DEVELOPING SMALL AND MEDIUM ENTERPRISE (SME) BUSINESS PORTAL BASED ON INFORMATION STRATEGY PLANNING (ISP)

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DEVELOPING SMALL AND MEDIUM ENTERPRISE (SME) BUSINESS PORTAL BASED ON INFORMATION STRATEGY PLANNING (ISP)

A project submitted to the Dean of Postgraduate Studies and Research in partial fulfillment of the requirement for the degree Master of Science Information Technology Universiti Utara Malaysia

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ABSTRAK

Fokus kajian ini adalah untuk membangunkan prototaip laman portal yang dikenali sebagai Pembangunan portal untuk perniagaan industri kecil dan sederhana berdasarkan perancangan strategi maklumat (ISP). Tujuan utama kajian ini adalah untuk membantu dari segi pengetahuan dan sumber daya pengusaha yang terlibat di dalam perniagaan industri kecil dan sederhana (SME), di mana perancangan strategi maklumat akan dilaksanakan dalam kajian ini. Pendekatan Portal industri kecil dan sederhana (SME) ini adalah untuk merangsang pengusaha industri kecil an sederhana (SME) dalam prestasi perniagaan dengan menggunakan perancangan strategi sebagai panduan dan justifikasi untuk berjaya di dalam perniagaan ini. Strategic View of business process and knowledge metodologi akan digunakan dan terdapat dua fasa dalam kaedah Strategic view of business process and knowledge iaitu: fasa perancang strategic dan fasa perancang operasi. lanya akan dimulai dengan perancangan, analisis keperluan dan diakhir kajian, prototaip portal untuk industri kecil dan sederhana (SME) ini akan direka bentuk dan dibangunkan berdasarkan keperluan pengguna. Kesimpulan dan kedapatan untuk masa hadapan akan turut sama dibincangkan.

ABSTRACT

The focus of this study is to develop a prototype of web portal known as Developing Small Medium Enterprise (SME) business Portal based on information strategy planning (ISP). The main objective of this study is to purpose knowledge and resources to assist the entrepreneur involved in small medium enterprise (SME) business, which is information strategy planning will be implement in this study. The portal for SME business approach is to stimulate the SME entrepreneur in business performance with strategy planning provides the direction and justification for a successful business. The Strategic view of business process and knowledge development methodology is used in this study, there are two phases in the method of Strategic view of business process and knowledge of: strategic planning phase and the operational planning methods phase. It will starts with planning, requirement analysis and at the end of this study, a Portal for SME business prototype will be designed and developed based on the user requirement. Conclusion and finding in future also will be discussed.

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TABLE OF CONTENTS

		Page
PER	MISSION TO USE	ii
ABS	TRAK	iii
ABS	TRACT	iv
ACK	NOWLEDGEMENTS	v
TAB	LE OF CONTENTS	vi
LIST	OF TABLES	x
LIST	OF FIGURES	xi
LIST	OF ABBREVIATIONS	xii
CHA	PTER 1 INTRODUCTION	
1.1	Introduction	1
1.2	Background	1
1.3	Motivation for research	2
1.4	Problem Statement	3
1.5	Research Objective	4
1.6	Scope	4
	1.6.1 Entrepreneur	5
	1.6.2 Marketing	5
	1.6.3 Strategy	6
	1.6.4 Planning	6
1.7	Significance of the Research	7
1.8	Target User	7
1.9	Limitation of Study	7
1.10	Report Structure	8
CHA	APTER 2 LITERATURE REVIEW	
2.1	Introduction	9
2.2	Small And Medium Enterprise	9
	2.2.1 Definition of SME	10

	2.2.2	Deve	elopment of SME	11
	2.2.3	Mark	reting	13
2.3	SMEs	Portal	or Website	14
2.4	Inform	nation	Strategy Planning	15
	2.4.1	Busir	ness Strategic Planning	16
2.5	Concl	usion		16
			EARCH METHODOLOGY	
3.1		uction		17
3.2	Plann	•		18
3.3	_		t Analysis	18
3.4	Design	n and I	Development	19
	3.4.1	Proto	otyping	19
	3.4.2	Hard	ware and Software	21
3.5	Data (Collecti	ion	22
	3.5.1	Ques	tionnaire	22
3.6	Data A	Analysi	is	23
3.7	Concl	usion		23
СНА	PTER 4	DEV	ELOPMENT AND RESULT	
4.1	Introd	uction		24
4.2	Data I	Require	ement	24
	4.2.1	Туре	s of SME	24
	4.2.2	Categ	gories of SME	26
		a)	Industry Based on Metal	26
		b)	Industry Based on Plastic	26
		c)	Industry Based on Source	26
		d)	Industry Based on Automotive	26
		e)	Industry Based on Electric and Electronic Component	26
		f)	Industry Based on Food Process	27
		g)	Industry Based on Chemical	27
		h)	Industry Based on Pharmaceutical	27
	4.2.2	Findi	ng of interview without portal	27
43	Inform	nation (Strategy Planning	29

