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APPENDIX GA36d

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SPBD7004

Thriving on a radical technological change with 3-H approach – a leading light source manufacturer's case.

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Abstract

The purpose of this case study is to examine the impact of leadership on organizational change. The case will demonstrate when facing the vigorous change external environment, leader adopting the Kurt Lewin's Phase of changes(Hayes, 2014) and Eddie Yu's 3-H approach [3-H represent: Heart; Head and Hand](Yu, 8 June, 2019) and lead the company adopt the changes and build up new competitive advantages. As the operation manager of KT, it is a good experience to learn the synchronization of the 3-H (Heart-Head-Hand), the magnifying the outcome. The demonstration on the heart-to-heart communication and empathy will help the strategy implementation stage in a more effective way. Leader of KT applied suitable strategic tools (Head), effective communication skills (Heart) to ensure the smooth implementation of the new corporate strategy and the good knowledge management (Hand) leading the organization form a new core competence and competitive advantage.

Keywords:

3-H framework; leadership theory, management of change, Kurt Lewin's theory of changes, SWOT, STEEP, Porter industrial analysis, motivation theory.

Background

KT established in 1989, the business model of KT is manufacturing of light source. It is a family business; the component of the strategic planning and decision the management board mainly consist of family members and three key managers, the key managers are factory manager,

operations manager and the finance manager. The Hong Kong office is mainly for finance control, sales and marketing planning. The factory located in Dongguan, China with the departments of procurement; R & D; QA & QC; logistics and production. There are 30 employees in Hong Kong, while in China there are over 2,000 employees. Except clerical support staffs (around 6-7 people), the majority of the employees in Hong Kong with a bachelor degree of above, while for China factory, the situation is opposite, over 75% of the employees population only with junior secondary level and 10% with senior secondary level and 15% with bachelor degree level.

The major products of KT is Halogen light sources and Energy Saving light sources (ESL). The manufacturing of the traditional Halogen light source is sealing a tungsten filament inside the glass then filled with an inert gas (the gas applied contains Nitrogen, Argon and Krypton, the component of gas applied will depends on the power output and the color temperature required)(Mazur, 2019). The simple Porter's value chain of KT summarize as fig. 1.

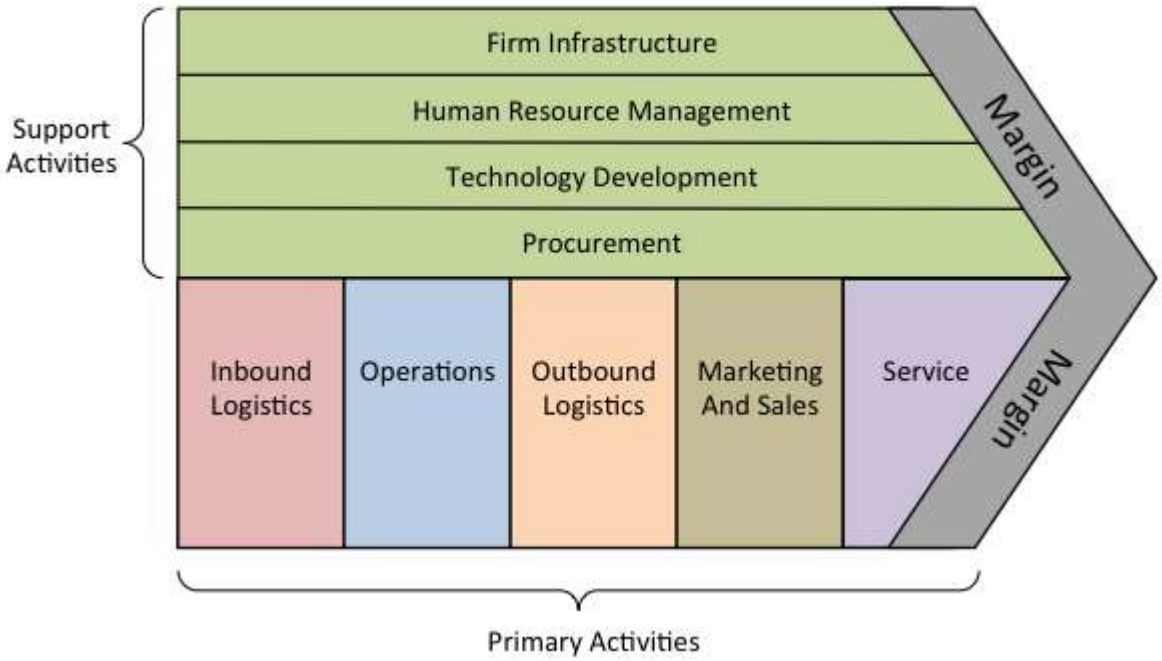


Fig. 1: Porter's value chain model.

Source: SetFree: http://www.businesssetfree.com/porters-value-chain/

Primary Activities

The Inbound Logistics

Department involved: R & D; QA; Procurement; IQC (Internal Quality Control); Logistics. R & D department will draft the BoM (Bills of Material) and will establish the qualitative acceptance and the testing procedures of the incoming material level together with QA and IQC department. Procurement department will figure out the best suitable supplier for the material according to the BoM. The logistic department will arrange the warehouse spaces and arrange, the IQC schedule and production schedule. This part mainly handles by China factory.

Operations

All the QC passed material will pass to the operation department for mass production. This part mainly handles by China factory.

Outbound Logistics

Final products will be inspected by QA department, some of the OEM customers will arrange their own QA to factory for quality check before the goods arrange for final shipment. Final shipment will be arranged according to the order and the vessel schedule. The part of quality assurance and warehouse management will mainly handle in China factory and the main logistic part arrangement will be handles by Hong Kong Office.

Marketing and Sales

Marketing research for the product and price trend. Promotion and publicity arrangement (like trade fair participation, social media promotion) Collection of client's information for initiate the OEM projects and price negotiation. This part mainly handles by Hong Kong office.

Support Activities

Firm infrastructure

Both Hong Kong office and China factory will have its own administration and finance department for daily operations, for any strategic direction or decision making, it will go to the management board.

Human Resources Management

Both Hong Kong office and China factory have its own human resources department for talent acquisition, training; performance and salary review. For the rank of manager or above, the performance appraisal will be proceeded by the management board. The HRM manager of Hong Kong will report to the operations manager and the HRM manager in China factory will report to factory manager.

Technology Development

The R & D department received the updated marketing research and information from sales and marketing department, the updated components information from procurement, they will proceed some prototype and test the reliability before apply for the budget of new product investigation.

For year, R & D department will responsible for 40-50 new products (including the light sources and lighting fixture). On the other hand, the R & D department together with the QA department will also responsible for the safety standard trend and safety compliance issue to ensure all the products will comply for the international safety standard.

Procurement

Besides the routine regular material purchase, the procurement department also actively participated in R & D process. Discovering the new materials for products; new machinery to increase the manufacturing efficiency and software like ERP for increase the overall efficiency and accuracy of the overall workflow.

Statement of the problem

The Halogen and the ESL lamp contain small amount of mercury (less than 5mg per bulb) and it have UV radiation. In addition, it waste 85% of their energy as heat and the lifespan of the Halogen and ESL lamp is relatively short (the average life span is around 750-2,000 hours), the EU initiated a new regulatory on energy saving requirement, the implementation IEEE regulatory on energy saving label, the light source with D no longer can import to EU. (Loughran, 23 August, 2018) The traditional Halogen and ESL products will be faded out, management of KT facing a challenge on this strategic issue. A corporate strategic plan and movement is necessary.

In order to cope with the strategic issue, management need to decide if the company should investigate a huge amount in physical machinery and talents to develop the new product line. KT is facing the impact of strategic issue, the leader acting a very important role to lead the

company overcome this strategic issue and building up new competitive advantages of KT. To overcome the strategic issue, the management of KT have applied more than one management theories in different dimension. By applying the 3-H framework, we will investigate the successful leadership of KT in a systematic way.

Literature Review

The origin of the 3-H framework is from Dr. Eddie Yu by applying a symbolic idea of Heart (H1); Head (H2) and Hand (H3) to demonstrate the dimension and relationship between people, organization and competence. We will based on the Lewin's Change theory to see the application on 3-H framework in KT's strategic movement.

