

Global Product Development Ways in Modern Thai Economy – Case Studies, Good Practices and Ways to Implement in Thailand

Andrzej Przemyslaw Kusnierczak

Abstract—Advances in technology (e.g. the internet, telecommunication) and political changes (fewer trade barriers and an enlarged European Union, ASEAN, NAFTA and other organizations) have led to develop international competition and expand into new markets. Companies in Thailand, Asia and around the globe are increasingly being pressured on price and for faster time to enter the market. At the same time, new markets are appearing and many companies are looking for changes and shifts in their domestic markets. These factors have enabled the rapid growth for companies and globalizing many different business activities during the product development process from research and development (R&D) to production.

This research will show and clarify methods how to develop global product. Also, it will show how important is a global product impact into Thai Economy development.

Keywords—Development, global, management, product.

I. INTRODUCTION

DEVELOPMENT in technology (for example Internet, telecommunication, speed data connections) and political rearrangements (e.g. fewer trade barriers, development of European Union, growing new unions: ASEAN, NAFTA, African Union, etc.) have led to increased global competition and develop in new markets.

“Companies in the World and around the globe are increasingly being pressured on price and for a faster time to market. In the meanwhile new markets are arising and many companies are noticing changes and movements in their main markets.” [1] “These factors have enabled the rapid rise of companies globalizing different business activities across the product development process from research and development (R&D) to production launch.” [1] “Many product development organizations have been in a regular need for finding new strategies that allow them to be more competitive in the international marketplace. The question that this research means to answer is to how to identify a framework that helps companies from Thailand see their position they may engage in the World and the factors that may guide them to generate new global strategies. [10]

“The influences of Globalization have already begun and it has a primary impact on the of product development proceeding through a wide range of industries. A new way has come out whereby organizations and companies are taking

advantage of qualified engineering teams spread around the world to enlarge and develop products in a collaborative multinational ways. Great practice in product development (PD) is now speedily migrating from local, cross functional collaboration to a mode of global, worldwide cooperation. For this reason Global Product Development (GPD) represents a major conversion of business, and it implements to a wide range of industries.” [2]

II. GLOBAL PRODUCT DEVELOPMENT

“Global product development is when a company has their product development activities globally allocate. Today many corporations have all elements of the product development process, from R&D to production, globally distracted.”[1] “The goal is to show edge that can help companies address miscellaneous strategic and tactical issues when considering assume of GPD.”[2] “There are two main types of Global Product: 1. High-tech – products with the most advanced technology available, those that incorporate advanced computer electronics, also every day or dated technology. 2. High-touch - high touch products are highly involved with consumer, products that solve a common problem, mostly FMCG (Fast Moving Consumer Goods) also cosmopolitan products, some products by popular person.”[19]-[20]

A. Globalization

„The globalization of production is a key development in majority industries and brightening during the previous three decades. New concepts, ideas, approaches and technologies such as e-commerce, genetic algorithms, and neural networks shall be accustomed to the production, industrial environment. It is compromising with many various methods and tools fitting for designing, managing and monitoring processes in the supply chain. The most meaningful terms which describe the challenges for global production management are Virtual Enterprise and Extended Enterprise. Global production management’s implementation requires integration and assimilation of many business processes, which includes organizational and technical attitudes and aspects. [3] The most important subjects chosen for this are:

- Strategic manufacturing issues and design of virtual enterprises;
- Supply chain management;
- Business process engineering;
- Performance measurement and management information;
- Modeling and simulation;

Mr Andrzej Przemyslaw Kusnierczak is the lecturer and researcher at Suan Sunandha Rajabhat University in Bangkok, Thailand (mobile number: +66943122777; e-mail: andrzej.kusn@gmail.com.).

- Advanced scheduling approaches and decision support;
- IT systems to support global production.” [3]

“Globalization is not just only about reduction of costs. It is mostly for leading business development in new markets. Many companies are implementing and assuming global product development strategies to achieve these markets but still carry on using multiple, independent, self-contained systems to lead product development and information about it. [4] „A plenty of producers and product creators are applying to reach global product development scope; one in which coordinated teams relies on digital resources to set up and share product information across the World. This type of way provides companies a higher space to manage the costs of development, the source of talents, and meet the needs of local markets. Well managed global product development can lead and secure the permanent, improved business efficiency and performance/achievements.” [4]

“With new market demands and ever-increasing product complexity, global product development needs a tight settlement within engineering branches to guarantee a quality final product. But the larger the collaboration circle is, the more difficult and error prone the data sharing and process coordination might be. Protecting very sensitive product information means a very real challenge.” [4], [6] “Well done Global Product Development can empower:

- 80% improvement in design and process reuse [4], [6]
- 25% decrease in product development time [5], [6]
- 30%-40% cost savings through higher product commonalities.”[4], [6]

B. Global Strategy

“Global Strategy” is a shortened definition that covers three areas: global, multinational and international strategies. Indeed, these three areas relate to those strategies designed to allow a company to reach its objective of multinational growth.” [7]

“In developing ‘global strategy’, it is useful to tell apart between three forms of international expansion that emerge from a company’s resources, abilities and actual international position. If the organization is still primarily concentrated on its domestic markets, then its strategies outside its domestic markets might be seen as international. For example, a dairy company may sell some of its excess milk and cheese supplies outside its home country, but its main strategic focus is put on the domestic market.” [7]

