# Chapter Six Discussions

In this chapter, the research results are analyzed with managerial and technical implications. We intend to provide a discussion and a reflection on the work and model we have developed. The research limitations are also described.

## 6.1 Validation

In order to validate the correctness and comprehensiveness of the model, we interviewed with the domain experts and compared with the related literature.

To avoid subjective notions and wrong interpretations, we introduced the analysis approach as well as framework and worksheets of research analysis results to the case study company. We asked domain experts to scrutinize the analysis results and give some advice.

TRADE-VAN INFORMATION SERVICES CO. (TRADE-VAN) is an information service company and provides services including cargo clearance, e-commerce, land information, insurance, finance, tax filing, and global logistics. In order to know whether the research results are generalizable, we introduced the modeling methodology as well as framework of research analysis results to TRADE-VAN and asked questions about the categorization of processes. We want to know whether the business process model is the same as the general one of ocean freight forwarder industry segment.

INSTITUTE FOR INFORMATION INDUSTRY (III) is the backbone of the research and development for Taiwan's information industry sector, with the aim of improving the productivity and competitiveness of all industries through the use of information technology. III is the chief assistant institute of D plan and e-alliance and provides consulting service of RosettaNet standard in global logistics. We explained the research approach and results to III and ask them to give some advice from the technical viewpoint.

國際貨櫃運輸實務 which details container transport processes is valuable to international trade industry as well as container transport workers. We compared the business process model of research results with the export and import processes of in this book.

We summarize the validation results in Table 6.1.

Table 6.1 Validation Result

| Data source | Description |
| --- | --- |

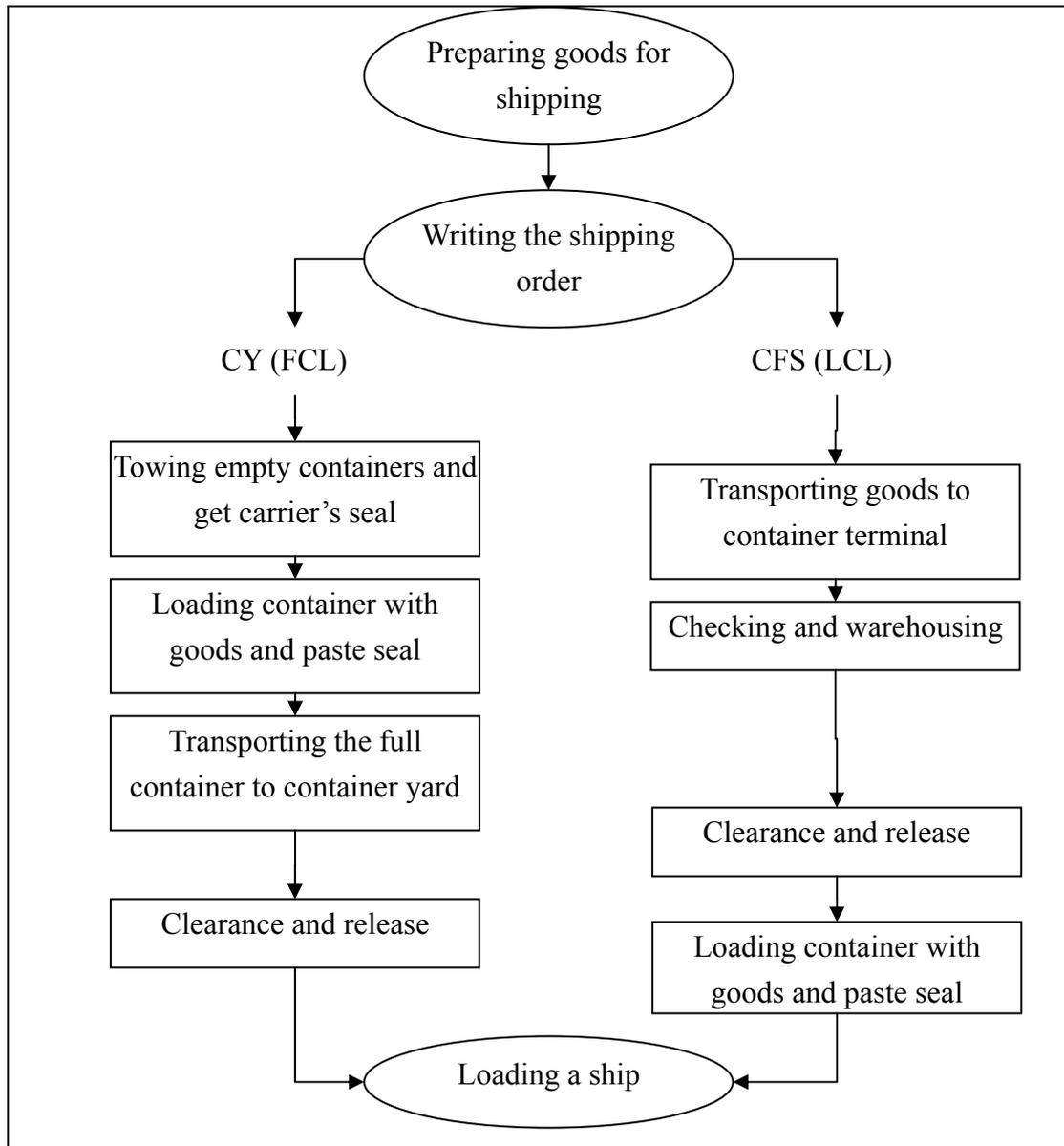| The Case Study Company | After understanding the modeling approach and analysis result, the case study company has no other questions. It means that the business process model is the same as the one of the case study company. |
|---|---|
| TRADE-VAN INFORMATION SERVICES CO. | They give us some advice as following:<br>1. About import, there are two types of process, ToPort and ToDoor in ocean freight forwarder. But usually air freight forwarder handles ToDoor goods, and ocean freight forwarder handles ToPort goods.<br>2. About our process model, they have no other questions. |
| INSTITUTE FOR INFORMATION INDUSTRY (III) | After understanding the modeling approach and analysis result, they asked some questions. The questions related to our process model is shown bellow:<br>1. In the process model, is there any mechanism for process failing or aborting?<br>2. In the process model, what processes have been automated and assisted by the information system?<br>About the process of transaction failure, we delegate it to the business process engine and messaging server. They provide the functions of detection of time-out and exceptions, notification of failure, and rollback upon failure.<br>In our process model, we record the utilization of information system in the boundary attribute of the business collaboration worksheets. Most processes are handled by telephone or fax; only the process of drafting bill of landing is supported by the documentation system. |
| Literature Review | Figure 5.25 is the flow chart of export, and figure 5.26 is the one of import. By referencing to the process descriptions of "國際貨櫃運輸實務", our common process model is similar to the export and import processes of in this book. |

