

SOCIAL NETWORK WITH E2.0: TO SUSTAIN IN PRODUCTION EFFICIENCY VIEW

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ABSTRACT

This paper approached the concept of cost profit control management within social network principle and Enterprise 2.0 (E2.0) in application software model. The construction based on knowledge-sharing systems which can cooperate in social network. The E2.0 model will sustain in production efficiency view. The presentation based on the complex enterprise of production cost control management problem solving in society network systems. E2.0 model applied a new technology and with contemporary project. Based on this an experimental prototype model was created and implemented in two electronic manufacturing companies. The result measurements will prove by financial reports with increasing the business process efficiency. This approached with a new cost profit management model can distribute into every small units of enterprise. Implementation can distribute from company level to department level and section level. Each unit can survive by itself like ameba cell. When each small unit in enterprise can make profit then company level will have profit also. In the future, this model needs to have further development into the production system.

Index Terms—Social Network, Enterprise 2.0, Absorptive Capacity, Knowledge Sharing, Business Process Performance

1. INTRODUCTION

Trend of business have higher competitive. To achieve customer satisfaction needs should have the value added by the sustained from new information technology system.[1] Enterprise Resource Planning (ERP) System is designed to integrate business processes with complex and lack of comprehensive in application software. [3,4,5,6,11] ERP system has provided a lot of compatible-useless reports and customization cost [8,9,10]. Evolution of Web Service and new concept of technology in Service Oriented Architecture (SOA), Software as a Service (SaaS), and E 2.0 have changed the software development system. These new technology service can support the different organize systems. Most of manufacturing process will have problem of

production cost control management. To apply Absorptive Capacity framework into Business Process can transfer potential capacity to be realized capacity.[2] Social Network used E2.0 to sustain in production efficiency view. The relationship between an ERP system and the knowledge capabilities of the organization can sustain the business process performance. The Absorptive Capacity framework concept can reduce the gap between the potential and realized capabilities.

2. OBJECTIVES AND CONTRIBUTIONS

2.1. Objectives:

This paper considered the following objective points; the first is to provide E2.0 model can monitor and analyze the production cost problem with "Hourly Efficiency" (H/E). And finally problem can control and manage by each unit itself. And every units will sustain business process performance. The second is to provide knowledge sharing source in the social network users. This will have information in social users to monitor and discussion how to control cost and profit. And the third is to provide a tool to enable production cost and profit problem solving. This social network will absorb "Tacit", knowing-how knowledge and "Explicit", knowing-that knowledge from organization into knowledge pool and activate to realize capability in business process performance.

2.2. Contributions:

Base on electronic manufacturing company in Thailand scope of this paper will present the benefit following outcomes. In development IT Enterprise for supporting business process need to have concept of Service Oriented Architecture (SOA), Software as a Service (SaaS) and E2.0 model as the part. The first is to have an E2.0 model in the social network to sustain in production cost problem solving. The second is to value added of monitoring cost and profit control management by case study will sustain business performance improvement. Since knowledge in the organization

even thought tacit or explicit knowledge is Human Capital. Each problem solving will keep for study or reference. The third is to prove the concept of absorb capability of organization from potential to be realize. As a model can prove E2.0 do sustain business performance improvement.

3. CONCEPTUAL AND PROPOSE PROTOTYPE MODEL

3.1. Main Conceptual.

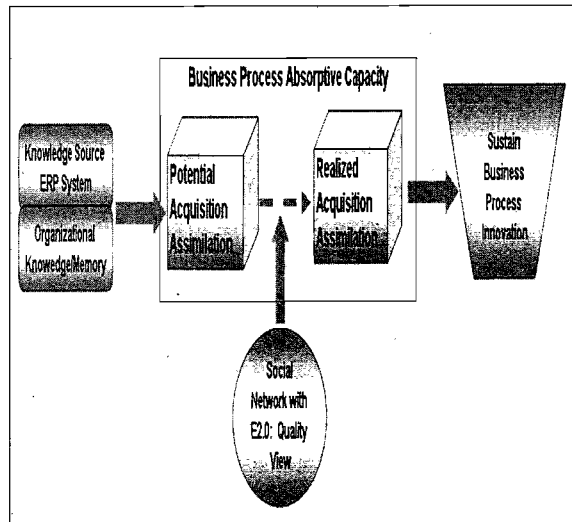


Figure 1 Social Network with E2.0

In high competitive situation now depend on how to increase revenue or equity and/or how to reduce cost. Reducing cost is the most way that enterprise will do within organize. To sustained business process performance can do by monitoring and control in production cost. This paper will focus on a main concept of production cost control management problem solving model with base on framework of Business Process Absorptive Capacity. (figure. 1)