“Implications of the three definitions within global strategy:

- International strategy: the organization’s objectives relate primarily to the home market. However, we have some objectives with regard to overseas activity and therefore need an international strategy. Importantly, the competitive advantage – important in strategy development – is developed mainly for the home market.” [7]
- “Multinational strategy: the organization is involved in a number of markets beyond its home country. But it needs distinctive strategies for each of these markets because customer demand and, perhaps competition, are different

in each country. Importantly, competitive advantage is determined separately for each country.” [7]

- “Global strategy: the company treats the world as huge, one market and one source of supply with little local modifications and variations. Importantly, competitive advantage is developed mostly on worldwide principles.” [7]

C. Global Marketing

“Both international and global marketing are co-working with doing business in foreign markets. In the case of international marketing, it assumes that foreign markets differentiate with respect to market segments and needs, in terms of the organization of the activities of international marketing, etc. The task is therefore to adapt the product off abroad to the needs of each market. [7] The global marketing comes from different assumptions: consumers around the world have some of the same needs; therefore, there is a product that in all conditions and in every market can be sold, as it meets the same needs everywhere. Such a product is called a product of the world, worldwide product (for ex. Coca-Cola) or global. [7] Input each company to foreign markets is a complex process, usually has an evolutionary character. The main steps in this process are:

- environmental assessment of international marketing (from an economic, law and political and cultural point of view) [7]
- decisions on sales to foreign countries (product, quantity, method of sale, selection of partners)
- selection of markets (size, level and distribution of income buyers , transaction costs , competitive advantages , the level of risk) [7]
- choice of how to penetrate the market (export , directly or indirectly , the strategy conjunction with the company for foreign direct investment strategy) [7]
- decision on the choice of the marketing program - in the field of product, price , promotion and place[7]
- decisions concerning the marketing organization”[7]

D. Benefits of a Global Strategy

“The business case for reaching a global strategy is based on one or more of the factors shown below:

- „Economies of scope: the cost savings improved by a group when it shares activities or transfers capabilities and competencies from one part of the group to another – for example, a biotechnology sales team sells more than one product from the total range.” [7]
- „Economies of scale: the extra cost savings that take place when higher capacity production makes unit costs to be decreased – for example, an Arcelor Mittal steel mill that transfers lower steel costs per unit as the size of the mill is increased.” [7]
- „Global brand recognition: the benefit that derives from being the owner a brand that is recognized around the world – for example, Apple, Microsoft, Samsung, Boeing, etc.” [7]

- „Global customer satisfaction: international customers whose demand is the same product, service and quality at many different locations around the world – for example, customers of the Sheraton Hotel network look forward to and obtain the same level of service at all its hotels around the world.” [7]
- „Lowest labor and other input costs: these emerge by selecting and modifying manufacturers with lower labor costs – for example, computer assembly from imported parts in Thailand and Malaysia where labor wages are lower than in countries making some sophisticated computer parts (such as high-end computer chips) in countries like the USA, Taiwan or Japan.” [7]
- “Improvement of research and development (R&D) costs and other development costs across the maximum number of countries – new models, new drugs and other forms of research often quoting to billions of US dollars. The more countries of the world where the goods can be sold mean the greater number of countries that can cooperate to these costs. The good example is Airbus Jumbo A380 launched in 2008, where development costs has exceeded US\$ 10 billion.” [7]
- “Emergence of new markets: means greater sales from essentially the same products.” [7]

E. Cost of a Global Strategy

“Set against these benefits, there are at least six economic costs of international and global strategies, as shown in Fig. 1.

III. GLOBAL PRODUCT CLASSIFICATION

“GS1 is one’s of the company which provide Global Product Classification System. To ensure products are classified correctly and uniformly, GDSN uses GS1 Global Product Classification (GPC), a system that gives buyers and sellers a common language for grouping products in the same way, everywhere in the world.” [8] „This improves the Global Data Synchronization Network's data accuracy and integrity, speeds up the supply chain's ability to react to consumer needs, and contributes to breaking down language barriers. It also facilitates the reporting process across product silos.” [8]

“The official (normative) GPC schema and GPC Browser information is published in Oxford English. Both the schema and the browser information are translated to other languages.” [8] „The foundation of GPC is called a "Brick;" GPC bricks define categories of similar products. Using the GPC brick as part of GDSN ensures the correct recognition of the product category across the extended supply chain, from seller to buyer. Bricks can be further characterized by Brick Attributes.” [8]

