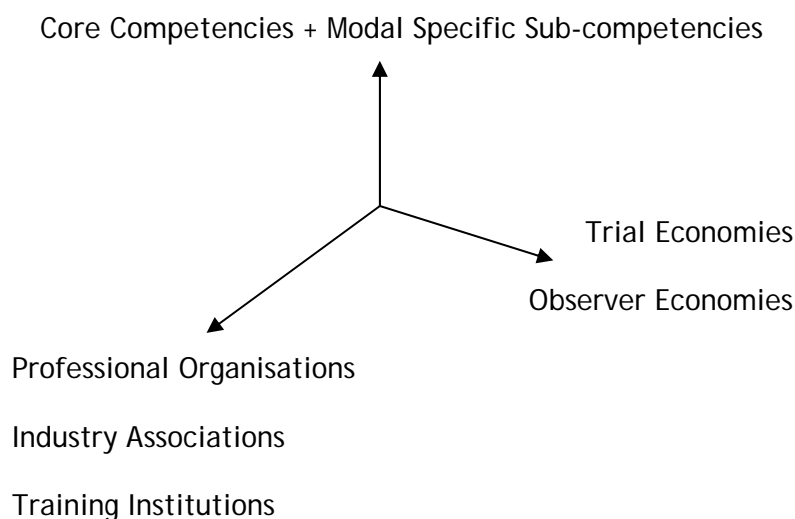
As part of the initial study brief, a three dimensional model was proposed as a means for identifying the transparency of the qualification. This relatively simple model is shown at Figure 1.

Figure 1 - The Three Dimensional Matrix



Based on the findings of the study, it is clear that this model will need modification in order for it to reflect the many variations that have emerged since the commencement of the study and the completion of these Phase 2 interviews. The proposed modified model is shown at Figure 2.

Figure 2 - The Modified Three Dimensional Model



The model shown at Figure 2 reflects the findings of this study that cause the initial model to require modification to reflect the reality of the situation regarding the general level of understanding and acceptance of competency-based training and career development. In this case, the model is modified to reflect the changes detailed in the following paragraphs.



Core Competency plus Modal-Specific Competencies

While it is considered that the core competencies that have been proposed could apply to road, rail and sea terminals (and possibly to airfreight, although this has not been considered) there will be sub competencies that will apply to each of these modes and which would need to be considered on a case by case basis. Some of these sub-competencies would be operational in nature or would be related to the specific technologies of the particular mode, such as ship loading or railway safe-working.

These sub-competencies may not be required for initial appointment to a position, but are likely to be required over time for legislative reasons or for the incumbent to be a more effective in the role.

Trial Economies and Observer Economies

Within the economies, it is likely that there will be early leaders, early followers and some late converts. It is appropriate to recognize that the success in implementing the model within the early leaders will have an impact on the manner and speed with which the model will be transferred to the other economies, as the process will be a voluntary one and will be recognized only for the ultimate value to the particular economy.

In order for the competencies to ultimately be adopted throughout the APEC economies, it will be important to apply some carefully developed strategies to publicize the project, to promote the benefits and to support the roll-out of the concept. It is beyond the scope of this phase of the study to propose these strategies, however, it is recommended that these strategies should be developed and agreed before wider roll-out of the competency model is attempted.

The Profession, Industry Bodies and Training Institutions

The Profession has been expanded to cover the two additional groups of industry bodies and training institutions. It is also appropriate to refer to “the Professions” as there is no one professional group, even within individual economies, that represent all the players in the industry. Individuals in the maritime, rail and road industries tend to be represented by their own professional bodies, with each taking their own, often parochial, view of professional development.

Industry bodies, such as IANA in North America and the Australian Logistics Council provide a linking role between members of the industry, professional development organisations and other participants in the industry. Training organisations at all levels have an interest in the process and would potentially be involved in the development of courses to support the competencies. These industry bodies and training organisations, along with the professional bodies, have a legitimate expectation to have input into the processes of refining and implementing these competencies.

OTHER ISSUES IMPACTING THE FUTURE OF PHASE 3 AND 4

During the course of conducting the interviews for this phase, respondees raised many points that collectively contributed to the formation of opinions that relate to other aspects of the study, rather than to the actual development of the suite of competencies. These issues were discussed in the following points:



1. Where organisations have very well established internal promotion and selection processes in place, along with access to career development courses and on the job training, gaining commitment to employ the APEC competencies is likely to be difficult, as organisations will question what they are likely to get from their participation.
2. For this reason, it is suggested that the mutual recognition of competencies and any future training packages should target those organisations and economies that do not have highly established systems or are willing to adopt the APEC standards on a voluntary basis.
3. In the USA, differences exist in relation to the understanding and application of the concept of “competencies” between and within organisations with a less unified approach to recognition and training than in Australia. Again, this will have an influence on the strategies adopted to achieve mutual recognition in the USA and may mean that universal acceptance of the competencies will be difficult to achieve.
4. In the USA and Canada, one major potential source of support is IANA, where that organisation could act as a champion for the acceptance of the competency framework by members of the association on a voluntary basis.
5. In Canada, the training system is more attuned to the use of competencies than in the USA, with the scale of operations being slightly more modest than in the USA. This suggests that Canada could be a potential willing economy for the trial of the competency framework.
6. Because of recent changes in the rail industry in North America, both Canadian National and Canadian Pacific are substantial players in the US market, providing a potential “back-door” entry into the US for the recognition project.
7. Thailand currently works within a fragmented system however there is a clear willingness to apply new ideas and a recognition that changes in the freight system must take place in order for the economy to cope with growth. The potential for the Thai economy to benefit from the exposure of one or more senior managers to operations in another economy, working within the competency structure, would be substantial.
8. The United Nations Agency for Economic and Social Development in the Pacific, UNESCAP, which is based in Bangkok, has done some related work in this field and may be a valuable source of support to APEC in getting the competencies recognized within Thailand and possibly, other countries in the APEC sphere. Sensitivities between APEC and the UN are recognized in making this comment, however, in the field of transport, relations appear to be very supportive.
9. For ease of administration, the nomination of Australia as the willing economy would make sense, with the strong likelihood that an organisation willing to accept the appointment of a terminal manager according to the competencies could be relatively easily located.
10. Based on earlier discussions, the merits of having a second willing economy appear very strong, both in terms of allowing a comparative study, to facilitate future acceptance of the process and to gain another perspective towards the project. On this basis, Canada is likely to represent the most suitable economy for the allocation of efforts to place a manager according to the competencies.
11. Should the above approach be adopted, Thailand could then be offered the opportunity to make an appointment according to the competencies on an opportunity basis, with monitoring and review to be on a less formal basis than for Canada and Australia.



12. Once the list of competencies has been identified and circulated, it is expected that more interest will be stimulated within all four economies. Therefore, this initial listing should not be regarded as being set in concrete and should be available to be enhanced over coming months, even if appointments are made according to the initial lists.
13. Because APEC will be asking organisations to support this task, with questionable benefit to them in the early stages, it will be necessary to develop a marketing and information plan that will provide all participating organisations with something of value for the efforts they are willing to put into the study.
14. While the development of an information and implementation strategy will be an important part of subsequent phases, it is considered that this aspect has not been addressed in sufficient detail by APEC Secretariat or within the current scope of the project and may need to be considered further.



PART 7 - PHASE 1 AND 2 CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The following conclusions and recommendations were made in relation to the competencies that were identified and to the other issues raised in this part of the report:

1. For the purposes of this study and future application of the competencies, the definition of intermodal should be as proposed below:

“The integration of shipments across modes through single administrative processes across modes through single administrative processes and rates. It is characterized by the transferability of the item between modes by unique systems of administration and billing”. *Terminology on Combined Transport - Jointly compiled by UN/ECE, ECMT and EC, 2001.*
2. Airfreight should be excluded from the study on the basis that it would broaden the current scope to such an extent that the capacity to develop a standardized list of competencies would be made much more difficult.
3. Should there be a desire to consider airfreight as an intermodal activity, this should be done as a separate study or as an extension of this contract.
4. That while the need for highly qualified and experienced intermodal managers in Thailand is strong and opportunities for influencing the future directions of the industry appear good, the lack of common systems and an overarching industry body to support change is likely to hamper the application of mutual recognition of competency concepts in the short-term.
5. Canada and Australia are mid-sized economies, however Canada benefits in terms of freight volumes and the size of intermodal volumes from the influence of the USA. Canada has a well-established awareness of competency-based training and recognition processes and is a potential economy for the employment of a terminal manager according to the proposed competency model.
6. The USA offers a model for the management of complex intermodal logistics systems which is highly advanced, however, the independent nature of the major operating companies, their company-centric approach to management and their near-capacity levels of work may make it difficult to gain commitment from within the US on an industry-wide basis for the mutual recognition model to be applied in that country.
7. Notwithstanding the above, US companies are keen to improve and to look for enhanced methods of human resource management and development, suggesting that it may be possible to gain support for the competency model on a company by company basis and through the support of the Intermodal Association of North America, IANA.
8. Because of the relative size of the Australian economy, the composition of the industry and the demographics of the population, Australia appears to be a



suitable economy for the application of the competency model within the intermodal industry.

