

The Development of Potential Models for Logistics Business Executives to Compete in the Digital Technology Era

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Abstract: - This mixed-methods research aimed to identify essential digital-age skills for logistics leaders, develop an executive potential model, and create a practical development manual. Data were collected via a three-round Delphi method and focus groups, then analyzed using content analysis, median, and inter-quartile range. The finalized model comprises four main components: knowledge, skills, attributes, and management, encompassing 21 sub-parts and 94 competency items. Notably, sustainable logistics and green supply chain management were integrated to address international ESG requirements. The resulting development manual is structured into five sections: Introduction, Terminology, Executive Potential Model, Practical Guidelines, and Evaluation. Five experts unanimously validated the manual (100% agreement), confirming its appropriateness and applicability for developing logistics business executives in Thailand.

Key-Words: - potential model, logistics business executives, digital technology era, Delphi method, competitive capability, POCCC management, smart logistics, green logistics, ESG

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1 Introduction

The logistics industry in Thailand has faced significant changes in recent years because of the rapid development of digital technology. Many companies in this business now use artificial intelligence, blockchain technology, and real-time data to manage their supply chains. In this situation, the executives of those companies need to have more than just general management skills. They also need technology skills and the ability to lead effective change within their companies. A World Trade Report states that the global logistics market is expected to reach USD 18 trillion by 2030, [1]. If Thai logistics companies are to profit from this growth, they need leaders who can understand and adapt to changes in the global market, [2].

An important issue for the logistics industry throughout the world is that it has a responsibility towards the environment. The European Environment Agency has reported that the logistics sector is responsible for approximately 24% of the world's carbon emissions, and this figure may increase to 40% if no action is taken, [3]. This is no longer only a matter of reputation for companies, because businesses in Europe and North America increasingly require their suppliers and logistics operators to show that they follow environmental,

social, and governance (ESG) rules if they want to win business contracts. Because of this, Thai logistics companies that cannot show eco-friendly logistics methods may face real commercial disadvantages in global trade. To understand what is happening outside Thailand, it is worth looking at examples from Singapore and Germany. In Singapore, PSA International launched its Smart Port plan in 2022 with the goal of reaching net-zero by 2050; they use green ships, electric equipment in the port, and real-time carbon tracking, [4]. This project shows that it is possible to care for the environment and be fast and efficient at the same time. In Germany, DHL Group is using two plans to get ahead of its competitors: the GoGreen Plus program to reduce carbon emissions and the Logistics 4.0 framework for moving, storing, and tracking goods in a faster, cheaper, and smarter way. They do this to be different from their competitors, not just to follow regulations. The training for logistics leaders in Germany normally requires knowledge of the ISO 14001 environmental rules, [5]. One of the reasons for doing this research was that there is a gap between these international standards and how Thai logistics executives currently work.

In addition to environmental issues, the rapid growth of artificial intelligence and e-commerce has made the logistics business more complicated. Growth in the AI market is currently running at approximately 36.6% per year, and many organizations are using this technology to improve customer service and to get better results, [6]. Many Thai companies buy AI-enabled systems, but their performance does not improve. This happens because the executives who manage those systems do not have the necessary skills in both data analysis and guiding changes in how people work, [2]. The concept of "smart logistics" has been proposed as a way for Thai operators to remain competitive in this environment, [7]. Thailand's National Logistics Development Plan (2028-2037) identifies the use of digital technology and green logistics as two aims for the country, [8]. The plan also wants Thailand to become a regional logistics center by using a blockchain customs system and a centralized electronic trading system to reduce logistics costs relative to gross domestic product (GDP). Whether the country reaches these goals mostly depends on whether Thai logistics leaders have the necessary skills.

Research shows that most of the logistics and warehousing businesses in Thailand, which are concentrated in the Bangkok Metropolitan Region and the Eastern Economic Corridor (ECC), face intense international competition, [9]. We conducted this study to help the industry. Its main contribution is that it treats green logistics and ESG skills as core parts of the model, rather than as additional items attached to existing parts.