Lewin's Change Theory

According to Kurt Lewin, we can divide organizational change can divided into three stages, they are: unfreezing, movement and refreezing.(Hussain et al., 2018) The simple flow of the Lewin's change theory can be demonstrated as the following diagram:

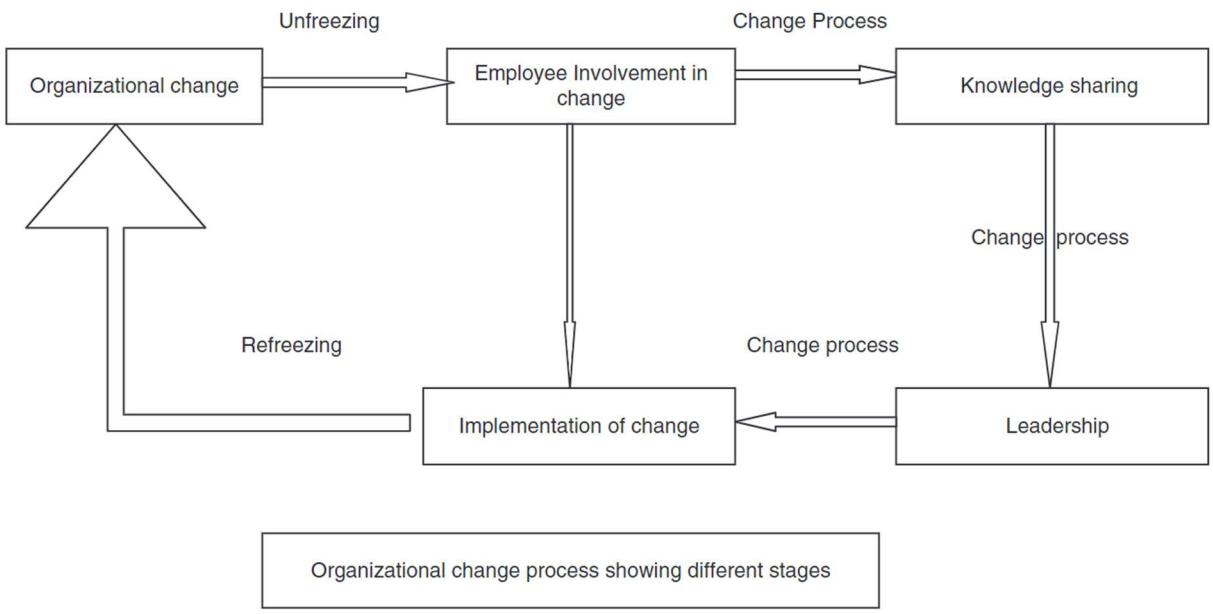


Fig. 2: Kurt Lewin's change model.

Source: Journal of Innovation & Knowledge 3 (2018) 123-127.

The first state - "Unfreezing", it refers to a great external impact happened, management and some of the employees (mainly the middle management) alter that the core competencies and the competitive advantages of the organization is being challenged, as the impact may not be significant for all employees alter the potential problem. The majority population not eager to change anything and keep the routine work, the impact may break the inertia of some population.(Hussain et al., 2018) This situation is like placing an ice in room temperature, it start melt but it is still an ice by observation.

The second stage- "Change process", it refers to the influence of the impact become more obvious, the majority alter the external impact may influence the organizational core competence and competitive advantages. The majority of employees alter that the current strategy or procedure no longer competitive, changes is needed even though it is difficult to have the full picture of the situation. During this stage, an organization's leaders need to focus on clearly communicating to employees the reasons for change and the steps needed to achieve it. This is

the opportunity for leader to implement the change as most of the people eager to take the risk, communication and feedback seeking is important as this stage as it is the stage to the formation of the new corporate strategy.(Hussain et al., 2018) This stage is like an ice is totally melt and become the liquid stage, it is the best time to change the shape of the ice that we would like to make, find a desired mold that majority of the people like and shape it again buy putting it on the fringe.

The third stage- "refreezing", after the new strategy is formed, management need to make it into a plan and clear instruction for all the employees to execute and achieve the new goal. When the standard procedures are form and become effectively execute, the organization will become stable and the back to the freezing stage.(Hussain et al., 2018) This stage like the melted ice reform but in different shape. By understanding the Lewin's change theory, leaders able to catch up the best timing to implement the change policy to getting the majority support from the organization.

H1- Heart-approach

It is related to the capability of the leader on communication, the power and skills to motivate the subordinates.(Yu, 8 June, 2019) In H1 approach, we will apply the McGregor's Theory X and Theory Y, transformational leadership theory and the motivation theory in KT case.

McGregor's Theory X and Theory Y

The attitude of the leader towards his or her subordinate will influence the direction or strategy planning. McGregor's Theory X and Y explained the two different attitudes of leader. Leaders will Theory X attitude that assuming the subordinates tends to get the minimal work and responsibility. Leaders will direct instruct the subordinates to ensure all the process under

control and reach the expected outcome. Employees are less initiation, motivated and creatively, the leader will be taking the major role of instruction and decision making. (Hassan, 2005) Normally under the supervision of leaders behave like Theory X, the organization is more bureaucratic and less innovation.

Leaders with Theory Y attitude will be opposite with Theory X, leaders tend to trust his/ her subordinates and believe that they are motivated and initiated. Leaders will provide freedom to work in their own way instead of giving full instruction. Employees tends to be self-motivate and eager to contribute to the organization.(Hassan, 2005) The organization under the leaders believe in Theory Y will be more organic and innovative. The relationship between management and employees are more interactive and more feedback seeking

Transformational leadership

Besides the attitude towards subordinate, the leadership style will be another factor then shaped the company strategy, Transformational leadership involves four factors: idealized influence, inspirational motivation, intellectual stimulation and individual consideration. Many studies discover that leadership style will influence the performance on individual employees and overall organizational performance, we can classify there have three different leadership style: Classical (like the Great Man; Trait….); transaction and transformational.(Samad, 2012)

In this case study, the transformational leadership will be taken as the leadership style of KT. There are four characteristics of the transformational leadership style: Idealized influence; intellectual stimulation and individualize consideration. Idealized influence means the leaders demonstration his capability through routine work; problem solving and critical decision making. In addition, the leader will demonstrate a high level of ethical and moral standard, the mutual

trust between leaders and subordinates are build up. The inspiration motivation, it is the capability of the leaders to direct the subordinates doing the right things at a right time to achieve the overall organization efficiency and effectiveness. Intellectual stimulation means provide a platform for subordinates to try different ways to work instead of providing detail procedures and solution. The way allowing work and problem-solving without pre-set framework will stimulate more creativity and innovation. The leader with transformational style will eager to provide the macro scope of the organization and allow subordinates involve in pathway building. The last characteristic is individualized consideration, leaders will be based on individual employees' ability, education background and character to desire the work, training and the communication way instead of standard form according to the position in the company. These kind of style will build up the trust between management and employees and created a supportive organizational culture.(Kendrick, 2011)

Herzberg's Motivation – Hygienic theory

Herzberg's idea that there is no job satisfaction is not job dissatisfaction, it is "no satisfaction" indeed. For example, the office only provide the cold and hot distilled water that is basically fulfill the basic need of the employees. However, some of the employees may looking for some more choices of drinks like coffee; tea or hot chocolate etc. This demonstrate the employees are not feeling satisfy but we cannot say they are dissatisfying. One day, if the administer announce that the company no longer supply the distilled water, employees needs to purchase himself/ herself, such policy will cause employees dissatisfy. (Tietjen & Myers, 1998) Herzberg two-factors theory has two factors, one is the motivators and the other is hygiene factors. Herzberg suggested that satisfiers are associated with the work nature (hygiene factory) and rewarding system (motivator). The most powerful satisfiers to the adoption of individual's need for self-actualization and self-realization on his/ her work. (House & Wigdor, 1967) Motivators

(intrinsic factors) include recognition; achievement; prospect; advancement; responsibility and work context. Hygiene (extrinsic factors) include: Pay, supervision; coworkers, working condition; job security and status. (Tietjen & Myers, 1998)

With reference to Herzberg, the hygiene factors will only cause interruption in the external work context while the motivators will have influence on individual thinking. As per Herzberg, if employers promote individual without increasing his/ her salary, employer realize his/ her good work and the contribution to the company. Planned to assign more challenging job to him/ her, This kind of action improve the individual motivators, however, if the employers do not put any effort on improving the hygiene factor, e.g no salary increment and the supervision relationship is bad, the individual employees will not satisfy with his/ her current job. There is no trade-off effect between two factors, each will directly affect the individual emotional feeling of job satisfaction.(Smerek & Peterson, 2007). As it included two factors (motivators and hygiene factor, it also calls Two-factor Theory). By understanding the Herzberg two factory theory, leaders are able have a strategic move to motivate the employees and sustain the competitiveness of the organization.

H2- Head-approach

It is related to the analytical power of the leader, the strategic mind-set and decision-making skills.(Yu, 8 June, 2019) In the H2 approach, we will apply STEEP and SWOT analysis in KT case.

Strategic analytical tool – STEEP

STEEP analysis also known as PESTEL; it is a strategic tool for leaders to understand more about the external environment. Each alphabet of "STEEP" has different meaning, "S" represents

"Social"; "T" represents "Technological"; "E" represents "Economics"; another "E" represents "Environmental" and "P" represents "Political". (Cronje, 2016)

The elements of "Social" include the demographics; age; education level and religion. Each element will reflect the culture and value of the society. The social factor contribute in the strategy formation process as the cultural factors will affect the strategic direction and leaders need to keep monitoring if there are any trend of social factor change.(Cronje, 2016) For example, if the society facing the ageing problem, the labour supply and the purchasing habit will be changed, the demand on health care products will be increased and demand on entertainment goods will be decreased. "Technology" speed up the efficiency and innovation of products and services, some of the technology even replace the labour intensive work.(Cronje, 2016) Artificial Intelligence (AI) is a good demonstration on how technology affect the strategic plan and speed up the liquidity of the market.