9. Canada is a larger economy than Australia with an established competency-based training system and employing advanced systems for the management of intermodal operations. As such, Canada would be the ideal second economy to be considered for the application of the model and to be used as a comparative study with Australia.
10. Should Australia or Canada, or both economies, be used for the Phase 3 appointment of an intermodal manager, the opportunity exists to employ one or more people from Thailand in the role, to assist the transfer of skills to Thailand and, in due course, to establish the validity of the processes within a developing economy.
11. The core list of thirteen competencies developed in Australia in Phase 1 of the study has proven to be a robust basis for the conduct of the review and the development of the revised list of fifteen competency areas.
12. The listing of fifteen competency areas that has now been developed is considered a suitable list of core competencies for the intermodal industry, however, it is inevitable that the key sectors within the industry, road, rail and sea, will have a relatively small number of additional industry-specific competencies that would need to be added to these core competencies.
13. The model shown at Figure 2 reflects the findings of this study that cause the initial model to require modification to reflect the reality of the situation regarding the general level of understanding and acceptance of competency-based training and career development. In this case, the model is modified to reflect the changes detailed in the following paragraphs.
14. Implementation of the competency framework and the ultimate roll-out throughout APEC economies will require the development of a carefully developed information and marketing strategy to ensure acceptance of the model by the many interested parties.

RECOMMENDATIONS

1. It is recommended that the mutual recognition of competencies and any future training packages should target those organisations and economies that do not have highly established systems or are willing to adopt the APEC standards on a voluntary basis.
2. Because of related work that has been undertaken by the United Nations Agency for Economic and Social Development in the Pacific, UNESCAP, it is recommended that this organisation be considered for the provision of support to APEC in getting the competencies recognized within Thailand and possibly, other countries in the APEC sphere.
3. It is recommended that for ease of administration, a formalised competency-based training structure and mutual recognition framework, Australia should be



considered as the willing economy for the Phase 3 study and appointment of an intermodal manager according to the competencies that have been identified.

4. Based on earlier discussions, the merits of having a second willing economy appear very strong, both in terms of allowing a comparative study, to facilitate future acceptance of the process and to gain another perspective towards the project. It is recommended that Canada would represent the most suitable economy for the allocation of efforts to place a second manager according to the competencies.
5. While the appointment of an Australian or Canadian person to a position of intermodal manager according to the competencies within their own economy would be beneficial and should not be ruled out, major benefits would flow to APEC and to Thailand if the appointments could be arranged for Thai citizens on an exchange basis into terminals in the other economies, with the results to be monitored on a comparative basis.
6. The initial model proposed by in the study brief is inadequate in explaining the many relationships that have now been identified by the study. It is recommended that the model now shown at Figure 2, or a version of it, should become the model used to represent the aims of this study.
7. This listing of fifteen areas of competency should not be regarded as being set in concrete and should not be considered final until the review of the Phase 3 appointments has been completed.
8. Because APEC will be asking organisations to support this task, with questionable benefit to them in the early stages, it is recommended that financial and consultancy resources be allocated to the development of a marketing and information plan that will provide all participating organisations with something of value for the efforts they are willing to put into the study.



PART 8 - PHASE 3 AND 4 METHODOLOGY AND APPROACH

PHASE 3 - APPLICATION OF THE MODEL

Phase 3 of the study required the following deliverables to be achieved:

4.3.1 The actual implementation of the comparison of qualifications for recognition model will involve both economy led and individual strategies. The conclusion of Phase 3 the consultant will be expected to complete the following:

- (a) The first strategy (economy led) will require the Consultant to identify a motivated economy that is seeking additional intermodal logistics managers to work within that economy.*
- (b) The second strategy will require the Consultant to identify an individual intermodal logistics manager who is seeking to work in another economy where there is a demand for his/her qualifications.*
- (c) The Consultant will be required to advise the economy and logistics manager on implementing the model.*

For (a), this aspect was completed in the Phase 2, with the recommendations shown at Part 7 of this report. In summary:

- Because of the relative size of the Australian economy, the composition of the industry and the demographics of the population, Australia appears to be a suitable economy for the application of the competency model within the intermodal industry.
- Canada is a larger economy than Australia with an established competency-based training system and employing advanced systems for the management of intermodal operations. As such, Canada would be the ideal second economy to be considered for the application of the model and to be used as a comparative study with Australia.
- Should Australia or Canada, or both economies, be used for the Phase 3 appointment of an intermodal manager, the opportunity exists to employ one or more people from Thailand in the role, to assist the transfer of skills to Thailand and, in due course, to establish the validity of the processes within a developing economy.

On the basis of these recommendations, it was agreed that Australia should be regarded as the primary economy, with Canada to be used as a comparative economy and for the person (or persons) to be appointed into an intermodal facility to be drawn from Thailand.

This recommendation satisfied the requirements of the first deliverable of the Phase 3 study.

The second deliverable required the identification of one or more people from Thailand who would be willing to visit Australia and possibly Canada for a period of around three months to work in an intermodal facility at a senior level and to be able to apply the



competencies under supervision and to be able to report on their suitability for application in Australia and in Thailand. This requirement proved impossible to implement in the time available and, on reflection, was an unrealistic expectation of the initial study brief.