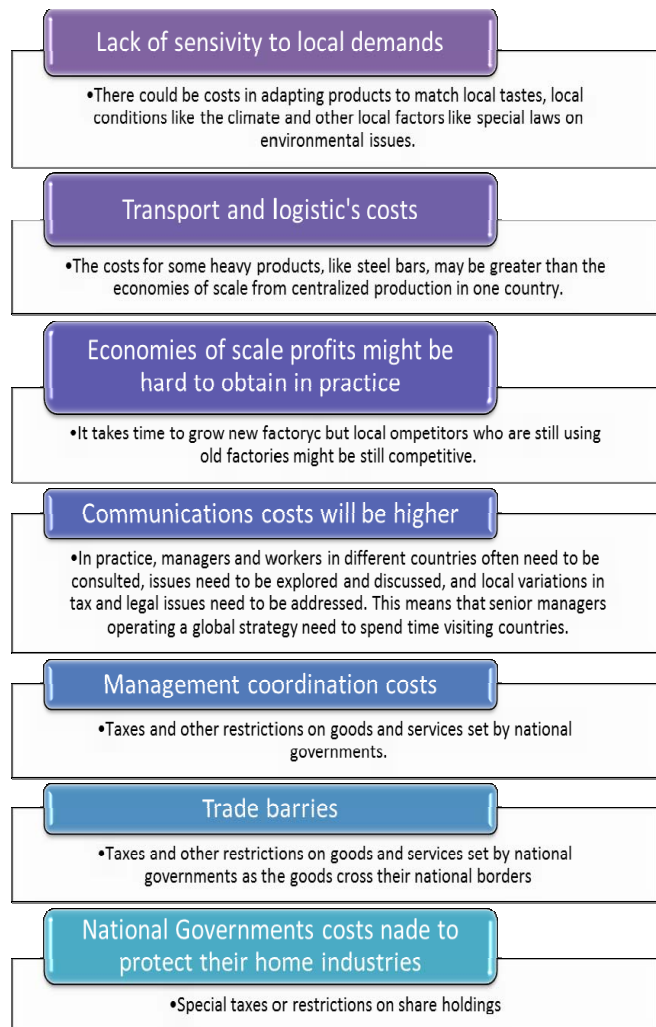


Fig. 1 Economic Costs of International and Global Strategies [7]

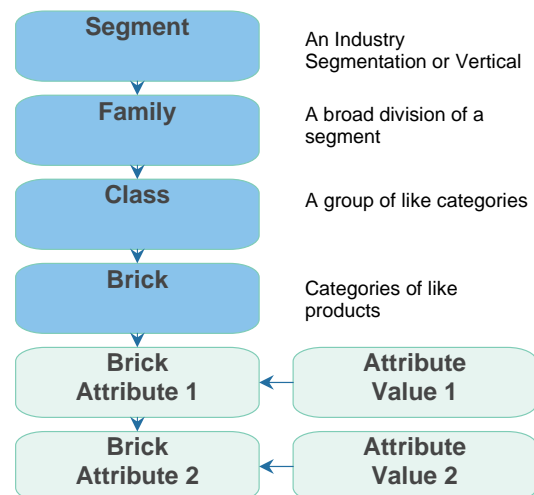


Fig. 2 Use GPC Hierarchy To Find The Brick [8]

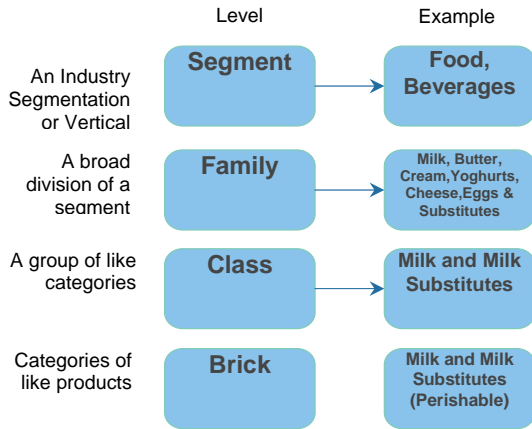


Fig. 3 One GTIN, One Brick. A Global Trade Item Number (GTIN) Can Only Be Assigned To One Brick [8]

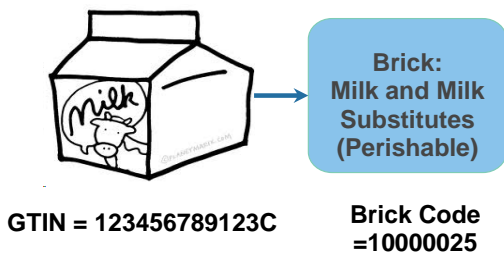


Fig. 4 Using Attributes - Bricks Can Be Further Characterized Using Attributes Where Required [8]

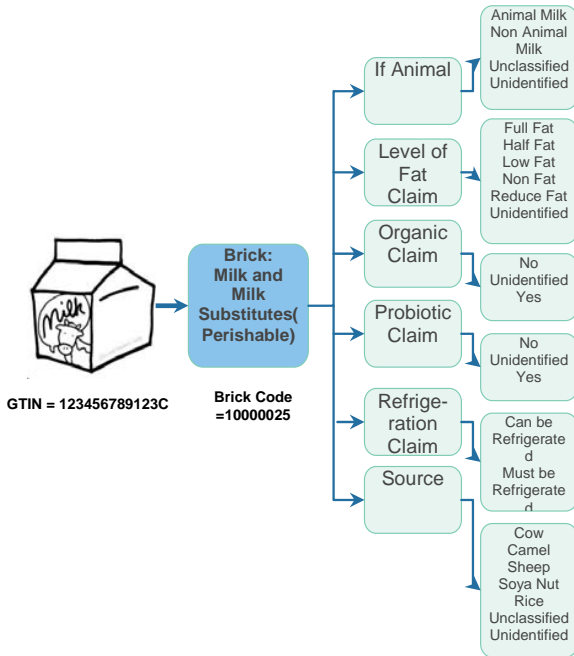


Fig. 5 Category Scope - GPC Is Already Available For A Wide Range Of Categories - And Is Growing All The Time [8]