"Economic" refers to the individual purchasing power and the reference of the future investment. It is a signal and reference for the organization to plan for their investment or any strategic movement.(Cronje, 2016) For example, during the economic downturn, the risk to investment will increase, organization will adjust its investment and it strategic plan to reserve more capital for overcome the economic downturn. "Environment" refers ecological responsibility, some organization rely on the natural resources for producing the products, the control to avoid over consumption. (Cronje, 2016) Environmental protection is one of the corporate social responsibilities, it helps to increase the company brand images. In addition, the increasing environment concern will affect the related policy e.g. banning the application of certain material like RoHs banning the use of PVC, leaders need to adjust the products design and the inventory planning.

"Political" refers to both local and global legal ordinances and laws. Any new local and international law or ordinance in force, it will directly affect the organization planning. It may increase or decrease the entry or exit barriers, or any newly in force policy will affect the return on investment.(Cronje, 2016) The typical example in year 2018, the trade war between China and USA, the immediate increase of the tariff, it immediately affect the export industries in China.(Sato, 2019) By applying the STEEP analysis, leaders are able to understand the external environment in a wider spectrum and formulate a more accurate strategic plan.

Strategic analytical tool – SWOT Analysis

SWOT Analysis is a tools assist management and leaders to build up the organizational strategy and regular evaluation of an organization in a systematical way. In order to design the organization strategic planning, leaders and managers used to understand the internal organizational environment and examine the external environment. SWOT Analysis help to locate the resources capabilities and insufficiencies, therefore the "strength" and "weakness" of the organization, that is the "S" and "W" represent, it assists the organization for effect resources allocation. The "O" represents the opportunities in the external environment, the opportunities refer to enlarge the market share. While the "T" represents the threat that is the potential risk in external environment.(GÜREL, 2017)

H3- Hand-approach

It is related to the technique of knowledge transfer to ensure all the employees has been well trained.(Yu, 8 June, 2019) The knowledge is not only explicit knowledge but also the implicit or some scholar call it tacit knowledge. Explicit knowledge refers to the knowledge that are well documented or record. They are traceable and easy for other people can recall it out when necessary. Tacit knowledge is the knowledge not easily codified, instinctual, not easy to express

verbally. Most of the tactic knowledge do not have a proper record or documentation, it normally shared in between a group of people in an informal way.(Krishnaveni & Sujatha, 2012) It is to ensure that the employees in the organization has been well equipped technically for daily operation but also developed a common goal to achieve the organizational mission and vision.

Knowledge Transfer

Knowledge transfer is a process that knowledge acquire in a particular situation will apply to other individuals, the knowledge transfer in an organization can be an individual level, division level or department level.(Argote, 2000) An effective knowledge transfer system refers to the well-established knowledge reservoir and the knowledge is applicable in daily operation within the organization. (Krishnaveni & Sujatha, 2012)

A good knowledge management system can improve the efficiency of the organization especially in manufacturing industry. The best practice in operation and problem-solving method being record and learn by other team members, it helps to ensure the consistence of products and quality standard. Proper problem-solving record and training of problem-solving skill can improve the decision-making process. In addition, proper knowledge transfer skills enhance a better customer service as the salespersons able to learn the handling skills; potential problem and the possible risk handling skills. Through regular training and sharing session, the knowledge can transfer to all team members and proper documentation is a good practice for knowledge management.

Methodology

We have applied the Lewin's change model – "unfreezing"; "change process and "refreezing" in this case study.(Hussain et al., 2018) We will examine the management theories applied in each stage to how KT's leader maintain a good equilibrium of the 3-H approach. The following table will show the tools the leaders applied in different stage of Lewin's theory of change:

Lewin's Change Theory stage	Description of the stage	Tools/ Action taken	Factor
Unfreezing	Realize the strategic issue	Reviewing the external environment by applying STEEP.	Head (H2)
		Reviewing the competitiveness of the organization by SWOT	Head (H2)
		Allocated the strategic issue and evaluate the risk of change. Issue a simple survey to understand the concern of employees at different levels.	Heart (H1)
	Formation of the change plan	Financial planning on purchase of new machinery.	Head (H2)
		Plan for the talents that the organization needed.	Head (H2)
	The timeline for the implementation of change	Base on the survey result to plan for the implementation timeline to ensure the majority of the employees can adopt the changes.	Heart (H1)/ Head (H2)
	Formulation of contingency plan to assist employees adopt the changes.	Income security plan in the transition of new technology adaptation. Priority of job re-allocation and training for low-skilled workers.	Heart (H1)/ Head (H2)
Change	The implementation of the change	Acquire talent who are familiar with the new technology.	Head (H2)
		Initiate the "Train the Trainer" programme.	Heart (H1), Head (H2)
		Regular review (once per week) on the implementation process with management and labour union.	Heart (H1)
		"You will be our quality control" programme, invite all employees testing on the new products and feedback to R & D.	Heart (H1), Head (H2)
Refreezing	Complete the implementation of the new strategy, the organization back to a steady state.	Post survey and focus group by Human resources department to estimate the adaptation of the new corporate strategy.	Heart (H1)
		Internal trainer start the training programme to team members.	Hand (H3)
		Systematic documentation of the feedback from "You will be quality control" and the corrective action plan.	Hand (H3)
		Create a new manufacturing, QA and IQC handbook.	Hand (H3)
		Regular meeting with department managers to review the process.	Heart (H1), Head (H2)

Analysis

Allocate the strategic issue (Unfreezing)

The management board of KT will have annual review on the strategic plan after the Chinese New Year holiday, in year 2008, the management board of KT has reviewed the SWOT and STEEP analysis for future strategic planning. Figure 3 show the SWOT analysis & Fig 4 show the STEEP analysis in detail:

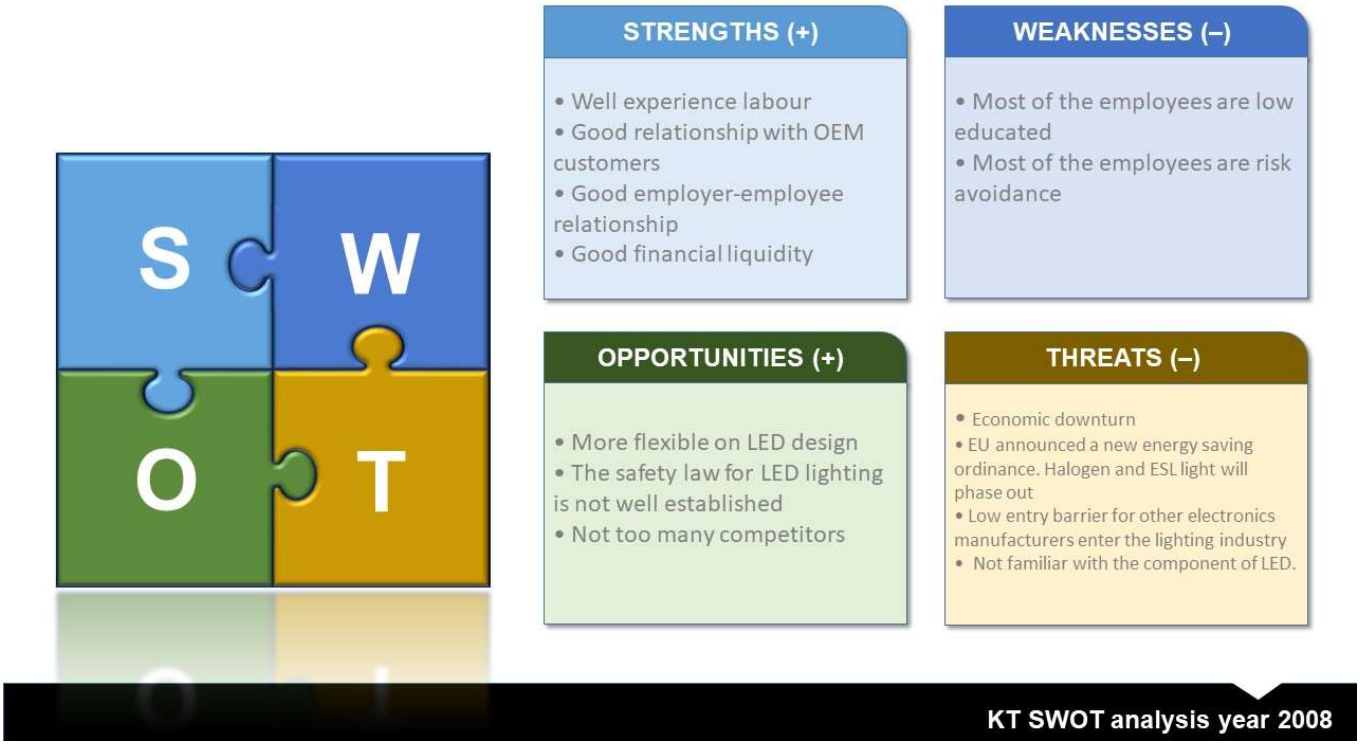


Fig. 3 KT's SWOT analysis year 2008 (KT, 2009)

Source: KT internal documents, 2009

STEEP analysis of KT year 2008

Social	The increasing education level in China, less people eager to work in factory with a low social status
	The decreasing birth rate in China lead to the decrease of labour supply
Technological	The LED technology applied on lighting industry
	The automatic production line
	Customer real time ERP system
Economics	Global economic downturn
	The appreciation of RMB
Environmental	New WEEE regulation
	RoHS (Restriction of Hazard Substances) in force in 1st July, 2006 and REACH (Registration, Evaluation, Authorization and Restriction of Chemical) in force in 1 June 2007. The purchasing department need a learning curve for adopting the new regulation
	EU new ordinance on energy saving ration for lighting products
Political	Increasing the minimum wages in China Increasing cost for Social Security Fund