	4.3.1	Stra	tegic Pla	n	29
	4.3.2	Ope	rational l	Plan	29
	4.3.3	Stra	tegic plan	n vs Operational plan	30
4.4	Protot	type			31
	4.4.1	Req	uirement	List	32
		a)	Useca	ase Diagram	32
		b)	Seque	ence Diagram	33
			i)	Login	33
			ii)	Register Profile	33
			iii)	Manage Profile	34
			iv)	Post Advertisement/announcement	35
			v)	Search Profile	35
			vi)	Upload form	36
			vii)	View form	36
		c)	Colla	boration Diagram	37
			i)	Login	37
			ii)	Manage Profile	37
			iii)	Advertisement	38
			iv)	Register Profile	39
			v)	Search Profile	39
			vi)	Upload Form	40
			vii)	View Form	41
			viii)	View Information	42
4.5	Portal				42
	4.5.1	Find	ling inter	view with the portal	43
	4.5.2	Com	parative	analysis	43
	4.5.3	Stor	yboard C	Component	45
	4.5.4	Inter	face Cor	nponent	47
4.6	Testin	ıg			49
	4.6.1	Usal	oility Tes	sting	49
6.7	Concl	usion			52
СНА	PTER 5	5 COI	NCLUSI	ON AND RECOMMENDATION	
5.1	Introd	uction	1		53

5.2	Overall Discussion of Findings	53
5.3	Recommendation for Future Work	55
5.4	Conclusion	55
REF	ERENCES	56
APPI	ENDICES	

LIST OF TABLES

Table 2.1	Detail definition of SME by size
Table 2.2	Sample of SME Definition in the Asia-Pacific Region
Table 2.3	Comparison of the Composition of SMEs in the Asia-Pacific Region.
Table 3.1	List of Hardware and Software
Table 4.1	Questionnaire without portal
Table 4.2	Result of operational plan vs strategic plan
Table 4.3	Usability Testing of Developing SME portal through ISP

LIST OF FIGURES

Figure 1.1	SME Development Programmers in 2007
Figure 2.1	Percentage of SME Establishment by Sector.
Figure 3.1	Summary of research processes
Figure 3.2	Strategic View of Business processes and knowledge
Figure 4.1	Usecase Diagram for User and Admin
Figure 4.2	Sequence Diagram for Login
Figure 4.3	Sequence Diagram for Register Profile
Figure 4.4	Sequence Diagram for Manage Profile
Figure 4.5	Sequence Diagram for Post Advertisements/Announcement
Figure 4.6	Sequence Diagram for Search Profile
Figure 4.7	Sequence Diagram for Upload Form
Figure 4.8	Sequence Diagram for View Form
Figure 4.9	Collaboration Diagram for Login
Figure 4.10	Collaboration Diagram for Manage Profile
Figure 4.11	Collaboration Diagram for Advertisement
Figure 4.12	Collaboration Diagram for Register Profile
Figure 4.13	Collaboration Diagram for Search Profile
Figure 4.14	Collaboration Diagram for Upload Form
Figure 4.15	Collaboration Diagram for View Form
Figure 4.16	Collaboration Diagram for View Information
Figure 4.17	Agribazaar interface
Figure 4.18	IKS.Com interface
Figure 4.19	The storyboard of the main page
Figure 4.20	The storyboard of the training page
Figure 4.21	The storyboard of the loan page
Figure 4.22	The interface of the main page
Figure 4.23	The interface of the registration page
Figure 4.24	The interface of the training page
Figure 4.25	Chart for page is design in a clear and understandable manner
Figure 4.26	Chart for item in a good quality and enhances the presentation of information.
Figure 4.27	Chart for easy to learn