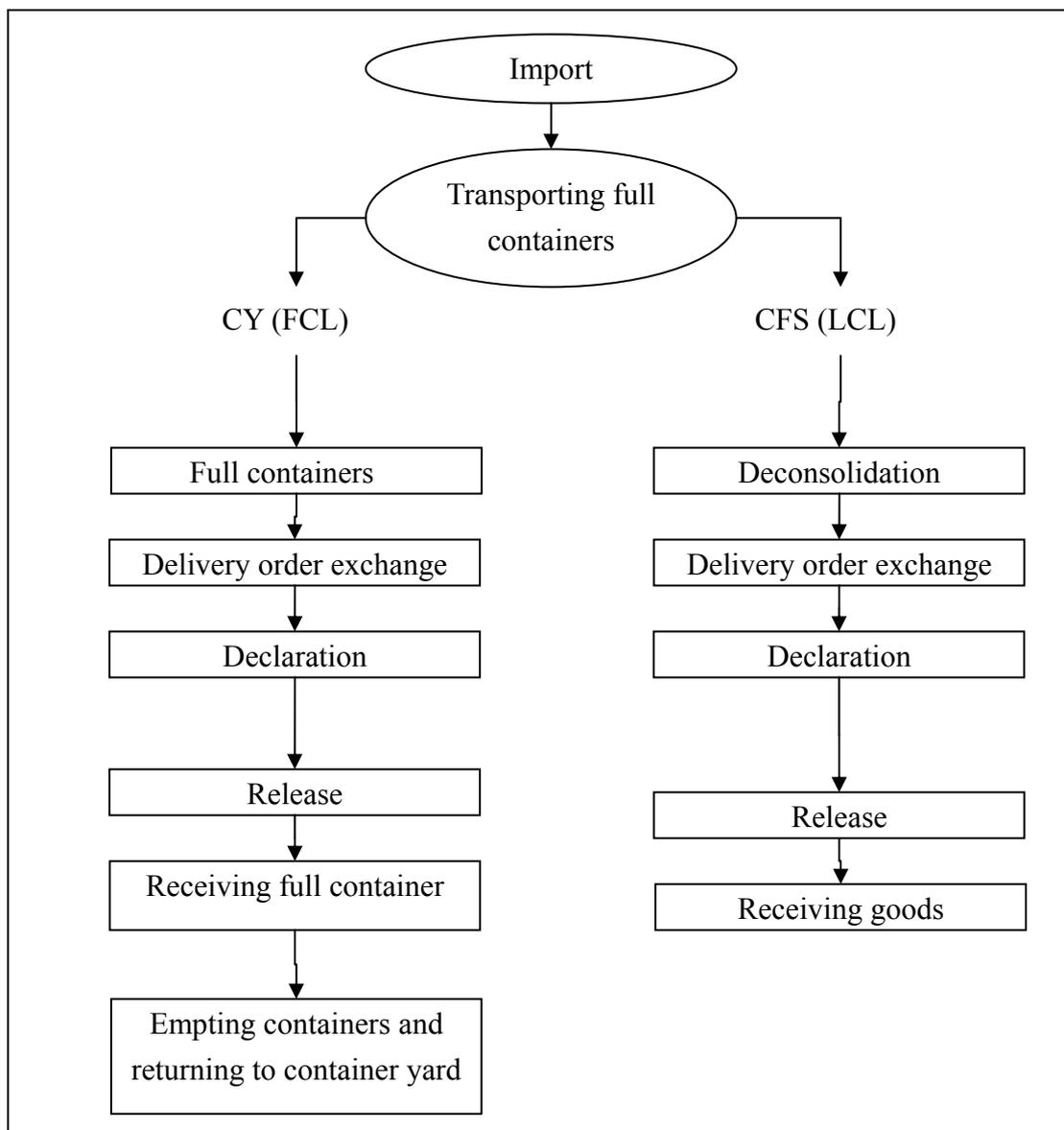Figure 6. 1 Container Transport Processes of Export

