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APPENDIX

New Product Introduction Success Factors Survey Questionnaire[*]

This survey asks about your satisfaction on new product introduction performance of the team and factors that may influence on succession of the project.

Please note that all answers will be treated in confidence.

This survey divided into 4 sections:

Section1: New Product Introduction Personnel Background

Section 2: New Product Introduction Project Background

Section 3: New Product Introduction Performance Evaluation

Section 4: New Product Introduction Success Factor Evaluation

This questionnaire should be completed by the person with responsibility for operations, or the person with an overview of the New Product Introduction activities.

The answers should reflect the situation of the New Product Introduction project, regardless of whether the project is an independent or incorporate with the other project.

When completed, please return the questionnaire in the envelope provided.

******* Thank you very much for your coordination *******

* This survey is being conducted by Sujitra Luangvangpho, it is a part of Master's Degree Programme in Engineering Business Management between Chulalongkorn University and The university of Warwick, UK.

Chulalongkorn University

THE UNIVERSITY OF WARWICK

Section 1: New Product Introduction Personnel Background

1. What is your sex?

☐ Female	☐ Male

2. What is your age?

☐ 20 – 24 years old	☐ 25 – 29 years old	☐ 30 – 34 years old
☐ 35 – 39 years old	☐ 40 and over	

3. What is your education?

☐ Bachelor's Degree	☐ Master's Degree	☐ Doctoral Degree

4. For how long have you been working at Fabrinet?

☐ Less than 1 year	☐ 1 – 3 years	☐ 4 – 6 years
☐ 7 – 9 years	☐ 10 years and over	

5. What is your department?

☐ Manufacturing	☐ Engineering	☐ Quality Assurance
☐ Industrial Engineering	☐ Production Planning	☐ Financial Control
☐ Purchasing	☐ Tooling Design	☐ Supplier Quality Assurance

Section 2: New Product Introduction Project Background

1. What does your new product introduction project do?

☐ Optical Passive Component	☐ Optical Active Component
☐ Optical Amplifier	☐ Data Communication
☐ Automotive	☐ Mass Storage
☐ Imaging	

2. How many different new product introduction projects have you been working within?

☐ 0 project	☐ 1 - 2 projects	☐ 3 - 4 projects
☐ 5 - 6 projects	☐ 7 projects and more	

3. How many people getting involve in your new product introduction projects, except operators?

☐ 1 - 3 people	☐ 4 - 6 people	☐ 7 - 9 people
☐ 10-12 people	☐ 13 people and more	

4. How long did your project take since first start until luanching to mass production?

☐ 1 - 3 months	☐ 4 - 6 months	☐ 7 - 9 months
☐ 10-12 months	☐ more than 1 year	

5. What do you see as the largest problem within your NPI project for *team ability in knowledge sharing and leaning*?

- ☐ Low knowledge background of the project
- ☐ Less information/ knowledge sharing with customer
- ☐ Less information/ knowledge sharing with customer
- ☐ Less information/ knowledge sharing within team
- ☐ Low ability in team learing
- ☐ Other, please specify .....

6. What do you see as the largest problem within your NPI project for *team ability in solving problem solving andreduce any uncertainty*?

- ☐ Low knowledge background in using problem solving and improvement tools
- ☐ Less budget to support problem solving and improvement in the project
- ☐ Less time to perform any problem solving and improvement
- ☐ Not enough people to perform any problem solving and improvement
- ☐ No data/ information avilable to use for problem solving and improvement
- ☐ No tools to support any problem solving and improvement
- ☐ No one ever encourage to engage in problem solving and improvement
- ☐ No risk management is applied
- ☐ Other, please specify .....

7. What do you see as the largest problem within your NPI project for *team ability in managing tasks and coordination with external team and intenal team* ?

- ☐ Low performance in task management
- ☐ Less communication and coorperation between team and customer
- ☐ Less communication and coorperation betwen team and supplier
- ☐ Less communication and coorperation within team
- ☐ Low support from management or project champion
- ☐ Less multi-discipline team or not enough people to perform any specific tasks
- ☐ Other, please specify .....