“From July 2005, the GS1 Global Product Classification standard includes:

- Food, Beverage, Tobacco,
- Home Care, Health Care (including over the counter part of (Health Care), Pet Care, Pet Food, Baby Care, Beauty Personal Care and Hygiene,
- Clothing, Footwear, Personal Accessories,
- Cross Category
- General Merchandise (Furniture & Furnishing, Kitchen Merchandise, Musical Instruments, Toys & Games, Stationery, Audio & Visual, Communication, Computing, Printed & Reference Materials, Sports & Well-being, Arts & Crafts, Outdoor & Camping)
- Hardlines
- DIY (Lawn & Garden Supplies; Building Materials, Hardware; Tools & Equipment Hand; Safety & Storage; Electrical Supplies; Plumbing; Heat, Ventilation, Air Conditioning)
- Automotive Aftermarket,
- Home Appliances.” [8]

A. What is the Role of GPC in GDSN?

“Global Product Classification (called also GPC) gives buyers and sellers a common language to group products the same way globally to ensure effective data synchronization in the Global Data Synchronization Network (GDSN). GPC enables the following processes:

- Item Registration
- Subscription
- Validation
- Search
- Publication/Subscription Match” [8]

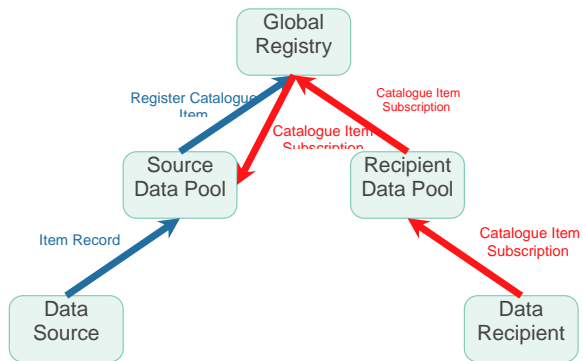


Fig. 6 GDSN Processes Enabled By GPC Without GPC These Processes Do Not Work [8]

B. Major Stages in New Product Development

There are five basic steps in a new product development process:

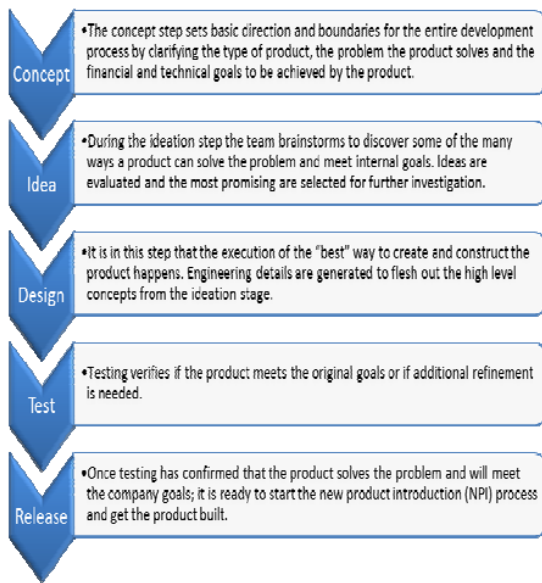


Fig. 7 Five Basic Steps in a New Product Development Process [13]

“The basic steps of the new product development process are listed above as stages that follow each other, but in reality the process is cyclical, not linear. Ideation, Design and Test steps are repeated over and over again, at varying depths of detail and on different subsystems, until the product design is complete.” [13]

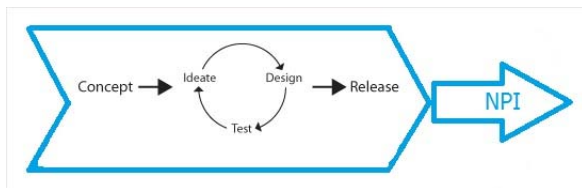


Fig. 8 New Product Development Stages [13]

According to Ellen van Kleef, the stages of new product development are as shown in Fig. 9.

„At the Fig. 9 stages of new product development process are shown along with representative consumer research methods and key references for reviews.” [14]

C. New Product Launch

“The global launch process begins about - 60 months ahead set in motion, launch the product (LY>-5). The regional launch process however starts later around -24 months prior launch (LY-2) after global market strategy has been soared to countries, and finishes at +6/+12 months after launch. Date ‘0’ perform the launch date in the country after meeting of market demand and authorization.” [11]

“The detailed Product Launch Process includes eight sub-processes planned to create launch willingness, advance launch absorption and understanding and improve launch achievement.” [11]

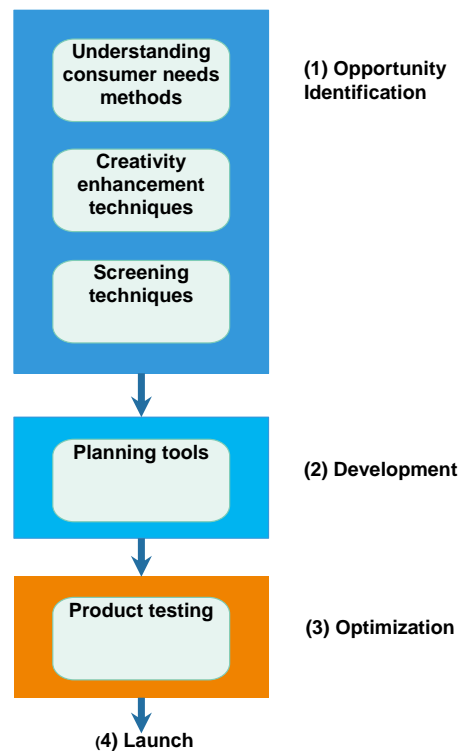


Fig. 9 The Stages of New Product Development by Ellen Van Kleef [14]