Fig. 4: KT's STEEP analysis 2008 (KT, 2009)

Source: KT internal documents, 2009

From the SWOT and STEEP analysis, there is a strong signal that will be strategic impact, management need to decide if the company need to change from producing traditional light sources (Halogen light or Energy Saving Light) to new LED lighting. Management suggest the phasing out of the original product line in three years, first year will start the purchase of the machinery; talent acquisition and training, at the end of the first year, will have the pilot run of the new LED products. Second year will start produce the LED light source for clients and expected it will take 20%-30% of the total capacity and 3rd year will take over 50% of the total production capacity. Each year will have quarter review and annual review, customers feedback will be done at the end of 2nd year.(KT, 2012) Completion of the pilot run will Management has

listed out the possible problem if the company change the product line:

Investment:

New machinery for PCB, different from traditional Halogen lighting, the LED are fixed in the PCB for electricity, new machinery needs to purchase or consider having outsource of the PCB semi-finished products. The management listed out that the problem of outsource of PCB, the delivery date of PCB is not under the control of the company, it is not favor for further R & D process as we are not able to test for new design. Most important is the cost cannot be control and it will affect the pricing of the products. (KT, 2012)

Plastic injection machines, due to the high energy release of Halogen light, the shade is made in glass. While for LED, the heat release is relatively small and plastic material can be used as the material of the shade. The plastic material will increase the flexibility of the cosmetic design, lower the cost and most important it increase the safety of the light as it will not easy to break even it drop from ceiling. (KT, 2012)

Color temperature testing machines, not like the Halogen lighting, the color temperature (color temperature refers to the color of the light like day light, warm white and white) is control by the noble gas, however, the color temperature of LED is depends on the fluoresce pigment on added on top of the LED chips (The color of the LED only have Red. Green and Blue, the color in warm white, day light and white are the effect on the fluoresce pigment), since the distribution of the pigment will not evenly distributed, color temperature testing machine is needed for classification. (KT, 2012)

The estimation of the initial investment on machinery around RMB25million for the first phase of

implementation. As the organization do not have any talent in R & D, manufacturing, quality control, management plan to have a budget for senior staffs to training in technical institution in part time mode.(KT, 2012)

Human Resources Management

The managing director of KT instructed the manager of human resources department to conduct a survey to all the employees, the survey has been attached in Appex. 1. The purpose of the survey is to estimate the possible reaction and minimize the stress of the employees. The survey assistant the management board to under the real situation instead of wild estimation, it also helps the management board to plan training and talent acquisition. (KT, 2012)

From the statistic, KT have over 40%[1] of the employee's population have over 15 years year and over 85%[2] of them do not have any ideas on the LED technology. Over half of the employees believed that their position will be replaced once there is a new technology introduced in the industry and around 40% of the employees not sure if their job is secure in the organization.(KT, 2012) This information provided the reference on the hygiene factor within KT, the management board have a potential risk of increasing the uncertainty on employees' job security if lack of communication before the new corporate strategy implement. In addition, the survey provide the intension of the employees for training, Over 75%[3] of the employees willing to participated in the training session.(KT, 2012) Talent acquisition is one of the major concerns of HRM, as all the employees are not familiar with LED lighting production, R & D; purchasing; QA and production line become the top priority of the talent acquisition as they support for the primary activities of the organization.

[1] The result of the survey of KT before the implementation of the new LED technology, detail refer to Appex 3
[2] The result of the survey of KT before the implementation of the new LED technology, detail refer to Appex 3
[3] The result of the survey of KT before the implementation of the new LED technology, detail refer to Appex 3

Reallocation on the production line

As new machinery will be purchased and a detail plan of selling of the existing machinery so that there are spaces for the new machine. In addition, inventory and warehouse control need to be clearly separate the current Halogen lamp and ESL with newly LED lamp. This is initiated by management board with the factory manager will be the chair person to coordinate with all related departments and staffs.(KT, 2012)

During the allocation on the strategic issue and the planning stage, the leader of KT well demonstration of the application of Heart (H1) and Head (H2) approach. The Head approach by the proper application of the strategic tools, SWOT and STEEP, it helps the management board allocate the issue more accurate; have a clear picture on the current situation of KT and the potential risk from the external environment. The Head approach helps KT effectively and efficiency for the resources allocation and catch up the time for new strategy implementation. The proper application of the Head approach leads the leader can analysis the environments in a multi-dimensional and systematic way, it strengthens the competence in the area of planning and monitoring. (Yu, 8 June, 2019)

Concern on employees' psychological concern, heart-to-heart communication what KT leader applied, as over 50% employees with over 15 years' experience. The long-term relationship between employers and employees, favor the communication bridge so that the organization goal, mission and vision will be deliver to all employees and avoid misinterpretation. The survey do not request on the person information, no name or staff ID, it demonstrate the management respect on personal information and let employees free to express their personal view. The respectful from management catalyzed employees committee to contribute the organization.(Yu,

8 June, 2019) The Heart approach will increase the motivation of the employees. With the appropriate application on the Heart and Head approach, the employees tend to have a higher motivation. Applying Herzberg's Motivation-Hygiene theory, the increasing of the motivation of employees will helps to increase the job satisfaction and will lead a better performance of the employees. Understanding the employees' concern is important for management to know the real situation within the organization. The leader of KT is taking the transformation style, more person-center with empathy instead of instructive and ordering, this favor leader applying the Heart approach in managing the organization.

At the end of the unfreezing stage, the management board has drawn the timeline for change stage for the 1st year as per figure 5:

		Department	Description
1st Year	1st quarter	HR	Acquire one assistant purchasing manager with LED/ PCB knowledge
			Acquire one assistant R & D manager with LED/ PCB/ plastic tooling knowledge
			Acquire one assistant QA manager with LED/ PCB knowledge
			Arrange training on LED/ PCB knowledge to the following functional managers: Factory manager Operaation manager R & D manager QA manager purchasing manager
		Purchasing	Grouping all the information of the machine
		Fty Admin	Draft the plan of the prodction line
		Sales & Marketing	Get the information from existing customers on their company view on LED lighting, price range
		R & D	Try to get more information on the LED application and PCB information
	2nd quarter	HR	Confirm the training for all managers and arrange the training schedule
			Report the recrunitment status
		Purchasing	Confirm the 1st lot of new machinary purchase
			Figure out the possible suppliers for the LED and PCB component
		Fty Admin	Confirm the new floor plan and the schedule of the re-allocation
		Sales & Marketing	Analysis the market information and suggest the target price range for the 1st lot of LED lighting product
		R & D	Try to draft the standard Bill of Materials.
			Research on the nesscary components and its characterics
			Design on the first lot of plastic tooling
			Prepare the proposal on new LED lighting design
		QA	Work with R & D deparment for drafting QA standard
	3d quarter	HR	Review on the new professional staffs (not only on professional knowledge but also the adoption to the team)
			Prepare the train the trainer programme
		Purchasing	Start collect the samples from LED/ PCB supplier for pilot run
			Start collecting different material for plastic injection
		Fty Admin	Selecting the staffs in production line change from traditional light source team to new LED team.
		Sales & Marketing	Select the LED design suggested by R & D and start to prepare the marketing plan for the new products.
		R & D	Start the pilot run of the plastic toolings
			Start the prototype of the 1st LED lighting
		QA	Work together with R & D department for the pilot run and draft the QA procedure and hand book
	4th quarter	HR	Group the information from the training staff for planning the next training session to middle management
			Work out the plan with the management board for the human rescources allocation to fit the new LED lighting production line
		Purchasing	Work with R & D department for supplier selection
		Fty Admin	List out the 2nd slot of tranining list for the new LED manufacturing team
		Sales & Marketing	Training on the new LED products
		R & D	Testing on the prototype
			Arrange the first pilot run for plastic tooling and assembly line
		QA	Testing on the prototype sample
			Final up the QA handbook for LED lighting

Remarks: The original source in simply Chinese, the translation is done by the student.

Fig 1: Timeline for 1st year of LED technology implementation (KT, 2012)

Source: KT internal document, 2012

Implementation of new technology (Change)

The proposed timeline has been confirmed by the management board, the board members explain to the line managers and start the preparation work. Management board will have a regular meeting once per week.(KT, 2012) Keeping a close communication to ensure the potential risk during the implementation, the close communication encourage a feedback seeking culture, it demonstrates KT leader applied the Heart approach and Theory Y management style. Since in the existing employee population do not familiar with the LED technology, acquire the professional from market is the most efficient way to speed up the implementation process since training of the existing time need a certain period of time and the learning curve of individual employee is different. This strategic move demonstrates the capability of KT leader on hand approach.

With an informal interview with KT human resources manager, the criteria of the new acquire talent not only with specific professional knowledge but also the need to fit it the corporate culture and existing staff. Factory manager and the department head were invited as the members of the interview board.(KT, 2012) The managing director did not involve in the recruitment interview as he think the most important is new staff respect on department supervisor and trust the supervisor will select the best candidate for the organization. KT leader show the trust on his employees that is a very important element on heart-to-heart communication. Regarding the performance appraisal for new join talents, work performance is one of the key elements and HR manager highlighted the other important is the degree of adoption in the company. This demonstrated the management concern on the hygiene factor for the employees.