2 Problem Formulation

2.1 Conceptual and Theoretical Framework

The present study is based on the competency framework [10], which proposes that effective performance comes from three types of capability. The first is knowledge (K), which refers to what a person knows. The second is skills (S), which refers to what a person can do. The third is attributes (A), which refers to how a person behaves in different situations. This KSA framework has been widely used in executive development research because it distinguishes between competencies that can be developed through training in a short time and those, especially in the attributes dimension, that require more time and experience to develop.

In the present study, two extensions were made to the basic KSA framework. The first extension was an addition in the management dimension,

which is based on Henri Fayol's POCCC framework. This framework covers five management functions, which are planning, organizing, commanding, coordinating, and controlling, [11]. In the present study, the POCCC functions are not treated as fixed administrative procedures. Instead, each function is understood as a set of activities that must now be carried out through digital tools in the modern logistics environment.

For example, planning now requires the use of big data analytics and AI-based tools for forecasting demand. Organizing relies on the Warehouse Management Systems (WMS) and Transportation Management Systems (TMS) software applications. Commanding makes use of AI-based dashboards to have better control over performance. Coordinating involves introducing real-time tracking systems based on the Internet of Things and national application programming interface (API) platforms for sharing digital platforms. Controlling now includes automatic monitoring of key performance indicators (KPI) as well as measurement of a company's carbon footprint and ESG reporting. This new, updated POCCC framework gives managers help in handling digital logistics and supports Thailand's goal of reducing overall logistics costs as a proportion of GDP, [9].

The second extension was adding sustainable logistics and green supply chain management as a separate knowledge sub-component. This addition became part of the Delphi process because all 19 experts agreed that it was an essential part rather than an additional item. This idea comes from prior work, in which he says that being eco-friendly and fast are the best ways to be competitive in modern logistics, [2], [12]. This idea fits value chain concept, which suggests that using technology and following environmental rules across all business activities creates a stronger, longer-lasting competitive advantage rather than just trying to lower costs, [13]. The ESG governance framework [14] also underscores the idea that leaders must understand sustainability as part of their work.

2.2 Research Objectives

The present study had three research objectives as follows:

1. To examine the essential components of competency for logistics business executives to enhance competitiveness in the digital technology age.
2. To develop a potential model for logistics business executives to enhance competitiveness in the digital technology age.

3. To produce a development guideline manual for the competency of logistics business executives to enhance competitiveness in the digital technology age.

3 Problem Solution

3.1 Research Design and Procedure

The present study is about the future. The three-round Delphi method was selected as the main method because the research topic requires expert judgment from people who are currently working in the relevant fields, rather than responses from a general population sample, [15]. This method is well-suited for topics where direct observation of the phenomenon is not possible and where the necessary knowledge is found in different professional groups, [16]. Focus group discussions were also used in the third step of the research to validate and refine the model that was produced by the Delphi rounds. The use of both methods together was intended to ensure that the findings were examined from more than one perspective before being accepted as final conclusions. The research was carried out in three steps, as shown in Table 1 (Appendix).

3.2 Research Procedure

Two groups of participants were involved in this study. The first group was the experts for the Delphi method. A total of 19 experts were selected through purposive sampling, [15]. The criteria for selection required that each panelist have clear knowledge, specialist expertise, and direct work experience related to the logistics industry or digital management. The panel was composed of three categories of experts. The first category was academics, consultants, and lecturers who have published research or are recognized specialists in logistics and supply chain management. The second category was government officials who work in agencies that are responsible for logistics policy and industry development. The third category was business practitioners, which included senior and middle-level logistics executives who have direct management experience in the digital technology age. A panel of 19 experts is consistent with [15] recommendation that a Delphi panel of 17 or more experts can reduce the margin of error to an acceptable level.