“Sub-processes are:

- 1) “Understand Market Opportunities (-60 until -42): Establish cross functional collaboration between Development and Marketing in early development stages to recognize attractive market segments based on market demands and define product line and profile for further scientific investigation. [11]
- 2) „Develop Market Strategy and Plan (-42 until launch): Manage internal and external situation and positions, investigate and define understood product strategy, then run into market strategies.” [11]
- 3) „Prepare Market for Launch (-40 until launch): Enlist with key opinion leaders to settle pre-launch market awareness and knowledge and strong support the product before its launch.” [11]
- 4) „Prepare Manufacturing and Supply (-40 until launch): Assure manufacturing and logistics are ready for on schedule, punctual production and delivery of the product.” [11]
- 5) „Prepare Commercialization (-36 until 0): Describe commercialization strategy and plan to target the customers as well as ensure promotional materials and ensure that sales forces are ready before launch.” [11]
- 6) „Execute launch and monitor performance (0 until +6 to +12): Secure on time accomplishment of launch activities according to launch roll-out plan and investigate launch performance.” [11]

- 7) „Manage Product Life Cycle (-42 ongoing): Establish professional competitive intelligence and define potential strategic options to enlarge and maximize product value during life cycle.” [11]
- 8) „Manage Product Launch Program (-42 until +6/+12): Assure resource availability, leverage cross-functional teams as well as record critical, the most important milestones and manage review, analysis meetings.” [11]

D. How to Build a Global Strategy?

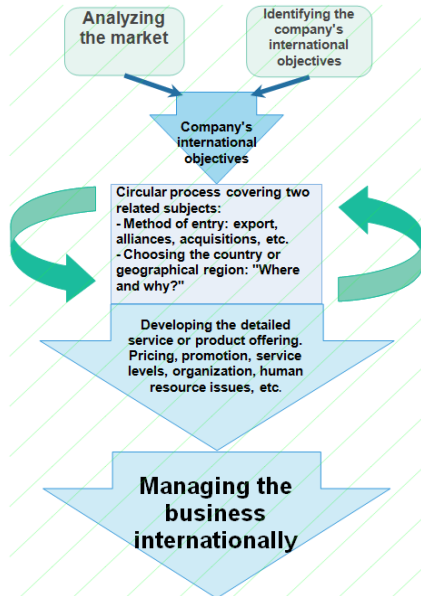


Fig. 10 How To Build A Global Strategy? [9]

“As a starting point, it’s worth to use some basic international data to analyze different countries/markets. The type of data is shown in the Tables I and II– economic data that explores the total wealth of some selected countries and the wealth per person for the same countries.” [9]

“Actually USA is the world’s wealthiest country. However, the countries of the European Union – for example Germany, the UK and France – are not far behind individually. Importantly from an international trade perspective, the EU countries can be grouped together. This means that the European Union as a combined market would come much closer to the USA in terms of total wealth.” [9]

TABLE I
THE WEALTHIEST COUNTRIES BY GROSS DOMESTIC PRODUCT - NOMINAL [16]

Rank	Country/Region	GDP (Millions of US\$)
	World	72,689,734
1	United States	16,244,600
2	China	8,358,400
3	Japan	5,960,180
4	Germany	3,425,956
5	France	2,611,221
6	United Kingdom	2,471,600
7	Brazil	2,254,109
8	Russia	2,029,812
9	Italy	2,013,392
10	India	1,875,213

TABLE II
THE WEALTHIEST COUNTRIES BY GROSS DOMESTIC PRODUCT - PER CAPITA [17]

Rank	Country	Int\$
1	Qatar	98,814
2	Luxembourg	78,670
3	Singapore	64,584
4	Norway	54,947
5	Brunei	53,431
6	United States	53,101
—	Hong Kong	52,722
7	Switzerland	46,430
8	San Marino	44,480
9	Canada	43,472
10	Australia	43,073