The management board suggested to initiate the "Train the trainer" programme, for those managers arranged to have training on LED technology, he/ she will lead the internal training session.(KT, 2012) The programme have the several purposes: cost saving for the training for the employees in lower rank; provide a communication bridge between supervisor and subordinates; a platform for the trained staffs apply the knowledge to practice and shorten the learning curve. In addition, it is a good foundation for the knowledge management. The "Train the trainer" programme validate KT knowing the skill on the keep the equilibrium between Heart and Head approach.

While the purchasing, R & D and QA departments are working with the prototype of the new products, the management board initiated a new programme – "You will be the Quality control" scheme. This scheme will be open for all levels of employees, the participants requested to apply the new LED lighting products for household use and record the performance of the bulb/ fixture.(KT, 2012) The scheme will collect the information from the end users experience, it does not involve in any scientific measurement, only users own feeling on the new LED lighting compare with the traditional Halogen one. The data collected will be greatly help the R & D department for future product development, the new products design will be closer to the customers demand. The sales and marketing person can self-experience on the products and activity participated in the improvement plan. In addition, it provides a communication platform for employees of R & D and sales & marketing, effective communication between this two department will contribute for the process of products development and customer service. Building up the communication channel with these two departments, R & D staff will get more information on the market trend and the customers need. On the other hand, the marketing staffs enrich their products and manufacturing knowledge, it favors them to have more confident in the negotiation process and discuss the OEM project with customer. Also, they able to solve

some basic technical problem with customers, the fast responds and professional image will increase the customer loyalty. The involvement of all level of employees within the organization encourage all the employees participate in the organization projects, get involve in products development. It positively influences the individual motivation, increasing the responsibility and recognition on employees' contribution. Motivate the employees at all levels and get their involvement in the product development will increase the productively within the organization. The initiation of the scheme is another evidence on the capability of KT's leader on the proper application on the Heart and Head approach.

The factory manager has selected a group of workers shift from traditional Halogen production line to new LED production line, with the discussion with the operation manager, both agreed except the line supervisor, around 60% of the new LED production line workers will be the year of service around 5-10 years; around 20% workers with year of service above 10 years and 20% with the year of service below 5 years. The rationale behind is both manager agree that work person work for over 10 years in the same professional tends to be risk avoidance and not easy to accept new technology, however, we cannot isolate them from the corporate changes and their experience in manufacturing may benefit for the new production line. For workers with year of service below 5 years are relatively with a younger age, as their experience in lighting industry are relatively short, they are tending to be easier to accept the changes on the manufacturing process. The only concern is the uncertainty of their willingness to stay in the organization, they have the high risk to leave the organization after they have learnt the new skills. Therefore, after the risk assessment, both managers have made up the component of the new LED pilot production team.

The salary package of the workers is consisting of: Basic salary, achieving production target bonus, overtime and the punctuality bonus. During the manufacturing hot season, individual

workers able to get 50% more on their salary from OT and production achievement. KT leader understand that there should be low production or even no production of the LED production line at the very beginning, in order to encourage the workers to join the new LED production team, KT leader announced that organization will offer compensation for the LED production line, the rate will be reference to the Halogen lamp production line. The compensation direct increase the eagerness of workers to join the LED production team.(KT, 2012)

The selection of members to the new production team show the skills of Head approach on risk assessment of the management board, the compensation for the members of the new production line show the leader on KT understand the consideration of the workers and response to their concern. It will increase the satisfaction on the hygiene factors as their income is being protect and eager to build up a good relationship with the organization.

Post implementation of the new LED technology (Refreezing)

Upon the installation of the new machinery and the nominated manager has completed the training, the managers have decided a series of the training seminar to the subordinates, the managers first train up the executive in a small group and the executive become the trainer and deliver the training, this programme is called "Train the trainer" programme. After each training complain, the trainers will have a meeting and discuss with the management board to see if the material used to revise or if the level is suitable for their department. In order to encourage the participation of the executive level to become a trainer, each trainer will compensation with study leave if they participated in job related course, subsidiary for the course fee and the extra compensation if they successfully become a trainer. Internal training session will be arranged one hour before the official off time and no deduction on work hour for both

trainer and trainees.(KT, 2012) The programme encouraged the active involvement of the executive rank, it is very important for the role of the middle management as a communication bridge and interpreter between workers and top management. It favors the proper interpretation of the company mission and vision and lead the employees targeting the same strategic goal with the management.

The "Train the trainer" programme show the equilibrium of Heart-Head-Hand approach, leader standing in the point of employee allowing them to have the training during the office hour, respect their private time after office hour. It shows the empathy of the leader. Education subsidy and trainer compensation is a head approach as it not only saving the cost for arrange the training for all employees but also increasing the motivation factors of the trainer, eager to contribute more and get the recognition from the management. The internal training perform the hand approach by knowledge transfer, skills and knowledge are being share within the company and it favor the organization to become a learning organization.

Upon the factory has reach the production capacity of 60% are LED light source production, the factory admin team has led the documentation team to design a proper filing system. All the QA handbook, reports and corrective suggestion from the "You are the Quality Control programme"; marketing research; customer feedback and the training material from "Train the trainer" programme. HR manager consult the trainers from the "Train the trainer" programme and designed an orientation training for newly joint staffs.(KT, 2012) As a manufacturing business, if all the line workers can keep a consistent work flow and skills, it will help to optimize the efficiency and output. Development of a systematic knowledge management system favor the organization become a learning organization, the proper and traceable knowledge to ensure the accuracy of the technical skills. The consistent problem-solving skills that all the employees are able to allocate the solution in the past experience. It is especially important for the sales &

marketing staffs, as they can handle of client problem consistently. A systematic training and knowledge management control demonstrated the application of hand approach from KT leader.

Factual information

From realize the organizational strategic issue, to strategic planning, formation of new strategy and implementation of the new corporate strategy, KT leader demonstrated the application of the 3-H approach, the project of the new LED technology implementation can be justified as success in the following area.

Return on Investment (ROI)

With reference to the internal documents, the expect investment amount will be offset in 5 years' time upon 60% of the production line are LED products, i.e. properly expect the profit from LED products on year 2018.(KT, 2012) While the profit from LED products are recorded in Q3 2017.(KT, Jan 2018), the ROI is earlier than expected that reflected that the new corporate strategy are effectively implemented.

Turnover of employees

The average turnover rate of KT before the new strategy implementation is around 10% annually, the management estimated the announcement of the new strategy will have a relatively high turnover rate due to risk avoidance and not eager to learn new stuffs, the HR manager estimated there will be around 30% of the people decided to left the organization. However, the turnover rate keep in a steady rate from year 2009 to year 2011, it keeps the turnover rate in 9-13% which can regard as normal rate.(KT, 2012) The steady turnover rate express the employees have confident on the organization strategic movement and employees believe the management able to lead the organization survive in the dynamic environment. Good understanding on Herzberg

Motivation Theory contribute to build up the trust between employers and employees, the organization deliver job security, recognition and prospect to employees. This is the one of the elements of the effective new corporate strategy implementation.

Market Share

The sales turnover during the implementation of the new corporate strategy, due to the adjustment from traditional Halogen light source to new LED light source, the drop of the sales turnover is around 5-8% from year 2009 to 2011.(KT, 2012) The slight drop on the turnover is normal due to the drop of the overall production capacity. This reflected that the staffs of Sales & Marketing able to align with the customers demand and provide the expected service to increase the customer loyalty, also, it reflect that the marketing staffs able to catch up the market trend and express to the R & D department to design the products that fit for customer demand.

One of the major OEM customers in Sweden support for the new LED products, after testing for the prototype samples provided by KT in Q3 2009, KT successful get the OEM projects for the Sweden customer starting from Q3 2010 and with constant increment on number of projects. From year 2009 to year 2017, the LED lighting OEM projects increase from 3 per quarter to 12 per quarter. In year 2017, KT became the 3rd largest lighting supplier of their furniture chain stores, KT are the only non-brand manufacturers in the top 5 lighting supplier within carry a large brand name.(KT, Jan 2018) The trust from the Sweden customer reflected that KT has get the right track on quality, product quality and after sales service.

Conclusion

From the case study of KT, the successful key of 3-H approach (Heart, Head and Hand) is how the leader can keep three approach in an equilibrium, if too focus or ignore on one component,

the lost balance will create a drawback.

In KT case, if the leader without the skills of Heart approach, the concern of the employees has ever been taken into account, the motivation of the employees will keep low due to low job satisfaction, without the efficient output the strategy will not success. Employees are valuable assets for the organization, hear to heart communication enhance the effective communication, leaders with empathy like KT leader alter the concern on the income if the workers work for the new LED production line, the special salary compensation off set the concern of the employees. The transactional leadership style and tends to believe the subordinates are work hard and participate (Theory Y) with lower the risk avoidance culture, prompt and empathic response from leader will established trust between employer and employees.

With a proper application on the strategic tools e.g. SWOT and STEEP helps leader to understand the internal and external environment helps leader to plan strategic move and problem solving. The clear vision on the external environments and understanding the internal strength and weakness can accurately allocate the core competence of the organization. If leaders fail to handle the Head approach well, it might take a longer time to allocate the core competence and competitive advantages of the organization. The organization will become less competitive or even replace by the major competitor.