The second group consisted of 14 experts who took part in the focus group discussions in Step 3 and who were selected based on their broad

knowledge and relevant work experience in logistics. The group included senior executives, business consultants, and academic specialists in the field of logistics. Their role was to evaluate the draft potential model and to suggest any necessary improvements before the model was finalized.

3.3 Research Instruments and Data Analysis

The research instruments used in this study varied according to the research step. In Delphi Round 1, a semi-structured in-depth interview form was used, and the data collected were analyzed by content analysis. For Delphi Rounds 2 and 3, a closed-ended questionnaire was used. Part 1 of the questionnaire collected personal background information in checklist format, and the data were analyzed using frequency and percentage statistics. Part 2 used a five-point Likert rating scale, and the data were analyzed using the median (Mdn) and the inter-quartile range (IQR). The criteria for retaining items were set at Mdn of 3.50 or above and IQR of 1.50 or below, which follow the conventions established for Delphi-based research, [16]. A median score of 3.50 or above means that most experts considered the item to be at least "high" in importance. An IQR score of 1.50 or below means that the opinions of the experts were concentrated enough to indicate consensus. In the present study, consensus was considered to be achieved when both conditions were met at the same time across all 19 experts within a single Delphi round.

It should be acknowledged that there are some limitations related to this research methodology. The Delphi method is based on expert judgment, which means that the results reflect the knowledge and experience of the particular group of experts. Three-round iteration helps to reduce individual bias, but it cannot remove the possibility of shared perspectives within the professional group. Also, because the study focuses on Thailand, the results may need to be changed to fit logistics companies in other countries. Furthermore, the model has not yet been tested for businesses in the real world. The study only shows which skills the experts think are important, but it does not yet prove that these skills directly lead to better business performance.

3.4 Research Findings: Components of Competency

The study only shows which skills the experts think are important, and there is no proof yet that these skills directly lead to better business performance. By the end of the third round, all four competency dimensions — knowledge, skills, attributes, and management — had almost perfect scores; the

average ranged from 4.94 to 5.00. Meanwhile, the middle range of values also had shrunk, with the values falling to between 0.15 and 0.69; these values are all below the 1.50 threshold. The academic, government, and business experts all agreed on this pattern. These results show that the four-part model accurately describes the skills that leaders need in the digital logistics industry.

Of the four dimensions, skills and attributes had the highest ratings. This result matches [10] idea that a leader's behavior, not only technical knowledge, is the main reason for long-term success. [12] says that in a supply chain, having a good leader is more important than simply having good technology. The experts' emphasis on skills and attributes was a result of their experience working through disruptions in recent years, including the COVID-19 pandemic and rapid technological change.

In the third round, the management dimension (based on the POCCC framework) also reached a median score of 5.00; however, the experts stressed that present-day management skills cannot be judged only against traditional methods. Nowadays, people say that any planning that does not include big data and prediction tools is not enough. Similarly, the controlling dimension is considered incomplete if it does not include carbon footprint monitoring and ESG reporting. Our updated model highlights the use of digital skills and eco-friendly practices alongside traditional management methods.

A significant finding was that all 19 experts agreed that green logistics and sustainable supply chain management should be added as a separate knowledge sub-part, labeled K5, rather than being included inside existing sub-parts. The K5 sub-part received $Mdn = 5.00$ ($IQR = 0.50$) in Round 3. The experts explained in the Round 1 interviews that, given the ESG requirements that are now built into international trade and procurement conditions, knowledge of environmental rules has become a basic expectation for all leaders in logistics companies that wish to remain competitive; this knowledge is no longer a specialist area. As a result of this finding, one sub-part was added to the model, bringing the total to 21 sub-parts and 94 minor competency items.