8. What do you see as the largest problem within your NPI project for *team ability to reduce complexity in product, process, system, documentation, and organization*?

- ☐ Low flexibility and low response to change in design and developement
- ☐ Organization does not support in increasing decision-making authority and lower level in team
- ☐ Low support from management or project champion
- ☐ No support tools avilable such as computer based- tools, prototype, quality tools, etc.
- ☐ No standard procedures use for carring out the NPI project
- ☐ No generic method use to guide project planning
- ☐ No procedure or method use to evaluate the project performance and status against customer requirements
- ☐ Other, please specify .....

Section 3: New Product Introduction Performance Evaluation

Please ranking your satisfaction on new product introduction performance of the team. Ranking score will be started from low performance (ranking 1) to high performance (ranking 5). According to the questions presented in table 1, table 2, table 3, and table 4, ranking 1 to ranking 5 responses to the question as:

1: Never
2: Rarely
3: Casually
4: Nearly Always
5: All the Time

Table 1: Knowledge Integration

Item	Dimension	Performance level				
		1	2	3	4	5
1	Are you encouraged to come up with ideas for improving the NPI process?					
2	Are you responsible for implementing new idea and changes to the NPI process?					
3	Have you ever had an idea for improving the NPI process?					
4	If you learn someting about NPI process (e.g. how to do something more efficiently), or if you have implemented an improvement individually, do you tell anyone else about it?					
5	Is the learning captured in writing and keeping in formalized processes for knowledge sharing?					
6	Do you hear about changes/ improvements that other people have made to the NPI process?					
7	Are you sharing your information on new product introduction process with customer and supplier?					
8	Is the organization providing training in product development improvement techniques to you?					
9	Are you working on new product introduction project together with other people as a team with a common goal?					
10	Is your the product development process being improved based on past experiences?					
11	Did you know the requirements of your customers?					
12	Do you receive training to upgrade your skills for a certain project?					
13	Can member of your new product introduction process team easily communicate and share information with each other?					

Table 2: Problem solving and Uncertainty reduction

	Dimension	Performance level				
		1	2	3	4	5
1	Do you see any problems exsiting in your project today?					
2	Is useful information on failure analysis used during development?					
3	Are computer aided design and simulation tools or check lists used to ensure the product functionality?					
4	Is the product's quality status monitored continuously during development?					
5	Is data collected to measure the effectiveness of the product development process?					
6	Is the data collected to measure the effectiveness of the development process used to manage this process?					
7	Are the key influences on the product development process identified and understood?					
8	Are the methods used for evaluation of customers' requirements reviewed in order to improve them?					
9	Do you ever consciously engage in resolving problem within the new product introduction process?					
10	Is there any barrier in solving problem in your project such as budget, technology, time, people, etc.?					
11	Is risk analysis approaches such as FMEA, Cause & Effect analysis, etc. is made and utilized to reduce the risk during each prospective.					
12	Are your front-line peoples consciously engaged in solving problem within the new product introduction process?					
13	Are you and your team have been trained in problem solving and improvement tools (e.g. SPC, Brainstorming, 5S, QFD, Pareto, , etc.)?					

Table 3: Continuous Concurrent

	Dimension	Performance level				
		1	2	3	4	5
1	Do crises that occur during the project strengthen the team's spirit?					
2	Do multiple disciplines concurrently make trade-off decisions involving the product design and technology or manufacturing process design and development?					
3	Does cooperation with others, inside and outside the company, comply with a strategically planned framework?					
4	Does each team member clearly understand his project responsibilities?					
5	During which stages of the product development is the customer involved? (1: Not at all, 2: Later Stages, 3: Early Stages, 4: Early & Later Stages, 5: Continuous)					
6	During which stages of the NPI process are the customers' requirements evaluated? (1: Not at all, 2: Later Stages, 3: Early Stages, 4: Early & Later Stages, 5: Continuous)					
7	Are organizational policies implemented that support working in teams?					
8	Is it possible for team members to work jointly in optimizing and reviewing their work?					
9	Is the present project integrated with the organization, its suppliers, customers, etc.?					
10	Is the focus of the team members fully project oriented during the whole development cycle?					
11	Do individual team members tend to put the team's interests before their own?					
12	Is management or team leader actively participating in the NPI process.					
13	Does your NPI project receive adequate resources?					