Training and knowledge management is the hand approach, it is also important as it will favor the organization become a learning organization. It helps the organization to sustain their own core competence and competitive advantage. In addition, systematic training can ensure the consistence of the product/ service quality and problem-solving skills. Training is also can help the newly join employees to adopt the technique and culture in the organization. The improper or ignore the importance of the Hand approach will slow down the organization efficiency and

cause asymmetric information flow as different employees will have different problem-solving skills. KT has demonstrated the focus on hand skills in the refreezing stage by knowledge management. Proper and systematic documentations, proper training depends on the employee position helps to sustain the newly develop competence.

KT successfully change the production line from traditional Halogen light source to LED light source is not an abrupt case, it is the proper application of the 3-H approach in a hormonic situation. Leadership need to be multi-dimensional and develop the skills in 3-H approach based on the situation and the organizational culture.

Appendix 1

Strategic Movement Survey (Pre-training)

Department: _____
Year of service in the company:_____
(1= under 3 years, 2 = 3-5 years, 3 = 5 -8 years, 4 = 8-12 years, 5= 12 -15 years, 6= 15 years of above)
Date: _____

Part A

1 Have you ever heard about the LED technology in lighting industry?
_____ Yes (If "Yes, please continue to Q2, if "No", please go to part B, Q4)

2 The degree of know-how on the LED technology in lighting industry?
(1 = Very little 2= have idea what it is 3 = some knowledge but not expert 4 = good knowledge on application 5 = Expert)
_____

3 Do you think the new LED technology will replace the current technology of Halogen lamps and Energy Saving lamps?
_____ (Yes/ No)

Part B

4 Do you think when there is a new technology in the industry, your current position will be replaced?
_____ Yes/ No/ Not sure

5 Do you enjoy working in this company?
_____ Yes/ No/ Not sure

6 Do you feel your position in the company is secure?
_____ Yes/ No/ Not sure

7 Do you ever consider your career prospect in this company?
_____ Yes/ No/ Not sure

8 You eager to learn more about new technology?
_____ Yes/ No/ Not sure

9 If company arrange the training on the new LED technology knowledge, will you join?
_____ Yes/ No/ Not sure

10 Do you think our company is competitive in the current market situation?
_____ Yes/ No/ Not sure

**Remarks: The original survey presented in simplied Chinese, the translation is done by the student for assignment presentation only.

Source: KT internal documents, 2012

Appendix 2

Strategic Movement Survey (Post training)

Department: _____
Year of service in the company:_____
Date: _____

Part A

1 Do you participated in any training section organized by the compamy?
_____ Yes (If "Yes, please go to Q2, if "No", please go to Q3)

2 Which section you have participated in?
_____
a) LED basic knowledge
b) PCB design
c) Engineering knowledge on LED manufactoring
d) QA for LED and PCB

3 Do you think the new LED technology will replace the current technology of Halogen lamps and Energy Saving lamps?
_____(Yes/ No)

Part B

4 Do you think when there is a new technology in the industry, your current position will be replaced?
_____ Yes/ No/ Not sure

5 Do you enjoy working in this company?
_____ Yes/ No/ Not sure

6 Do you feel **MORE** confident your position in the company is secure?
_____ Yes/ No/ Not sure

7 Do you ever consider your career prospect in this company?
_____ Yes/ No/ Not sure

8 You eager to learn more about new technology?
_____ Yes/ No/ Not sure

9 If company arrange the training on the new LED technology knowledge again, will you join?
_____ Yes/ No/ Not sure

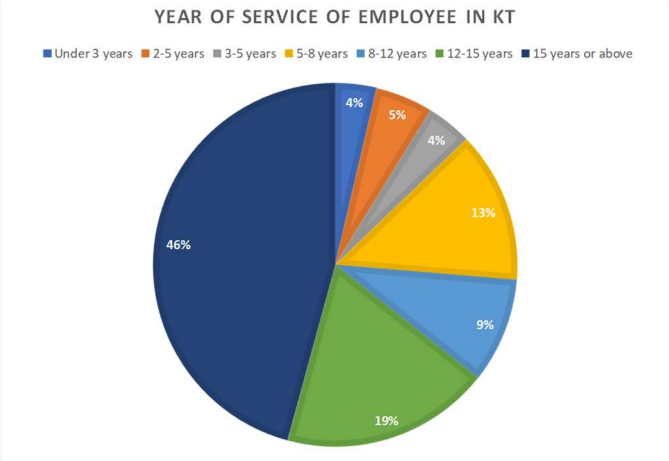
10 Do you think our company is competitive in the current market situation?
_____ Yes/ No/ Not sure

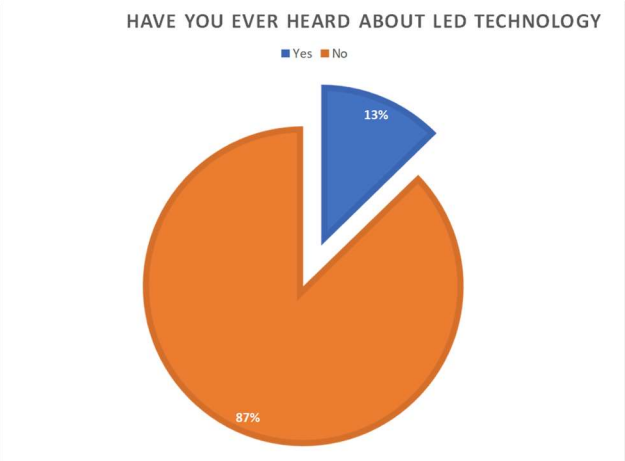
**Remarks: The original survey presented in simplied Chinese, the translation is done by the student for assignment presentation only.

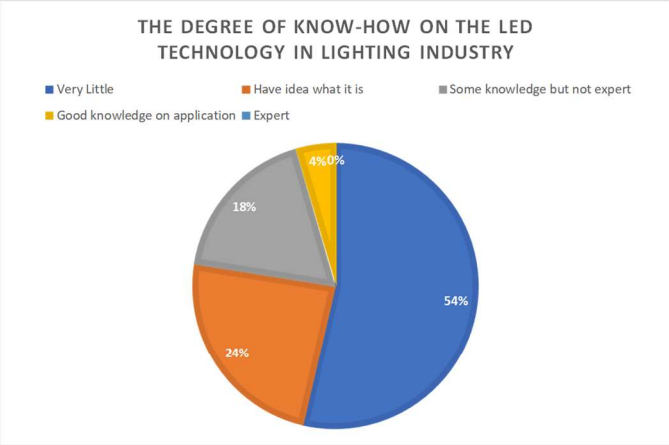
Source: KT internal documents, 2012

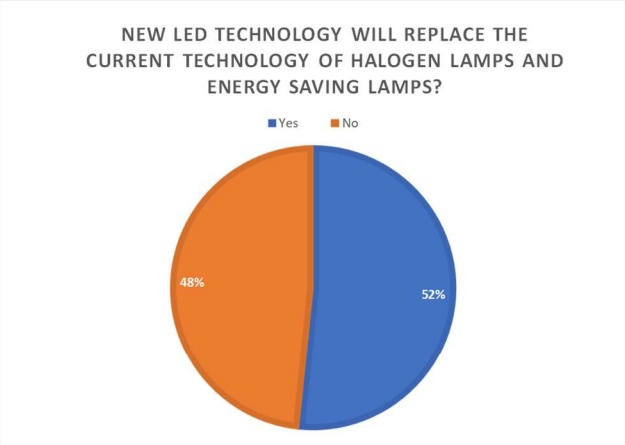
Appendix 3

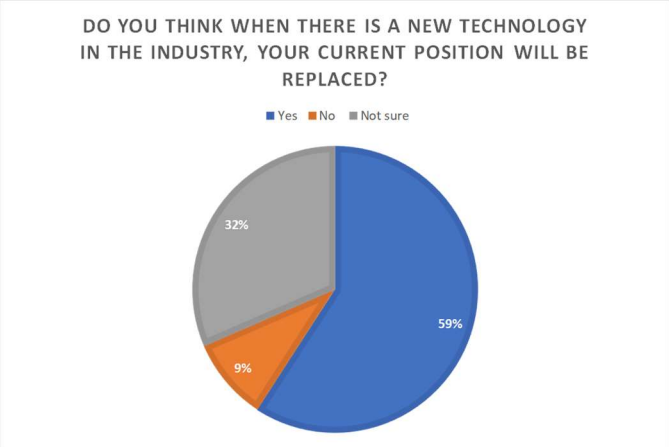
Statistic result (Pre-training)