3.5 Development of the Potential Model

Our model, which was produced from the three Delphi rounds and the focus group discussions, integrates three conceptual elements. The first element is the KSA competency framework; the second element is the POCCC management

principles; while the third element is a sustainability layer that covers green logistics and ESG obligations. These three elements are related to each other and are not simply listed alongside each other. Knowledge and skills provide the substantive foundation for performance. Attributes determine whether that knowledge and those skills are actually applied effectively in real working conditions. The management dimension, which is expressed through POCCC, provides the organizational framework through which the competency of an individual executive is translated into institutional performance. Green logistics and ESG awareness appear across all four dimensions, but K5 is the component where this dimension receives the clearest and most explicit recognition within the knowledge component.

The main function of the model is to show how a leader's personal skills can be used to benefit the company. This is done by using digital technology throughout the entire logistics process. This is expected to lead to lower costs, a better service, and measurable progress on the sustainability of the environment. The model was designed to help logistics companies to achieve the efficiency and green logistics targets set out in Thailand's National Logistics Development Plan for the period 2028 to 2037, [9]. The proposed potential model for logistics business executives is illustrated in Figure 1.

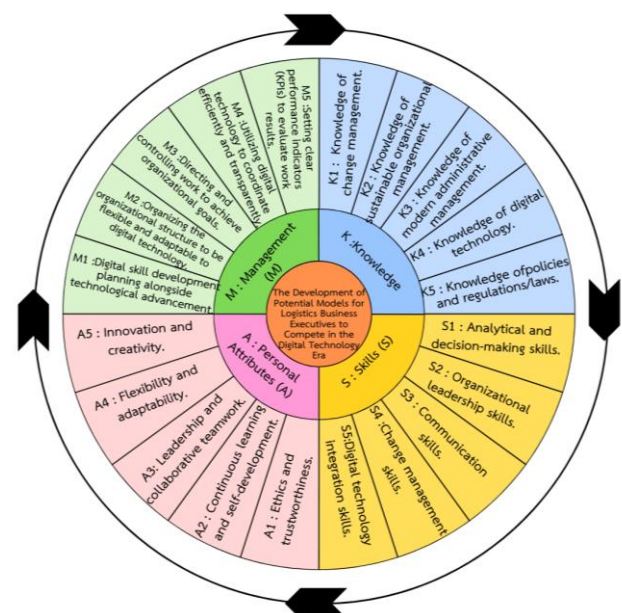


Fig. 1: Potential Model for Logistics Business Executives to Enhance Competitiveness in the Digital Technology Age

Source: created by the authors

3.6 Development Guideline Manual

This manual is intended to help companies use our model in their businesses. It is organized around the four dimensions of the standards of competency. The knowledge dimension emphasizes digital supply chain management, data analytics, and green supply chain management, including carbon emission tracking. The skills dimension focuses on the use of data to make decisions, using technology to lower costs, and planning green operations. The attributes dimension prioritizes leadership in change, digital business ethics, and managing environmental and social responsibility (ESG). The management dimension connects all five POCCC management functions with digital tools and sustainability goals, which include automatic carbon tracking and reporting, and supply chain transparency. The manual also includes tools to test skills both before and after development activities in order to measure how much progress has been made.

The inclusion of the POCCC principles with digital and sustainability information in the manual was done deliberately by the research team. Henri Fayol's original management framework was developed during the manufacturing era. Although times have changed, the five core ideas of planning, organizing, commanding, coordinating, and controlling remain valid and arguably more important in today's fast-changing environment. What has changed is the way in which these functions are performed. The manual makes these updated management principles clearer for executives, so that they can connect those principles with the digital tools that they actually use in their work.

Five experts checked the finished manual to make sure that it was easy to understand, met all the goals, included digital and green topics, and was useful for actual work. All five gave the highest possible score, meaning they completely agreed. We believe that this result shows that the model and manual will really help the Thai logistics industry and workers.