To explanation this main concept which composes of three parts, input, process and output part. Input part is sources of knowledge, Enterprise Resource Planning (ERP) and Organization knowledge. In the large organization structure, especially electronic manufacturing companies need Information Technology System. ERP system has composed of three main modules; Financial Module, Account Payable (AP), Account Receivable (AR), General Ledger accounting (GL), Fixed Asset, Distribution Module, Purchasing, Sales and Inventory systems, and Manufacturing Module, Production Shop-floor, Material Resource Planning, Bill of Material (BOM). Business has not only ERP application system but also Human Resource Management System (HRMS). ERP knowledge is the input part because of in GL

System that records are gathered by grouping of account code. These data will be mapped in Hourly Efficiency (H/E) Report. Base on "Income Statement" report will show profit comes from income minus expense. As the same concept the H/E report will show "Hourly Efficiency" comes from "Profit" divide "Work Hour". H/E report has control concept with maximizing income, minimizing expenses and minimizing work hours. H/E report of each business process unit can analyze and monitor the H/E ratio and control for having high profit and low cost. Another source is organization knowledge of tacit and explicit that had experience in production cost control management.

Process part will apply Social Network with E2.0 to absorb the Potential Capacity of monitoring and control management with H/E report to be Realized Capacity. The new technology of SOA, SaaS and E2.0 can activate to sustain business process. Base on knowledge from ERP system and Organization itself. It will be the knowledge source as potential that can absorb to be realized and then to sustain the business process, production efficiency.

The output part will be measured the successful result of outcome the in Financial Report and H/E report show the maximizing income, minimizing expenses and minimizing work hour.

3.2. Social Network with E2.0 Model:

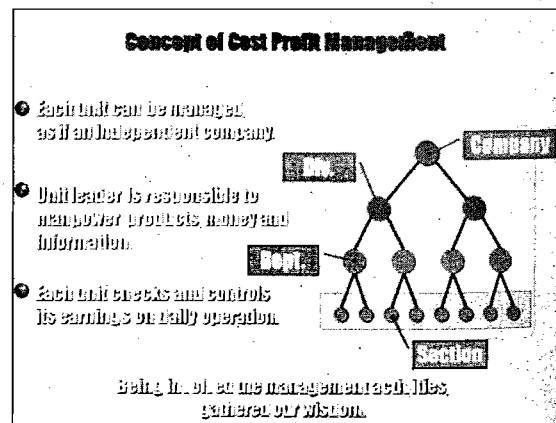


Figure 2. Show Concept of Cost Profit Management.

In business activities can increase production efficiency. There are many activities implemented. Some called "Small Group Activities" (SGA) which composed of many activities spot. This paper has focused on electronic manufacturing company.

In figure 2 presented the social network in the manufacturing. E2.0 in application system can apply these activities as a window of knowledge sharing within the organization. Users can receive

information of all activities easily as web service that they can place in their desktop.

E2.0 Application of Production cost control management Problem Solving Program name "Ameba System"

In Ameba System will be a proposed prototype application system model. The first step is starting by break down company level into division, department, and section level. The small business unit is section level. And setup the committee from the representative for the discussion any problem occurred during implement and monthly meeting of company performance result. All production direction users and non-production users such as sales staffs or marketing or purchase staffs can share and monitor their business unit or other one.

The second step, the collecting data via GL system. H/E report needs to feed information from ERP system. But ameba system selected only main four grouping. Such as group of Sales or Production output amount, Material group, Expenses group and working hour group.

The third step, each business units have to transfer cost by internal purchase and internal sales. The discussion and setup the agreement rule is the main and difficult to do. The key member groups need to set the best price for every business unit price.

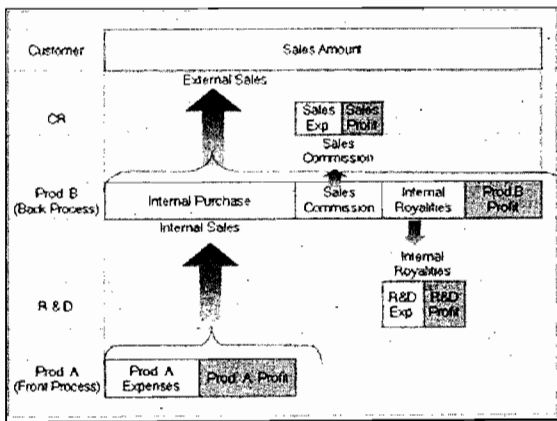


Figure 3. Show an Ameba System Conceptual Flow.