The following difficulties were encountered in identifying a suitable person to be seconded to an organization in Australia (or Canada) for this study. These included:

- No Australian or Canadian companies could be located that were willing to employ a senior Thai person in a major intermodal facility for the proposed duration of the study. The reasons for this situation related to:
 - The lack of project funding to support such as secondment.
 - The perceived lack of benefits to be gained by the potential host,
 - An unwillingness to have a person from outside the organisation working in a senior position in a sensitive area, and,
 - High level of existing workloads did not allow for what was seen as a distraction from normal operations.
- No Thai company, institution or professional body could be found that was prepared to fund the secondment of a suitable person to Australia or Canada for the study.
- No additional funding was available from the APEC Secretariat to support this initiative.

After some eight months of attempting to identify Australian or Canadian companies that would be prepared to fund a secondment from Thailand, including major Australian companies that had operations in Thailand and which regularly brought staff to Australia for professional development, it was recognized that this objective, as specified, could not be achieved and that another approach would be necessary.

This situation was discussed on a regular basis with the sponsor in the Australian Department of Transport and Regional Services (DOTARS), with support being provided to help identify the alternative approach that evolved to address the evaluation requirement.

QR (Queensland Rail) which provided the support for the revised approach to the evaluation process indicated that had it been involved in the study from the outset, it may have been in a position to have assisted with a secondment due to the desire to enhance commercial relationships with Thailand.

For the above reasons, deliverables 2 and 3 were not satisfied as required by the original consultants brief.

Following recognition that the evaluation plan as initially specified was unlikely to be achievable, a summary of the situation and recommendations for an alternative approach to this requirement was proposed to the APEC Secretariat and the APEC BMC. This approach recognized that for the reasons specified above, validation could best be achieved through working with one or more companies in Australia that would allow their own staff to participate in a validation study.

In order to obtain comparative data from another economy, it was suggested that if a willing participant organization could be found in Canada, then a highly valid outcome could be achieved. This approach was endorsed by the APEC Secretariat in July 2005 after representation from the writer to the sponsor. Approval was also provided by the



Secretariat to extend the duration of the study to the end of April 2006 in order to allow the revised approach to be completed and for recommendations for the future to be made.

The validation and evaluation methodology that evolved was to identify Australian and Canadian organizations that would be willing to have their own staff validate the model through the conduct of a workplace study involving the maintenance of records over a period of time to assess the extent to which the competencies were applied in the workplace. Again, for reasons relating to current levels of workload in the intermodal facilities, lack of perceived benefits to the organization and lack of commitment to an externally imposed request for support, there was virtually no interest shown by Australian or Canadian organizations in the requests for support to be provided. As stated, however, QR was the one outstanding exception, with their senior logistics management and their Training and Development team being willing to consider the request for support and ultimately being willing to participate in the study. The proposed validation of the competency framework with a Canadian firm did not eventuate.

Once QR made this commitment in September 2005, there was a way cleared for the study to proceed and it was possible for the writer to work with the QR management to implement the validation process.

This work with QR satisfied the requirement of the third deliverable for the Phase 3 study.

During this time, a data collection instrument was developed for application in three or more intermodal terminals within QR, respondees were identified by QR and the data collection process was commenced. A copy of the data collection instrument is shown at Annex C.

PHASE 4 - EVALUATION

Phase 4 of the study required the following deliverables to be achieved:

4.4.1 The Consultant will perform the following duties for Phase 4:

- (a) *Evaluate the model and recommend refinement as necessary. Recommendations should also be made regarding ongoing monitoring of the situation to ensure changes are recognised, documented and translated into action to expand recognition.*

Part 3 of this report details the results of the evaluation undertaken within QR. Based on the results of the evaluation, plus some allowance for knowledge obtained during the Phase 2 study, it is considered that the competencies as defined are a suitable list of competencies to be applied with in intermodal facilities throughout APEC economies. In view of the level of acceptance of the competency listing within the Canadian and US organizations that were studied in the Phase 2 study and the positive comments from Thai organizations during the Phase 2 study, it would seem reasonable to assume that the competencies would apply with some local modification other economies in the region.



This recommendation satisfies the first part of the requirement for 4.4.1, as it confirms that the list of competencies is relevant in the Australian situation and likely to be relevant, with some local refinement, in other economies.

In relation to the second aspects of the requirement detailed in 4.4.1, the validation process did not result in the generation of recommendations for the on-going monitoring of the situation or to expand recognition if appropriate.

In order for the competencies to be kept current, there will be a need to identify an organization within the APEC structure or the Australian training structure that would be able and willing to monitor the competencies on an on-going basis. For this study to have been of any value, it is essential that a mechanism be put in place for the future that will ensure the work that has been done will form part of an on-going commitment of interest and resources to the maintenance of the competency listing and the promotion of the concepts that have been developed.