“Even though China has been catching up these last few years in terms of total wealth, China has a lot more inhabitants than the USA – so China’s wealth per head is substantially lower than the USA. These basic comparison types are explored more in depth in the country selection film further. [9] The next step is to identify the company’s resources for international expansion, especially those that have a competitive advantage. For example, maybe the company has special brands or patents which can be used for international expansion. Again, we’ll explore it in a more structured way in a short while. [9] It’s only after this that a company should set its goals for international and global expansion. Some companies may find this surprising – why should a company not begin by setting out what it wants to accomplish internationally? [9] The reason for leaving goal-setting until now is that goals need to be set in a realistic context of what opportunities exist in the market place and what resources the company possesses to expand internationally. To take a simple example, there would be little point for an automobile firm setting goals for a major expansion on the US car market in 2009 when the market is under such pressure. Equally, a small computer service company may simply not have the resources it needs to launch its products globally, no matter how attractive its service might be. It would be better to define more realistic goals.” [9] “Once the goals have been worked out a company can begin to explore which global markets offer the best opportunities: usually called market entry and mode. Simultaneously, it should to think about how to enter these markets – maybe through a product launch, maybe through a joint venture etc... Both aspects are represented by the two circular arrows in the above model. [9] Finally, whatever method of market entry and mode is chosen, the company will want to think about products pricing, products, distribution and a whole array of other factors related to its international goals. This is called product development or service offering and forms the models last part. [9] Importantly, there is an important aspect that missing from the model – learning and innovation. The reason that this has been left out is to avoid making the basic development process unnecessarily complicated. But we will not just ignore these issues. We will deal them at the end.” [9]

“The five main areas in analyzing international opportunities are:

- 1) Such as customer demand in broad, main geographical areas: market size, growth and history – including special customers such as big multinationals who are already active as customers in a particular region. These factors include, but go beyond, issues of population and wealth which are identified in the movie.” [9]
- 2) “Competitors: local and international companies who are already active in the countries markets, their market shares and basic facilities - do they have major competitive advantages? If yes, what are they?” [9]
- 3) Regional and international infrastructures: what major costs are involved in communicating, transporting and distributing in different parts of the world? [9]
- 4) Country politics and economic trends: some basic considerations only at this stage, such as economic growth and political risk – too much to analyze in depth at this stage. [9]
- 5) International trade barriers, tariffs and quotas: are there any major issues here which can support or block the market opportunity?” [9]

E. Global Product Launch Success

“In business, “Going global” is a lot more than just a catch phrase. It is a big challenge with important decisions that every company’s leader should take at some point. And things can get more difficult when it is with startups – because the founders are often without required experience and they are too much enthusiastic.” [12]

“How to bring your product successfully to the rest of the world? “Theodore Moulos is the CEO at i-docs and a member of Metavallon’s Experts network. He is the person who usually see “the dark side of the moon” while launching and growing the products in different markets, as he says “sometimes with great success and sometimes not”. According to his opinion, his insights on what it take to bring a product to a different market (a B2B product in particular); here we have 10 keys useful for launching and growing products globally.” [12]

- Key 1: The first 20 sales endeavors will shape your strategy. [12]
- Key 2: To identify local competitors, simply ask your customers. [12]
- Key 3: To secure target accounts, aim small and forget your local ways. [12]
- Key 4: Use sales companies to fire up your leads and market penetration. [12]
- Key 5: Maintain a go/no go option in each market and adjust if necessary. [12]
- Key 6: Establish a local office, no matter where your team is. [12]
- Key 7: Recruit through local headhunters, secure through your own selling. [12]
- Key 8: Develop your partners’ network to reinforce your sales. [12]

Key 9: Activating partners is a proactive operation, not an automatic one. [12]

Key 10: Managing partners and sales pipelines [12]

VI. EXAMPLES OF GLOBAL PRODUCT DEVELOPMENT

A. Major Strategies

“In the image below you can see the major stages of developing new products, with thanks to Detra Montoya, Professor of Marketing at the University of Washington.”[15] She has used this chart in her Marketing 301 course:

Major Stages in New Product Development



Fig. 11 Major Stages in New Product Development [15]

“Note that the general stages of the NPD process shown above are not the general product road mapping process or the Product Management/Product Planning function but specific to one product. The above infers that the overall product strategy and roadmap are already developed and that you're now ready to begin the development of new products with goals/markets/segments, etc. clearly established. In addition, depending on the company, industry, or sometimes even the product, the stages may order differently or parallel instead of sequential. For example, it's better to do a preliminary business analysis before any concept development/testing, and then a more in depth business analysis before development starts.”[15]

“For the Honda R&D (Ohio, USA) and Porsche AG (Stuttgart, Germany) design engineers, their main focus was Product Development. That is, engineering a solution from the final concept (for the Body Design in this case) to make the idea reality.” [15]

Major Stages in New Product Development

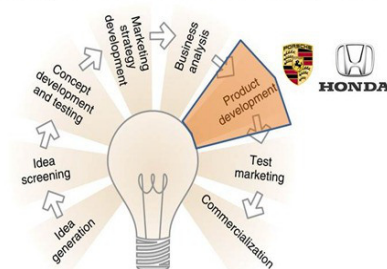


Fig. 12 Major Stages In New Product Development [14]

“It is also vital to note here that within the Product Development stage as shown above; there is also concept development and testing which is necessary to ensure that the engineering solutions meet the products goals and intent. The Concept Development and Testing stage in the figure refer mainly to the different solutions which are available for a specific consumer need or product goal, and testing those different solutions/concepts with the appropriate consumers to reduce the field down to one direction. Some product testing (vs. consumer testing) also takes place (i.e. in the automotive industry, aerodynamic testing would be done on several of the initial clay concepts to narrow the field). Once one of those concepts has been selected for product development, additional concept development and additional tests will take place to realize the defined product goals. To use another automotive example, mounting internal panels could be carried out through fasteners, plastic tabs, adhesives, etc., which can all be developed and tested in order to find the best method to meet the selected direction concept.”[15]