The last step, each business unit has to monitor and control management performance by monthly. Each key member group should have meeting in company view point in every month. In figure 3 can describe from the bottom up. The production of product "A" will monitor and control cost and profit in H/E report. Production "A" will sale to production "B". And production "B" will have product cost that composed of cost product "A" plus other allocate cost to Sales and other in-direct business unit and plus their expected profit in "B" product. So the final price that sale to outside will be the cost the final production line cost has plus

their profit. If all business units can make profit then the company will have profit also.

3.3. Measurement in Production efficiency in H/E report

In Figure 4 showed a sample of H/E report. To collect the data are from mapping accounting group in GL system. "Hourly Efficiency ratio" that showed in H/E report. Therefore each business unit monitor and control each item or account code in concept maximizing income, minimizing expenses and minimizing work hours. This will sustain business performance direction and lead to be the improvement in business or make a chance of profit [12]. And with questionnaire by survey with top management with Financial Reports in the statistical will be output part. Report will show the result monitoring and control management in all business units.

Code	Item	Plan 11/2007	Result of 10/2007
1000	Order Booking	367,830,467	528,543,159
1010	Total Sales Amount		502,596,022
1020	Total Profit		542,809,703
2010	Sales Commission		
2020	Royalty		
2030	Air Freight & Shipping Fee		
2040	Sea Freight & Shipping Fee		
2050	Welfare		1,803,411
2160	Stationary		635,649
2170	Insurance		56,284
2180	Electricity & Water Supply		-15,247
2190	Tax Expense		
2200	Donation		
2210	Water Treatment		
2220	Bank Charge		254,747
2230	Miscellaneous Expense		
2000	Total Expenses		1,803,411
3000	Added Value		
4000	Total Working Hours		
4010	Regular Hours		
4020	Overtime Hours		
4030	Transfer Hours		
4040	Internal Common Hours		
4050	Indirect Department Hours		
5000	Hourly Efficiency		
5010	Net Sales per person		
6000	Man Power (Temporary)		

Figure 4. Loss Amount Conceptual.

There are three types of analyze reports, Trend Report, Pareto Report, and Variance Report. One sample report is shown in figure 5. These analysis reports will give the view to management in the monitoring and control cost and profit. This paper will compare the before and after using E2.0 model result. And proving the E2.0 model can absorb the potential capacity in organization to be realized.

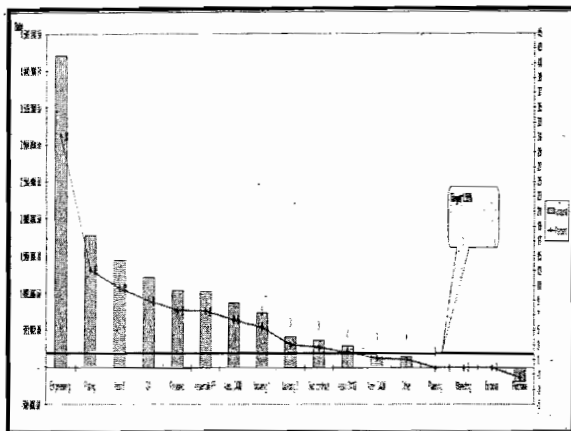


Figure 5. A Management Report of Pareto.

4. FUTURE WORK

Base on Absorb Potential Capacity to be Realized in this paper proposed an E2.0 model tool with H/E report in each business unit in Social Network is not only one model. But also other views in production efficiency that can sustain business process performance.

5. CONCLUSION

Base on framework of Absorb Potential Capacity to be Realized, this paper approached an E2.0 model tool with monitoring and control management in production cost within Social Network. Increasing high competitive, to reduce cost is the most way that enterprise will do within organization. This paper provides a concept of social network with E2.0 tool to management to control production cost and profit. "Income Statement" report will show profit comes from income minus expense. As the same concept the H/E report will show "Hourly Efficiency" comes from "Profit" divide "Work Hour". H/E report has control concept with maximizing income, minimizing expenses and minimizing work hours. H/E report of each business process unit can analyze and monitor the H/E ratio and control for having high profit and low cost. And finally operating profit will increase. Knowledge sources are based on ERP System and Organization Tacit and Explicit knowledge. By Information Technology with an E2.0 model is in contemporary project.

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