A range of future options for the on-going maintenance of the competency listing and the promotion and development of the competencies have been considered. These options include:

- Sole responsibility resting with the APEC Secretariat to implement and monitor the model,
- Identifying a tertiary institution or a government training authority in a committed economy to maintain the on-going review function,
- Delegation to a private sector organization in a committed economy for the on-going monitoring of the competencies on a fee for service basis,
- Retention of responsibility in Australia by the DOTARS, or,
- Appointment of an external organization on a fee for service basis in an economy that has not been involved in the study in order to expand the scope of future involvement.

Problems of commitment, financial and resource capacity and understanding of the project objectives make most of these options unattractive or unacceptable long-term solutions. As a stand-alone project, the writer is unable to recommend that any one of these solutions would be cost-effective or likely to provide a suitable solution for the maintenance of a competency register.

Well within the project the writer became aware of the complementary work carried out in North America, primarily through the University of Denver (Identification of Needed Intermodal Skills and Development of Required Training Programs I and II). This work could prove a valuable extension of the Mutual Recognition of Competencies for Intermodal Logistics Managers project and may present the most logical way to proceed into the future.

Based on the above considerations, it is recommended that:

- The focus of the APEC TPT-WG, at this stage, not be on the development or maintenance of a register of mutual recognition.
- The APEC TPT-WG should endorse the findings of the study as a valid listing of competencies for intermodal facilities management within APEC economies.
- The listing be linked to the work being undertaken through the University of Denver (Identification of Needed Intermodal Skills and Development of Required Training Programs I and II) as a reference framework for this aspect of training and development.
- The APEC TPT-WG promote the two initiatives hand in hand to the member economies, allowing the economies to adopt the concepts as appropriate and to



potentially move to a situation of full mutual recognition of the competencies at a later stage.

- In due course, the TPT-WG identify a training organisation in a member economy, possibly Canada or Australia, that would be willing to develop training materials for use in member economies to develop the competency set.

These recommendations satisfy the requirement for the second part of 4.4.1, as they recommend a process for the on-going monitoring and maintenance of the competency listing and propose a possible path for the future for the achievement of mutual recognition.

PHASE 4 - REGISTER OF MUTUAL RECOGNITION

Phase 4 of the study required the following additional deliverable to be addressed:

4.4.2 A key deliverable at the end of Phase 4 involves the development of a 'Register of Mutual Recognition of Qualifications for the Intermodal Logistics Manager'. This will clearly document in a simple but formal manner:

- (a) *Where mutual recognition has already occurred*
- (b) *The essential elements of that mutual recognition*
- (c) *The process and means of recognition*
- (d) *The means of expanding that recognition.*

The information contained in this part has been derived from the following sources:

- The Department of Education, Science and Training, Canberra, ACT
- Transport and Tourism Division, UNESCAP, Bangkok, Thailand
- IANA (Intermodal Association of North America), Greenbelt MD
- Discussions with a range of training and development personnel in Canada, the USA and Thailand, as well as Australia.

Based on observations 1-8 of Phase 2 (page 31) and information derived as part of the phase 4 study, the following specific comments are made in relation to the deliverables for this phase.

- Mutual recognition of competencies of this nature does not appear to have yet occurred between APEC member economies but has occurred within economies, such as Australia, through the competency-based training framework.
- The work being undertaken through the University of Denver and in Canada has the potential to achieve recognition of related competencies throughout the APEC economies.
- In order to achieve mutual recognition, several preconditions would appear necessary to be satisfied. These include:
 - An established national or industry training structure that would support adoption throughout an economy.
 - A commitment from member economies to recognise training and competencies gained in other economies.
 - Agreement on the common competency listing.
 - A training structure that would support the development of the underlying skill sets.

The writer is of the view that at this time, it is unlikely that the processes of competency-based training and mutual recognition between economies are well enough



developed in all APEC economies to enable mutual recognition of the competencies to be achieved. The allocation of any further effort as part of this study or any subsequent extension is unlikely to achieve a short-term outcome that would satisfy the initial objectives of this study. A more realistic approach is to recognise the difficulties that would be faced in achieving universal recognition of the competencies throughout all APEC economies and to put in place a structure that can achieve the objectives over a longer period.

This view does not in any way seek to diminish the value of the study or the merits of the original project objectives. The manner in which many organisations and individuals in four economies supported the development of the list and the many favourable comments that have been made in relation to the need to develop skills in these competency areas reinforces the fact that this has been a worthwhile study and that if properly promoted, industry support would be obtained, at least in the trial economies. Once adopted in trial economies, there would be a number of “early followers” who would be the next economies to show an interest in the concept and ultimately adopt the concepts.

In order to achieve this adoption of the competencies by stealth, this structure for the future could best be served by the following actions:

- Articulation of these competencies to the work being undertaken through the University of Denver.
- The commitment to the regular monitoring of the competencies through the APEC TPT-WG meetings.
- Publicity given to the concepts through publications, media releases or the APEC TPT-WG web site.
- Progressive discussions with industry bodies, professional organisations and major intermodal operators in member economies with a view to establishing a level of interest sufficient to justify the creation of a support network across APEC economies.