4 Discussion

4.1 Knowledge and Sustainable Management

This study found that logistics leaders need to know two things in particular: how to manage change (K1) and how to manage a sustainable company (K2). Prior research [17] said that leaders must act

quickly and identify opportunities when times are difficult. Knowledge of economic, social, and environmental issues is also consistent with sustainability research [18], [19]. Their position was that sustainability should be part of a company's strategy from the outset, rather than something that limits normal business.

The most important aspect of this study is the addition of sustainable logistics and green supply chain management (K5) as a necessary skill for leaders of logistics companies. Earlier competency models for logistics executives, including those reviewed at the beginning of this study, do not include green logistics knowledge as a standalone sub-part. The experts insisted that it should be a separate item to reflect changes that are already happening in international trade. The examples of PSA International in Singapore and DHL in Germany that are noted above consistently require their leaders to understand environmental issues, [4], [5]. The established framework [14], which states that there is an expectation that companies must be responsible for their effect on the environment, provides support for this viewpoint. Our findings also suggest that Thai logistics executives, especially those who work with customers or partners who have ESG reporting obligations, need to develop the same level of competency.

4.2 Skills and Digital-Era Leadership

Analytical decision-making skills (S1) and organizational leadership (S2) were identified as the two most important skill components in this study. These results match the earlier findings [20], which studied executive competency in Thai companies; they found that the ability to make effective decisions when conditions are uncertain is what distinguishes high-performing executives from others. Experts in the supply chain also describe the current business world as being in a state of VUCA, which stands for volatility, uncertainty, complexity, and ambiguity; they suggest that the best way to overcome this is for business leaders to use data analysis, [21], [22].

In so far as the results relate to leadership, they are consistent with transformational leadership research, which indicates that transformational leaders are the reason why organizations successfully adopt new technologies such as AI and IoT, rather than simply installing the equipment without changing their work processes, [23]. It is also worth noting that the required skills identified in this study are very close to those that are needed at PSA International in Singapore for their leaders.

There, AI is used for scheduling and maintenance in the port, and they require leaders who understand data and can organize teams to work together, [4]. This shows that our model works well for Thailand and matches what regional logistics leaders require.

4.3 Attributes and Business Ethics

The experts consistently agreed in all three Delphi rounds that ethics and trustworthiness (A1) are very important. In the first interviews, the experts said that this was not just general professional honesty; it was about honesty in customs documentation, accuracy in ESG reporting, and reliability in sharing information with supply chain partners. This agrees with ethical leadership research, which finds that leaders must be honest and ethical, especially when making decisions that have both legal and commercial consequences, [24].

Change leadership (A3) and adaptability (A4) also scored highly, supporting the established point [10] that how a person acts is a key to long-term success. A quick-thinking management allows companies to deal with problems quickly and also to identify new opportunities that slower competitors cannot see [25], [26]. In the Delphi discussions, several experts said that it was vital that ESG ethics required accurate reports of carbon emissions rather than estimates. The reason for this is that international trading partners have become more experienced in detecting fake environmental claims. This is something that most Thai logistics guides do not cover yet, so this model adds a new and useful approach.

4.4 Management and Digital Technology

The findings for the management dimension confirm that the use of technology in planning (M1) and operational control (M4), which includes WMS, TMS, and big data, remains central to a competitive logistics business. This idea fits the value chain concept continues to be widely relevant. Technology that is used in all parts of a company's business, rather than used only in isolated functions, cuts costs and sets the company apart from its competitors who find it difficult to copy the example quickly, [13]. Our findings add the specific extension of control functions, including ESG-related KPIs, to this established position. The experts agreed that the leaders in Thai logistics companies must now trace how much carbon is produced for each shipment, by how much the waste is reduced, and how sustainable the suppliers are. These are key in measuring performance and are no longer considered only the responsibility of sustainability experts.