“The responsibilities are expanded over a broader range of the NPD process as shown below in this brand management role, the primary focus being go-to-market strategies. Also known as GTM” [15]

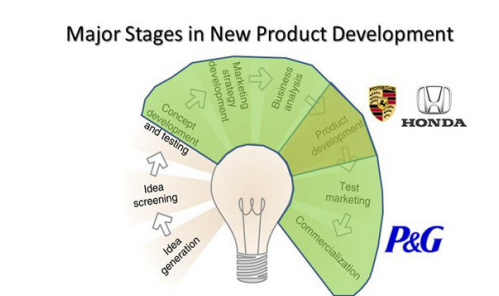


Fig. 13 Major Stages In New Product Development [15]

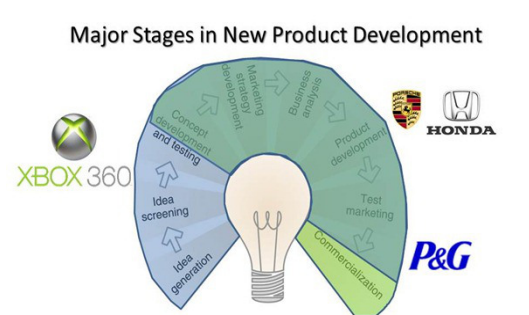


Fig. 14 Major Stages In New Product Development Concludes This Segment On NPD Series And Stages. [15]

“A typical CPG brand manager will own one maybe two products through the entire product life cycle (from ideate to end-of-life aka EOL). At Microsoft, products get handed off depending on the stage of the product life cycle it is in. Product Managers and Product Planners concentrate on the front end, ideate to product development. Product Marketers will concentrate on the commercialization and go-to-market

strategies (GTM) once the product is completely defined. The skills needed to ideate a new product can be quite different from the skills needed of taking a pre-defined product to market, so this makes it possible Product Managers and Marketers to leverage these skills across a broader range of products.”[15]

VII. OVERALL GLOBAL STRATEGIES FOR THAILAND

“Thailand is big enough to be an alluring market by itself and now has the bonus feature of being a channel to Indochina. Big businesses such as: Nestle, Unilever, Toyota, Matsushita, IBM, Procter & Gamble, Reckitt Benckiser, Ford Motor Company came to the country with export strategies and engaged in direct investment strategies subsequently by setting up subsidiaries which are wholly owned or finding local partners to form joint ventures with. Unilever's and P&G's direct investments occurred through wholly owned subsidiaries, while Nestle, Toyota and Matsushita used joint ventures which they had created with local companies. However, Nestle subsequently got their hands on their partner's shares in the joint venture and now it wholly owns Nestle Thailand.” [18]

“Unilever is the oldest and P&G is the youngest in Thailand of the seven above mentioned businesses.” [18]

“Toyota's success and the successes other Japanese multinational companies in the automobile industry enjoyed can be attributed to them setting up production facilities in Thailand early on. They have well established distribution and service networks, which gives them high degrees of consumer loyalty. Pushed by the of the Yen's rising worth, and pulled thanks to growing local demand as well as by the liberalized policies and incentives of the Thai government, Japanese producers have increasingly moved car part production facilities to Thailand, and have started expansion plans to further increase its production centers.” [18]

“Automobile companies often follow a strategy of alliances when they come to Thailand. Examples of this are the Auto Alliance Co., Ford Thailand, Mazda and local partners which produce pickup trucks. Fiat combined with to produce the Fiat 178 (Fiat Palio) world car, while Isuzu, Nissan, and Toyota joined up to produce and interchange parts in order to meet the 54% local content requirement currently required for cars which are assembled in Thailand. Partnering with local government companies is particularly important in such regulated industry fields like telecommunications. For example the US company AT&T partnered with Shinawatra.” [18]

“Most product and services only need to be minimally or moderately adapted for Thailand. Big multinationals, on the whole, try to leverage their strong global brand products on the Thai market with a little tailoring to meet local needs. Nestlé's products in Thailand include both global and domestically developed brands. Nestlé's strategy for its products in Thailand mirrors its policy of “brands to be local, people regional, only the technologies goes global” and its philosophy of broadening the market and pursuing market shares with a limited number of brands. Unilever in contrast,

blankets the market with a wide range of brands in four main divisions, with subcategories in each brand in pursuit of market shares. It has also shown its corporate citizenship by being one of the first companies to include an environmental conservation strategy in their product strategy. P&G Thailand follows the “megabrand” approach, six categories with eight major brands. Additional modifications for consumer products vary by product type and Thai Food and Drug Administration regulations. For example, the steering wheel for cars is on the right, electric voltage is 220V, and when it comes to beauty product important aspects, due to the climate, are moisturizing and protections against UV radiation.” [18]

“IBM follows a regional product strategy integrated by way of Singapore. Thailand is used as a destination for a limited number of advanced technologies and design configurations. Toyota markets its globally standardized world cars in Thailand, but it also produces in Thailand and in late 1996 it launched, an Asian car. Meant for the markets of the southeast Asia region” [18]

“No one has a higher degree of regional integration for value added activities than Toyota. A relatively developed backward linkage to the Thai automobile industry has allowed Toyota to pursue a successful vertical integration strategy. Toyota extensively uses the BBC scheme set up in ASEAN. As the illustrated figure below shows, Toyota produces stamped parts, diesel engines and electrical equipment in Thailand and ships them across the region in exchange for car parts and other parts.” [18]