It is strongly recommended that any future development of a recognition framework should be achieved through the cooperation of industry groups and professional organisations in member economies and the encouragement of UNESCAP. Such an approach is likely to overcome the problems associated with a very fragmented approach to mutual recognition of competencies within APEC economies at the present time.

This discussion and the above recommendations satisfy the requirements of 4.4.2, providing a suggested basis for the future, notwithstanding that the initial objectives of the study have not been met in full.



PART 9 - ANALYSIS OF WORKPLACE EVALUATION

The workplace evaluation of the proposed competencies was conducted in three intermodal terminals operated by Queensland Railways, QR, during the period October 2005 to January 2006, with actual data collection by participants covering three to five week periods. The study involved the compilation of twelve person weeks of evaluation of the use of the competencies by the three respondents. The inclusion of one five-week study allowed month-end activities, such as financial reporting, to be covered in the review period. These results are summarized in the following table.

AREAS OF COMPETENCY	USED DURING STUDY	FREQUENCY	MINIMUM PERCENTAGE TIME	MAXIMUM PERCENTAGE TIME
1. Manage Occupational Health and Safety	Y	3	5	10
2. Manage Security and Risks	Y	8	5	20
3. Manage People	Y	10	20	70
4. Manage Finance and Planning Functions	Y	8	5	50
5. Create a Customer (Service) Focus	Y	7	5	20
6. Develop and Apply Communication Networks	Y	8	5	50
7. Apply Mandatory Regulations within the Facility	Y	5	5	20
8. Capacity Planning and Coordination	Y	8	10	25
9. Manage Equipment	Y	6	5	30
10. Engage with Industry and Apply Industry Knowledge and Experience	Y	3	5	5
11. Managing Performance within the Facility	Y	7	10	20
12. Understand and Employ Negotiation Skills	Y	1	10	10
13. Understanding of Contract Law	N	0	0	0
14. Understand the Basic Logistics and Supply Chain Concepts	Y	6	5	10
15. Other Personal Skills and Attributes	Y	4	5	10
Other tasks not related to these competencies	Y	8	5	20



Based on the summarized data, the following conclusions can be drawn:

1. Of the fifteen competencies, fourteen were used during the study period
2. The only competency not used during the period was Competency 13, Understanding of Contract Law.
3. The most frequently used competency was Competency 3, Manage People.
4. Competency 3, Manage People, also required the greatest percentage allocation of time, both in terms of the minimum and maximum percentages of time employed in given weeks.
5. Competency 8, Capacity Planning and Coordination and Competency 11, Managing Performance within the Facility were closely ranked as the second and third most frequently used competencies, both with the second and third highest time allocations during the survey period.
6. The “Other tasks not related to these competencies”, included a variety of tasks or time-consuming activities, such as attending or conducting training sessions, travel and other miscellaneous management functions.

During the evaluation period, Competency 13, Understanding of Contract Law, was not used. On this basis, there would be a temptation to remove this item from the competency listing, however such a course of action would be quite inappropriate and would be likely to overlook a competency which is regarded as essential within some Australian organizations and fundamental to operations in Canada and the USA. In these latter two economies, contract law relates to employment law and is fundamental to the basis upon which labor is employed within the intermodal terminals.

Based on the survey data that were collected from this limited survey, supported by the caveat detailed above, there are no reasons for believing that the competency listing as proposed is other than entirely relevant for the Australian situation. As this list reflected substantial input from organizations in Thailand, Canada and the USA, it is likely that the listing would be acceptable if also trialed in those economies.

In relation to “Other tasks not specified”, while the activities that have been listed are relevant, they are typical ad-hoc management activities that consume time but which are not specific competencies. Unless future surveys reveal substantial amounts of time being devoted to tasks that can be described as competencies and which can therefore be developed, there is no justification at this stage for regarding any of these activities as competencies and including them in the competency listing.



Annex A

ORGANISATIONS AND INDIVIDUALS CONSULTED DURING THE COURSE OF THIS STUDY

The following is a listing of the organisations and individuals who have provided valuable direct input into this study, links into their organisations or support for making other contacts and for whom the author wishes to extend his thanks for their cooperation and time.