Table 4: Simplicity

	Dimension	Performance level				
		1	2	3	4	5
1	Is a team empowered to make organizational changes in order to reduce any complexity?					
2	Are the NPIprocess and organization documented?					
3	Are the reasons for design changes/ process changes or improvements reviewed and documented?					
4	Are procedures used to monitor and motivate teams?					
5	Are methods or tools used to assist in gathering requirements from customers?					
6	Are methods or tools used for evaluating whether customers' requirements are met?					
7	Are customized tools used to flow down requirements from the customer to the teams?					
8	Is a standardized procedure used for carrying out the project?					
9	Is a generic method used to guide project overlaping and planning?					
10	Are quality tools used to collaborative work and reduce any complexity throghout the project?					
11	Is there any procedure and tools used to monitor and evaluate a project performance?					
12	Is the project data avilable to all the team members?					
13	Are you ever engage in reducing the unnecessry task or complexity in the project?					

Section 4: New Product Introduction Success Factor Evaluation

Please ranking your level of agreement on new product introduction success factors. Ranking score will be started from strongly disagree (ranking 1) to strongly agree (ranking 5). According to the questions presented in table 5, ranking 1 to ranking 5 responses to the question as:

1: Strongly Disagree
2: Disagree
3: Undecided
4: Agree
5: Strongly Agree

Table 5: New Product Introduction Success Factor

	Dimension	Agreement level				
		1	2	3	4	5
1	A team's ability to integrate and embed in shared knowledge and understanding of current *customers'* needs and future value to customer among product development members is essential to succession of the NPI project.					
2	A team's ability to integrate and embed in shared understanding of *suppliers'* design, process, and manufacturing capabilities among product development team members is essential to succession of the NPI project.					
3	A team's ability to integrate and embed in shared understanding of the firm's internal design, process and manufacturing capabilities among product development members is essential to succession of the NPI project.					
4	A team's ability to integrate and embed in sustain significant improvements in development over long periods of time rests on the capability to learn from experience is essential to succession of the NPI project.					
5	A team's ability to has effectively use of communication and information flow between the team is essential to succession of the NPI project.					
6	A team's ability to identify and solve problems in the early phases is essential to succession of the NPI project.					
7	A team's ability to avoid and reduce uncertainty already in the early phases is essential to succession of the NPI project.					
8	Applying quality management practices such as lean, TQM, and countinuous improvement principles will lead to succession of the NPI project.					
9	A team's ability to overlap tasks in the early phases is essential to successof the NPI project.					
10	Keeping relevant people and functions continuously involved from the early to the late phases by the use of cross-functional or multidiscipline team is essential to succession of the NPI project.					

Table 5: New Product Introduction Success Factor

	Dimension	Agreement level				
		1	2	3	4	5
11	Supportive from top management or team champion/ leader will help the project to mintain momentum when it runs into difficulties.					
12	A team's ability to *reduce complexity* in products, processes, systems, documentation, and organization, and by this reducing the overall development task and making the individual tasks simpler is essential to succession of the NPI project.					
13	Applying the standard tools and practices such as Design for Manufacturability, Design of Experiments, Computer-based tools, Prototype, etc. will make the project more efficient and effective.					

******* Thank you very much for your coordination *******

BIOGRAPHY

Miss Sujitra Luangvangpho was born at Lop Buri, Thailand, on January 12th, 1972. She graduated from the department of Electrical Engineering, Faculty of Engineering, Rangsit University in April, 1995. She started her study for Master's degree in Engineering Management at the Regoinal Centre for Manufacturing Systems Engineering, Chulalongkorn University in November, 2002, as a full-time student.

She is now working with Fabrinet Co., Ltd., Thailand, as a senior engineer in department of Quality Assurance.