Data source:曾俊鵬, 1998

Figure 6. 2 Container Transport Processes of Import

Data source:曾俊鵬, 1998

The model as a whole was validated by interviewing with domain experts and reviewing literatures. The result shows that the common process model is correct and similar to the business scenario in the real world.

## 6.2 Contribution

1. Application of a consistent modeling methodology UMM.

In this research we have addressed methodological support for modeling collaborative commerce business processes. In order to analyze the business process,

we proceed to apply a consistent modeling methodology UMM from the top-level step (Business Reference Model) down to the lowest-level step (Business Transaction). Via in-depth case study, expert interviews, and literature reference, analysis, and comparing, we understand the details of global logistics industry. According to UMM, we identify and specify the inter-enterprise business processes in a logical and systematical way.

2. Development of a common process model of global logistics industry.

We use ebXML Business Process Analysis Worksheets as modeling aids to record and represent analysis results of global logistics industry. After referencing the business scope and business processes of the case study company, we define business reference model as "Ocean Freight Forwarder Export and Import Model". It means that this model is mainly focused on export and import processes of ocean freight forwarder.

After finishing data analysis and construction of the public process model, we validate the whole model by interviewing with domain experts and reviewing literatures. Thus, this common process model is agreed-upon and implies business logic, therefore, it can be used as a reference for understanding the detailed public process of global logistics industry, and also be used as a B2B process analysis instrument and reference in global logistics industry.

3. Emulation of B2B transaction scenario based on this common process model.

We try to develop a B2B process integration prototype system based on this common process model. We choose a common transaction "Booking-shipper-to-forwarder" as an example for implementation. In process integration oriented approach to integrate internal application system and external trading partners, all the messages are in XML format. The messaging server is used to deliver and manage the interchanges of business document. The business process engine is used to execute the modeled business processes.

In such a process integration framework, this prototype system shows that the common process model is feasible and suggests a possible solution for real-time and efficient B2B electronic commerce. Moreover, this prototype system can be quickly deployed and configured when business process is changed.

## 6.3 Research Limitations

Due to time and resource constraints, this research has a number of areas to improve.

1. This research only uses "Booking-shipper-to-forwarder" transaction as a process example for implementing our prototype system.

2. The problems of transforming Worksheets into business process specification in XML format have not been solved. The analysis result cannot be transformed into system implementation specifications directly.

3. In this prototype system, we use BizTalk XLANG scheduler engine as our business process engine because we lack of a trial version of business process engine which conforms to ebXML BPSS.