Australia

Mr John McNamara, General Manager, CRT Rail Operations

Prof Rod Troutbeck, Chair of People Development Group, Australian Logistics Council, Queensland University of Technology, Brisbane

Mr John Hayton, Director Americas Eurpoe Section, International Cooperation Branch, Department of Education, Science and Training, Canbarra, ACT

Mr Greg Smith, Terminal Manager, Toll NQX Queensland

Mr Andrew Lyne, Business Operations Support Manager, NQX Freight Systems

Mr Anthony Perkins, General Manager, Chullora Freight Terminal, Pacific National

Mr Peter Lamrock, Company Secretary, John Swire & Sons Ltd

Mr Adrian Sammons, General Manager, New Guinea Pacific Line

Mr Geoff Sundstrom, General Manager, Patrick Portlink

Mr Rob Peyerl, National Rail Business Manager, CRT Group

Mr Paul Griffin, Intermodal Manager, Pacific National

Mr David Muir, Manager Landside Logistics, P&O Trans Australia

Mr Garry Scanlan, Trade Development Manager, Darwin Port Corporation

Mr Brodie Jackson, Terminal Manager, NQX freight Systems, Darwin

Capt Chris Bourne, Deputy Harbourmaster, Fremantle Port Authority

Mr Gordon Innes, Terminal Manager, WA/NT, P&O Port Services Division

Mr Craig Hnnessy, Fremantle Manager, Patrick Terminals

Thailand

Ms Sukthita Pongpeomperk, LCB Operations Manager, ESCO, Laem Chabang Port, Thailand

Mr Anil Singh, General Manager, LCB Container Terminal 1, Laem Chabang Port, Chonburi, Thailand

Mr Barry Cable, Chief, Transport and Tourism Division, UNESCAP, Bangkok, Thailand



Ms Geetha Karandawala, Chief, Transport Facilitation Section, UNESCAP, Bangkok, Thailand

Mr Vincent Valentine, Economic Affairs Officer, Transport Facilitation Section, UNESCAP, Bangkok, Thailand

Ms Charlotta Benedek, Associate Economic Affairs Officer, UNESCAP, Bangkok, Thailand

Mr John Kershaw, General Manager, Linfox Thailand

Mr Eugene Cody, General Manager, Toll Thailand

Mr Sombat Buasuwan, Business Development Manager, Toll Thailand

Mr Thanadon Hemrumpai, Head, sales and Customer Service Relations, Lat Krabang ICD, Thailand

Canada

Mr Sean Goff, Director, International Sales, CN (Canadian National Railway)

Mrs Barbara Leonard, Intermodal Division CN (Canadian National Railway)

Mr Ed Greenberg, Intermodal Division, CP (Canadian Pacific Railway) Calgary

Mr Alan Parry, CP (Canadian Pacific Railway) Toronto operations, Mississauga

Mr Michel Vachon, Terminal Manager Montreal Taschereau Terminal, Canadian National Railway

Ms Kerri Davies, Public Relations, Vancouver Port Authority, Vancouver BC

Mr Jack Arthur, Manager Trade Development, Vancouver Port Authority, Vancouver BC

Mr Tom Broddy, Manager Container Operations, Centerm, P&O Ports, Vancouver

Mr Doug McCune, Manager Operations, Terminal Systems Inc, Vanterm, Vancouver

Mr Colin Donaldson, Terminal Manager, Terminal Systems Inc, Deltaport, Vancouver

Mr Alan Lemont, Operations Superintendent, Terminal Systems Inc, Deltaport, Vancouver

Mr Bill Postlethwaite, Posco Services, Delta, BC

The USA

Mr Chuck Burriss, Director - Hub and Facility Operations BNSF (The Burlington Northern and Santa Fe Railway), Fort Worth, Texas

Mr Alan Copeland, Senior Manager, Hub Operations, BNSF (The Burlington Northern and Santa Fe Railway), Hodgkins, IL

Mr Deron Amans, Senior Manager, Pacific Northwest Region, Intermodal Hub & facility Operations, BNSF (The Burlington Northern and Santa Fe Railway), Seattle WA

Ms Joni Casey, President, IANA (Intermodal Association of North America), Greenbelt MD

Mr Tom Malloy, Vice President, IANA (Intermodal Association of North America), Greenbelt MD



Mr Chuck Spraker, Intermodal Division, NS Corporation, Norfolk VA

Mr Randy Guy, General Manager, Intermodal Division, NS Corporation, Norfolk VA

Mr Cary Booth, General Manager, Intermodal Division, NS Corporation, Norfolk VA

Mr Bill Rutledge, Divisional Manager Charleston, SC, NS (Norfolk Southern Railroad)

Mr David Porter, Assistant Manager, Container Operations, Garden City Terminal, Savannah Georgia

Mr Scott Moore, Director Government Affairs, UP (Union Pacific Railroad), Omaha, NE

Mr Rod Villaroman, Senior Manager Intermodal Terminal Operations, Union Pacific Railroad, Long Beach, CA

Dr Patrick Sherry, University of Denver, COL



Annex B

CONSOLIDATED LIST OF CORE AUSTRALIAN COMPETENCIES FOR INTERMODAL LOGISTICS MANAGERS

The following is the initial listing of core competencies developed as a result of the Phase 1 study conducted in Australia and detailed in the Phase 1 Report.