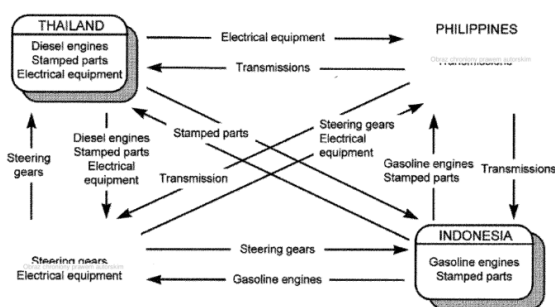


Fig. 15 Toyota's Logistics under the BBC Scheme [18]

VIII. ADVICES FOR THAI COMPANIES WHO ARE INTERESTED TO GROW PRODUCTS GLOBALLY

„As we see above there are many various ways to develop global product. But there are some milestones which should be followed.

Firstly, use some basic international data to analyze different countries. Important is to analyze the economic growth and potential of the countries. It is easier run new product in the country where the economy maybe is not well developed, but it is rising fast. The advantage of it is that we can take place in the market quicker, and being recognized longer – being ready for higher expansion when market is grown.

Secondly, to identify the company's resources for international expansion, especially those which have competitive advantage.

Thirdly, the company should set international and global objectives. Some companies might find this surprising.

Then, while having defined its objectives, a company can begin to explore which markets around the world represent the best opportunities – comparing with the potential market's growth.

At the same time it is needed to think about how it enters such markets – perhaps a product launch, a joint venture etc.

Finally, important is to think about pricing, products, distribution and a whole range of other factors related to its international objectives. This is called developing the product or service offering and forms the last parts of the model.” [9]

ACKNOWLEDGMENT

The author would like to show our deepest gratitude to Research Institute of Suan Sunandha Rajabhat University for giving me the opportunity and scholarship to do this research.

REFERENCES

- [1] “Successful global product development: A guide for Industry”, Technical University of Denmark, Department of Management Engineering, (Successful global product development: A guide for Industry, 2014)
- [2] “The New Practice of Global Product Development” Steven D. Eppinger, Anil R. Chitkara, MIT Sloan Management Review, 2006
- [3] Kai Mertins, Oliver Krause, Burkhard Schallack, “Global Product Management”, Kluwer Academic Publishers, IFIP WG5.7 International Conference on Advances in Production Management Systems September 6–10, 1999, Berlin, Germany, Springer-Verlag New York, LLC, August 1999, <http://www.springer.com/engineering/production+engineering/book/978-0-7923-8605-6>, <http://www.itbooks.net/book/Global-Production-Management/9780792386056/>
- [4] “Product development drives business growth”, <http://www.ptc.com/solutions/global-product-development/>, 2014
- [5] PTC Customer, <http://www.ptc.com/solutions/global-product-development/>, 2014
- [6] Schuh & Co, others from PTC customer experience, <http://www.ptc.com/solutions/global-product-development/>, 2014
- [7] Prof. Richard Lynch, <http://www.global-strategy.net/what-is-global-strategy/>, 2014
- [8] GSI Association, <http://www.gsi.org/gdsn/gpc/what>, Brussels, 2014
- [9] Prof. Richard Lynch, “How to build a global strategy?”, <http://www.global-strategy.net/how-do-you-build-a-global-strategy/>, 2014
- [10] Victor Takahiro, Endo Martines, “Global Product Development: A Framework for Organizational Diagnosis”, Master of Science in Engineering and Management, Massachusetts Institute of Technology, Boston, USA, January 2008
- [11] Andrea Brückner, Eva Wiedenhöft, Thao-Binh Pham-Thi, “Achieving High Performance through Product Launch Management - Accelerating launch uptake to maximize product value in patent protected life cycle”, Accenture 2009,
- [12] Theodore Moulos, “The 10 keys to global product launch success”, <http://www.metavallon.org/the-10-keys-to-global-product-launch-success/>, 2014
- [13] “New Product Development Steps & How to Address NPD Challenges”, <http://www.arenasolutions.com/resources/articles/new-product-development-mpd>, 2014
- [14] Ellen van Kleef, “Consumer research in the early stages of new product development – Issues and applications in the food domain”, PhD-thesis, Wageningen University, 2006, ISBN: 90-8504-330-1,
- [15] Richard Velazquez, “New Product Development Lecture – Overview”, <http://richardvelazquez.wordpress.com/2011/03/08/new-product-development-lecture-overview/>, 2011

- [16] "GDP and its breakdown at current prices in US Dollars". United Nations Statistics Division. December 2013. Retrieved 31 May 2014.
- [17] World Economic Outlook Database, April 2014, International Monetary Fund. Database updated on 8 April 2014. Accessed on 10 April 2014.
- [18] George S. Yip, "The Asian Advangate", books.google.co.th, 2014
- [19] Krzysztof Wach "Global product as a result of globalization process" Cracow University of Economics 2003, <http://mpa.ub.uni-muenchen.de/31660/> MPRA Paper No. 31660, posted 17. June 2011 19:36 UTC
- [20] Imran Choudhury, http://www.answers.com/Q/What_is_high_touch_product, 2014