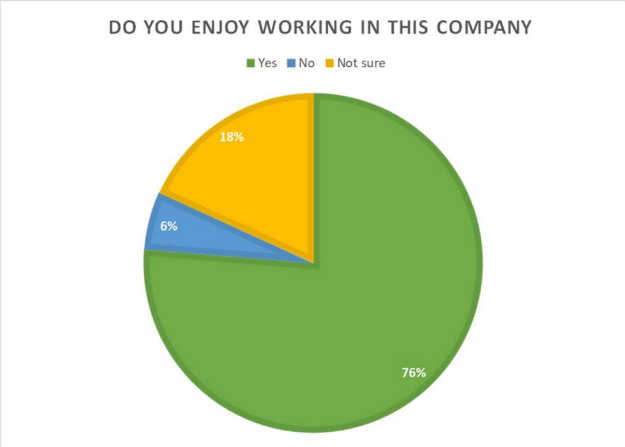








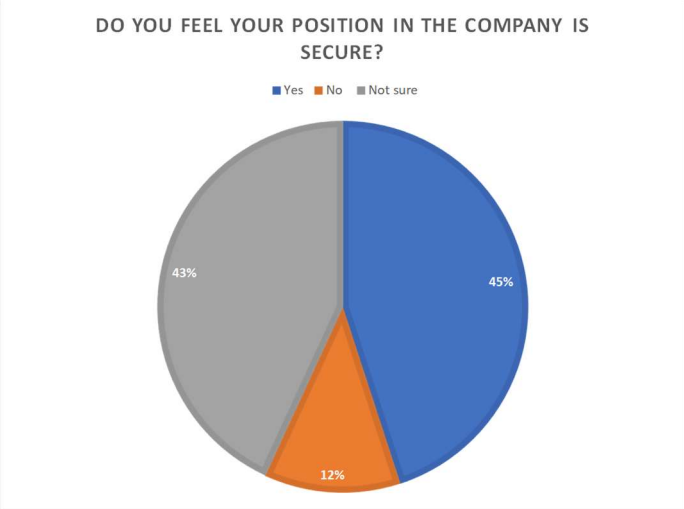


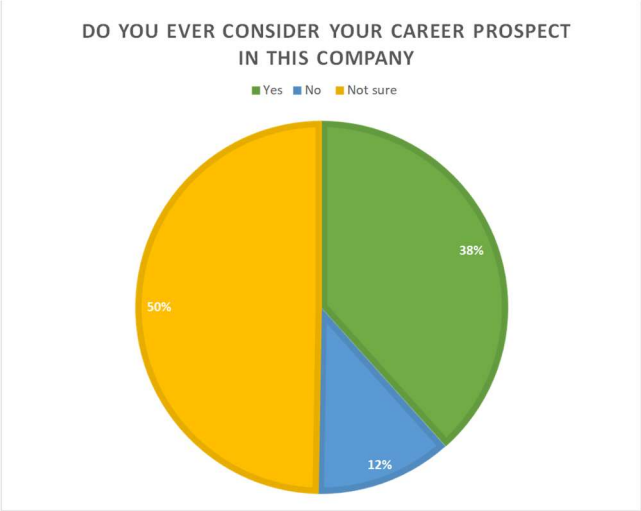


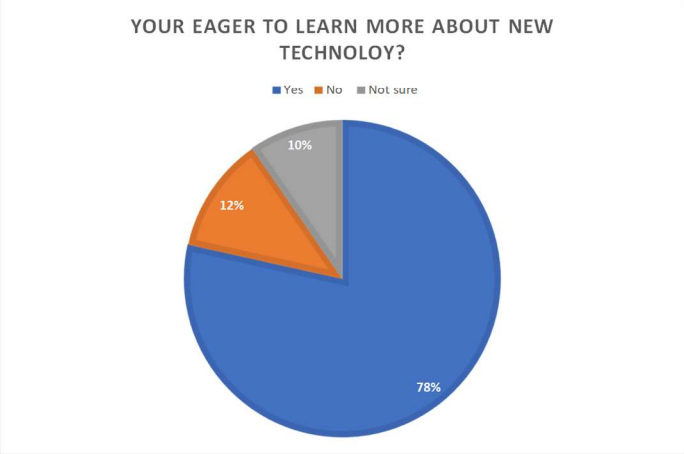
Source: KT internal documents, 2012

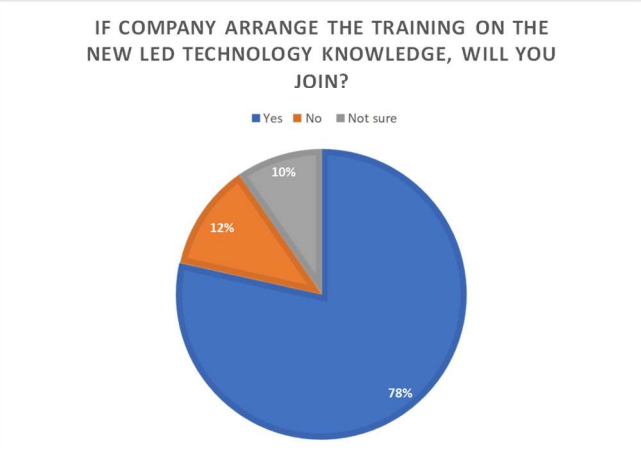
Appendix 3 (continue)

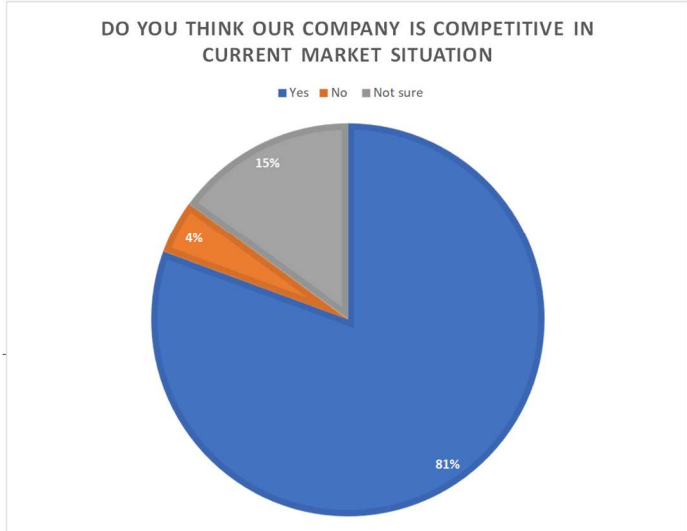
Statistic result (Pre-training)







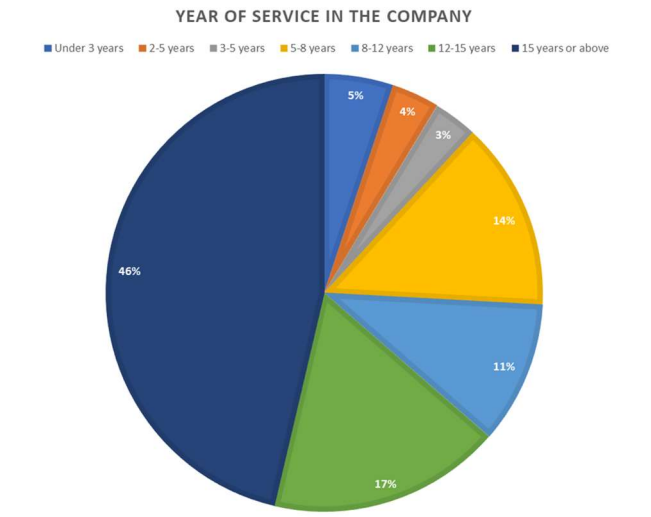


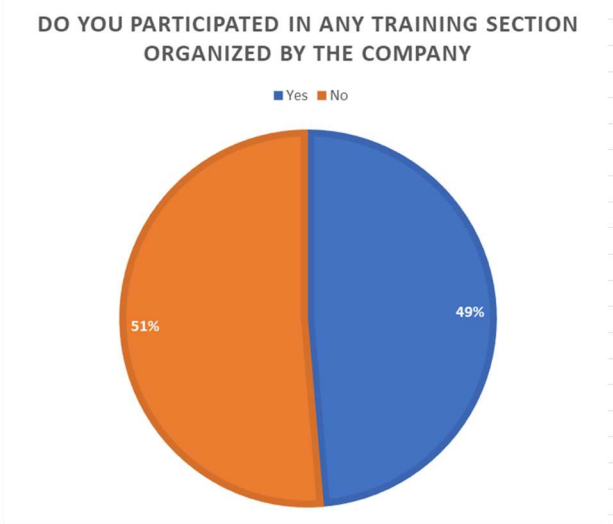


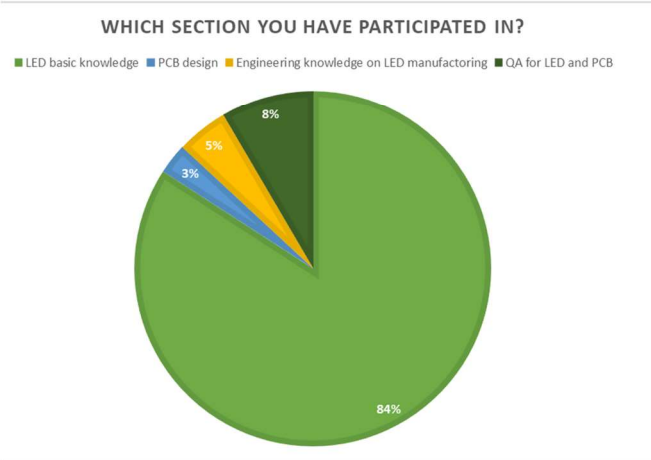
Source: KT internal documents, 2012

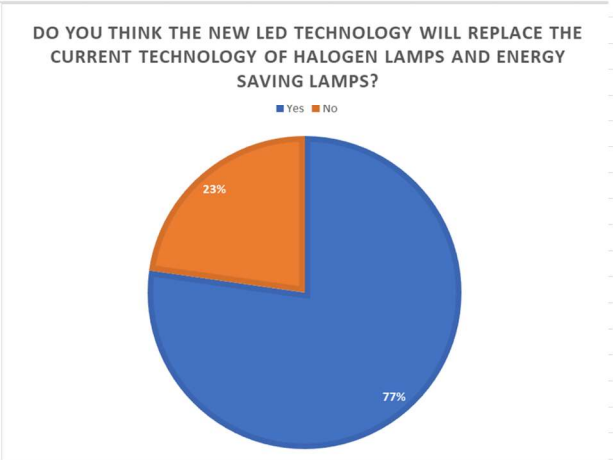
Appendix 3 (continue)