Similar research methods were used in a prior study [27] to examine how the performance of Thai executives in online businesses could be improved. Both found that carefully checking and controlling their management plans helped companies to reach their goals. Our study has added sustainable KPIs to this control. There is a simple lesson for the POCCC framework; in this digital age, managers must track both business performance and carbon emissions at the same time. If they fail to track either of these, they will not meet the standard required by Thailand's National Logistics Development Plan for 2028 to 2037, [9].

4.5 International Benchmarks: Singapore and Germany

We added a reference to international trade in response to earlier feedback for the model. The question raised was whether the model actually meets international standards or just describes conditions specific to Thailand. The most relevant comparisons for this purpose are with Singapore and Germany, because both countries require that logistics leaders are competent in using new technology and in protecting the environment.

Singapore is a particularly relevant comparison because PSA International operates within the same ASEAN region as Thai logistics operators and handles some of the same cargo flows. Essential skills that PSA requires for senior operations executives include managing data, AI, supply chains, and green operations; these match specific sub-parts of K2, K3, S1, S3, and K5 of the model used in our study, [4]. This shows that the model meets the same standards as those needed to be a leader in regional logistics. Thailand and Singapore have the same ideas, but in Thailand, there are no clear, official training programs or a set of standards for logistics leaders.

The comparison with Germany is different. There, companies such as DHL Group and DB Schenker use Logistics 4.0, which involves AI, robots, and smart data to manage shipping and warehousing. Their methods for protecting the environment are far more advanced than what is usual in Thailand, [5]. German training programs for leaders in the logistics sector include knowledge of ISO 14001 to protect the environment, how to use advanced TMS, and how to report on green business practices, as well as the usual digital and strategic management skills. The GoGreen Plus program requires that carbon emissions be understood by all managers, and not just by the ESG teams. The K5 was added as a separate sub-part in this model for the same reason. It is one extra sub-part in the

framework, but it shows an important change in environmental responsibility; it is no longer a minor matter, but a core part of management.

The comparisons with Singapore and Germany show that our four-dimensional framework developed in this study matches international standards. The difference in logistics between those countries and Thailand is not about which skills are needed; it is that their leadership training is widespread, with training institutions, certification bodies, and high company standards. The change required in Thailand to address this situation needs action through government policy and industry organizations, in addition to academic research.

4.6 Synthesis and Limitations

Although the four dimensions in the model work together, it is knowledge and skills that provide the foundation on which management performance is built. The attributes dimension determines whether the skills can actually be used effectively when working under real pressures, while the management dimension, when using the POCCC model, provides the company structure that uses individual skills for the benefit of the company.

The green logistics and ESG rules are in K5, but they are also present in the management and attributes dimensions; their connection with sustainability and inclusion in the model makes it appropriate for the competitive environment that Thai logistics operators are facing.

We need to state clearly that there are several limitations of this study. The Delphi method produces structured expert opinion, but not experimental evidence. The fact that the 19 experts considered these competencies to be important does not prove that executives will necessarily deliver better business results, even if they have the competencies. Proof of that causal relationship would require long-term research using actual performance data, which was not included in this study. Moreover, the study was conducted within the context of Thai logistics, so direct application in other countries would require adjustment to account for local rules, regulations, environments, and industry conditions. In particular, the green logistics sub-part reflects the ESG pressures that come from the trading partners of Thai operators, and different markets may apply different standards. In addition, the geographic concentration of logistics companies and expert knowledge in the Bangkok Metropolitan Region means that the findings are most reliable for conditions in that area and in the ECC. The findings may not apply in the same way to logistics operators in other regions of Thailand.

5 Conclusion and Recommendations

This study produced a potential model for logistics leaders in Thailand. The model has four main components, which are knowledge, skills, attributes, and management. It includes 21 sub-parts and 94 minor competency items and was developed through a three-round Delphi process with 19 experts; it was subsequently validated through focus group discussions with 14 experts. The most significant addition to the existing literature is the inclusion of sustainable logistics and green supply chain management in K5 as a separate and essential knowledge component. This inclusion was unanimously agreed on by the experts and reflects the growing ESG requirements imposed by international trade on Thai logistics operators. A development guideline manual was also produced as part of this study. It was evaluated by five experts who all gave their highest rating across all the evaluation criteria, meaning they all agreed 100%.