COMPETENCIES COMMON TO ROAD, RAIL AND PORT

1. **People Management and Leadership skills, including:**
 - Recruitment and Selection
 - Industrial relations
 - Task allocation and delegation
 - Teamwork
 - Empowerment
 - Performance management
2. **Safety awareness and creation of a safety culture**
3. **Security awareness:**
 - Physical security of the facilities
 - Security of the containers
 - Personnel selection and vetting
4. **Knowledge of the regulatory environment:**
 - Road, rail, sea and air regulations - state, national and international
 - Customs, AQIS and other regulators
 - State and national standards, including environmental, IR and OH & S
5. **Financial and business acumen:**
 - Knowledge of the P&L, balance sheets,
 - Budgeting,
 - Reporting,
 - Invoicing,
 - Performance management
 - Strategic planning
 - Market growth and development
 - Benchmarking and performance improvement
 - Ensuring a legally compliant business
6. **Customer (Service) focus:**
 - Knowledge of their industry
 - Packaging and treatment of the goods being transported
 - Knowledge of their market and where you fit in - modal choice, local and international competition
 - Customer expectations
 - Options generation for delivering an excellent service
 - Communication with the customer
 - Coordination and capacity planning
7. **Communication skills:**
 - Staff
 - Customers
 - The surrounding community
 - Other stakeholders
 - Understand what is being communicated to you



8. **Industry knowledge and Involvement:**
 - Knowledge of the existing physical networks
 - Ability to develop an information network to support decision making
 - Understanding of new developments and their impact on the industry and your business
 - Participation at an industry level in influencing change
 - Inter-terminal operations and requirements
 - Sourcing of empty containers
 - Recognise road and rail are two distinct skill sets that need to complement each other
 - Understand the nature of the industry
 - Fragmented
 - Ageing workforce
 - Generally low skill levels
 - Not attracting the best young people
 - Skill shortages
 - **Resource optimization and planning:**
 - Route selection
 - Strategic and operational level planning
 - Scheduling
 - Equipment optimization
10. **Performance Management**
 - Measuring, monitoring and managing people/human resource performance
 - Measuring, monitoring and managing performance and utilization of equipment
 - Measuring, monitoring and managing network performance
 - Measuring, monitoring and managing customer satisfaction
11. **Negotiation skills:**
 - Rate development
 - Contract conditions
 - Resource allocation and optimisation
12. **Understanding of Contract Law**
 - Contract theory
 - What constitutes the contract
 - What can be negotiated
 - Sub-contract relationships
13. **Other Personal Skills**
 - Knowledge of IT systems
 - Risk management
 - Warehouse design and layout
 - Planning concepts

ADDITIONAL CONSIDERATIONS FOR PORT OPERATIONS

- Knowledge and ability to work beyond the port that you are operating in
- Knowledge of the port culture
- Capacity to work back through the regulators to influence change
- Documentation systems - import/export documentation
- Interaction with shipping lines
- Be a good corporate citizen

NOTES:

1. These competencies are not in a prioritized order, however, the first five competencies were listed by each respondee within the top few competencies for each of their lists, while the others were listed in a slightly less regular or consistent manner but were listed in the course of all interviews.



2. The sub-competencies or skills comprise interpretations of what respondees have offered and have been assigned to headings (competencies) that most-closely accommodate the skill that has been described.
3. In the case of performance management, aspects of this competency appeared under a number of other competencies, suggesting that a separate competency should be created because of the importance of the skill-sets that were identified. This now appears as competency No 10.



Annex C

APEC MUTUAL RECOGNITION OF COMPETENCIES FOR INTERMODAL LOGISTICS MANAGERS

EVALUATION OF RELEVANCE OF THE COMPETENCIES TO THE WORK SITUATION

Name:

Location/Facility:

Contact Number:

Week ending:

AREAS OF COMPETENCY	HAVE I USED THIS COMPETENCY THIS PERIOD?	PERCENTAGE OF AVAILABLE WORKING TIME SPENT ON THIS COMPETENCY	REMARKS
1. Manage Occupational Health and Safety			
2. Manage Security and Risks			
3. Manage People			
4. Manage Finance and Planning Functions			
5. Create a Customer (Service) Focus			
6. Develop and Apply Communication Networks			
7. Apply Mandatory Regulations within the Facility			
8. Capacity Planning and Coordination			
9. Manage Equipment			
10. Engage with Industry and Apply Industry Knowledge and Experience			
11. Managing Performance within the Facility			
12. Understand and Employ Negotiation Skills			
13. Understanding of Contract Law			
14. Understand the Basic Logistics and Supply Chain Concepts			
15. Other Personal Skills and Attributes			
Other tasks not related to these competencies			
			100%

Please email your return to Kevin Donnelly at bgiudici@stantons.com.au by the end of the Monday following each week of the review.

Please contact Kevin Donnelly or Barbara Giudici on (08) 9481 3188 should you have any questions regarding the survey.