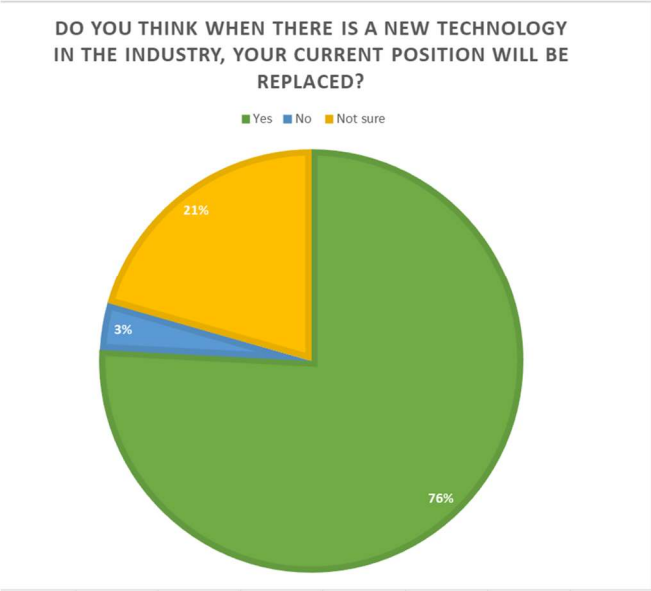
Statistic result (Post-training)

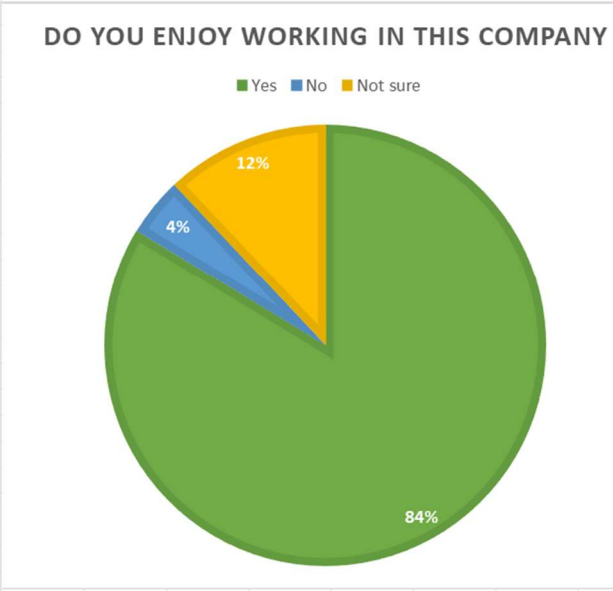








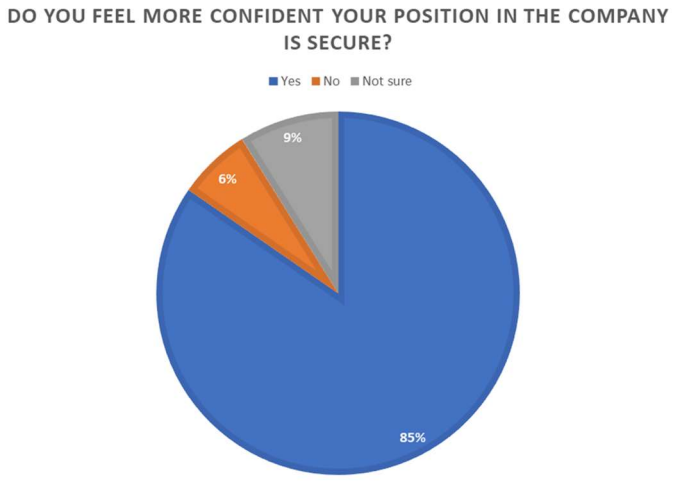


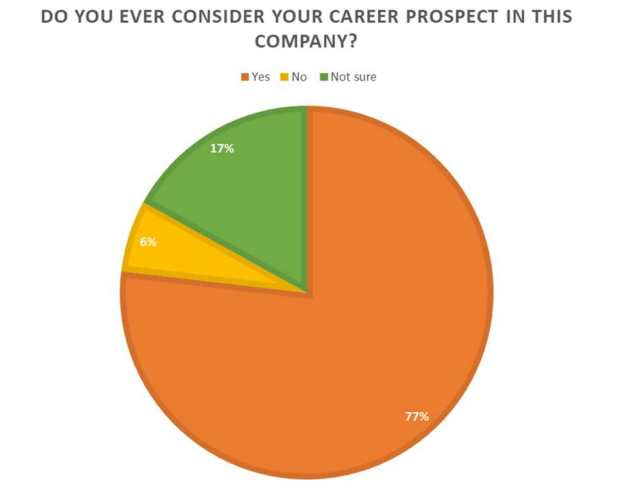


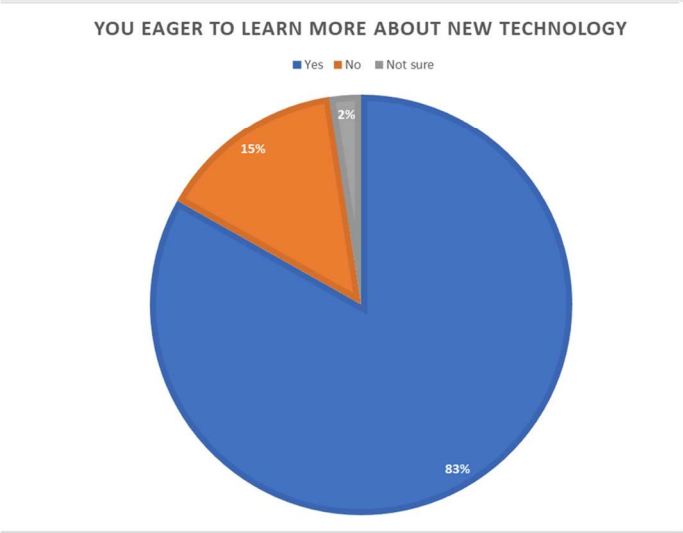
Source: KT internal documents, 2012

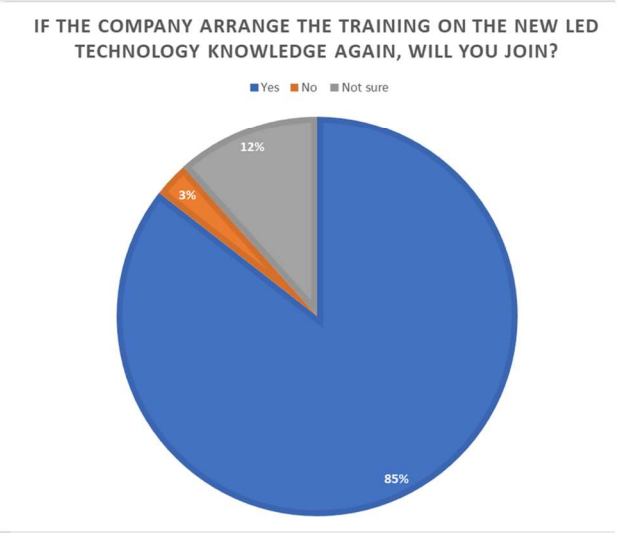
Appendix 3 (continue)

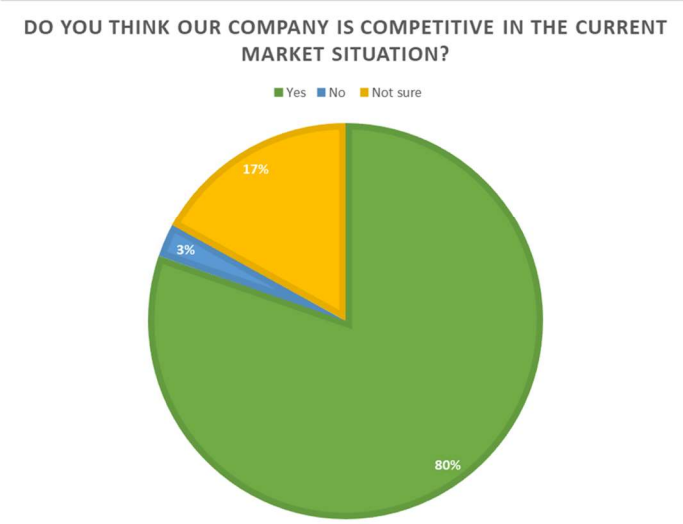
Statistic result (Post-training)











Source: KT internal documents, 2012

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