The model uses McClelland's KSA framework [10] with Fayol's POCCC management principles [11], a digital transformation component, and ESG governance requirements that previous academic work in this area has not yet incorporated. The management part of the model uses digital tools, which include WMS, TMS, big data, carbon trackers, and AI-based dashboards. These digital tools help to implement the POCCC principles; they will directly improve efficiency and lower costs as intended by Thailand's National Logistics Development Plan for 2028 to 2037, [9]. The model aims to use the same leadership standards already established for Singapore's PSA International and Germany's Logistics 4.0 framework, [4], [5].

Our main recommendation is that Thailand develop national standards for digital and green logistics leaders, supported by a clear certification process and publicly funded training programs. The parts of the model related to ESG, which are K5, M4, and A1, are good starting points to define the knowledge about sustainability that the new standard should include. Moreover, a national computer system to share data and a centralized supply chain data platform to track supplies would help executives develop real-time coordination, as suggested by the experts.

The manual produced in this study is ready to be used by leaders in the logistics sector as both a diagnostic tool to check performance and a tool to develop the process. The tools in the manual allow organizations to identify gaps in skills at both the individual and company levels before designing training programs. Because there is high competition in the EEC area and the Bangkok

Metropolitan Region, organizations that serve international clients with active ESG disclosure requirements should give priority to developing green logistics.

Future research seems to be particularly important in two directions. The first is long-term research to examine whether leaders who receive training using this model actually help to improve company performance and sustainability. Cause and effect cannot be proved by this study. The second direction is to compare the performance of Thai logistics leaders with those in Singapore and Germany. This will determine whether the differences in competency identified in this study are reflected in measurable differences in performance at the company level. Furthermore, the development of training curricula that use AI simulation and sustainability scenario planning exercises would help to reduce the gap between what the model requires and what current training programs in Thailand can deliver.

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Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

Miss Ladda Thiengnam designed the study, gathered and reviewed the data, and wrote the final report. Professor Dr. Suchat Siangchin supervised the research, provided academic guidance throughout all stages, and reviewed the final report. Associate Professor Dr. Sanchai Intapichai helped to design the research and reviewed the methods used. Professor Dr. Teerawut Bunyasopon gave expert advice on industrial and human resources development and reviewed the final report.

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Conflict of Interest

The authors have no conflicts of interest that are relevant to the content of this article.

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APPENDIX

Table 1. Research Procedure

Step	Process	Output
Step 1	1. Reviewed relevant documents, theories, and prior research in both Thai and international contexts. 2. Analyzed the current situation of logistics executive competency in Thailand and studied international benchmarks from Singapore and Germany. 3. Developed the conceptual framework by incorporating the KSA framework, the POCCC management model, and a green logistics and ESG dimension. 4. Quality assessment of the framework by an expert panel.	Conceptual framework for developing a potential model for logistics business executives to enhance competitiveness in the digital technology age.
Step 2	Delphi Round 1: In-depth interviews were conducted with 19 experts using semi-structured interview forms. Delphi Round 2: A closed-ended five-point Likert-scale questionnaire was constructed and administered to the same 19 experts. Delphi Round 3: The statistical results from Round 2 were sent back to the experts so that they could confirm or revise their opinions.	Potential model for logistics business executives to enhance competitiveness in the digital technology age.
Step 3	1. Drafted the potential model and the practical development guideline manual. 2. Conducted a focus group discussion with 14 experts for model evaluation and refinement. 3. Revised the model according to the recommendations from the focus group discussion. 4. Quality assessment of the manual by 5 experts.	Completed potential model and development guideline manual for logistics business executive competency (final version).

Source: created by the authors