LIST OF ABBREVIATIONS

SME	Small and Medium Enterprise
ISP	Information Strategy Planning
ICT	Information and Communication Technology
MOSTI	Ministry of Science, Technology, and Innovation
IKS	Industri Kecil dan Sederhana
MARA	Majlis Amanah Rakyat
RM6	Rancangan Malaysia Ke-6 (The Sixth Malaysia Plan)
RM7	Rancangan Malaysia Ke-7 (The Seventh Malaysia Plan)
RM8	Rancangan Malaysia Ke-8 (The Eighth Malaysia Plan)
RM9	Rancangan Malaysia Ke-9 (The Ninth Malaysia Plan)
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UUM	Universiti Utara Malaysia

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In now day, Malaysia has been known as a country have own economy and politic with have a different community, race, and etc. The ability for the expansion of domestic as well as international markets requires full commitment from entrepreneur regardless of the size of the companies. The expansions plan not only focuses on large companies but also, involves Small and Medium Enterprise (SMEs). There have many issues are need to considered as success factor, entrepreneur have to place a marked emphasis on market assurance issues, product being marketable as well as the ability in winning market competition.

1.2 Background

Business is very important for generating growth and economic development. Economic development is a process of increase in total income and income per capita of the population and also is accompanied by fundamental changes in the structure of a country's economy, thus the distribution of income for the population of a country. Economic development cannot be separated from economic growth (Economic Growth); economic developments are stimulating economic growth and vice versa. Malaysia is countries have a different races, cultures, languages, and customs and also have stability in political and economy. Successful in manage its own country in their own became a factor of effectiveness of outside policy as a reference and practice. Malaysia also have been recognize as a development county have stability and solidity economic growth, thus it is become more influential when have a connecting with other country without bother their ideology.

In the near future, especially this year and next year, in line with what is outlined by the government (we should) settle the question of the economic issues, dealing with many problems occur at lower levels, important in managing the administrative, regional, etc. To ensure that in the not too soon, Malaysia will be out of the economic situation is not very good.

The contents of the thesis is for internal user only

REFERENCES

- Ali, S. S., & Nelson, O. N. (2006). An Evaluation of SME Development in Malaysia. *International Review of Business Research Papers*. 2(1), 1-14.
- Andersen Consulting . (1987). Foundation-Method/I: Information Planning. 8.0. Chicago: Andersen Consulting.
- Booth, Wayne C., Gregory G. Colomb., & Joseph M. Williams. (1995). *The Craft of Research*. Chicago: The University of Chicago Press.
- Culkin, N., & Smith, D. (2000). An emotional business: A guide to understanding the motivations of small business decision takers. Qualitative Market Research, 3(3), 145-157.
- Cruz, T. (2003). Systems, Methods & Processes. Sao Paulo: Atlas.
- Day, D. (1996). Cultural bases of interface acceptance: foundations. In *People and Computers XI*, 35-47. Proceedings of HCI'96 (August 20-23, 1996, Imperial College). London: Springer-Verlag.
- Davenport, T.H. (1994, July). "Reengineering: Business Change of Mythic Proportions?" *MIS Quarterly*, 3,121-127.
- Dennis, A., Wixom, B. H., & Roth, R. M. (2006). *Systems analysis design* (3rd ed.). New Jersey: John Wiley & Sons, Inc.
- Dix, A., Finlay, J., Abowd, G., & Beale, R. (2004). *Human computer interaction*. England: Prentice Hall International.
- Driscoll, D. L., & Brizee, A. (2010). *Observing*. Retrieved 22 December 2010, from http://owl.english.purdue.edu/owl/resource/559/07/.
- Fletcher D. (2005). A family-embeddedness view of entrepreneurship. In M Raffa, L Iandoli (Eds.), Entrepreneurship Competitiveness and Local Development RENT XIX Proceedings. Edizioni Scientifiche Italiane: Rome
- Finkelstein, C. (1992). Information Engineering: *Strategic Systems Development*. Addison-Wesley Pub. Singapore: Co.
- Hares, J.S. (1992). *Information Engineering for the Advanced Practitioner*. John Wiley & Sons: Chichester, GB.
- Harrington, H.J. (1991). Business Process Improvement: the Breakthrough Strategy

- for Total Quality, Productivity and Competitiveness. New York: McGraw-Hill, NY.
- Harrington, H.J. (1993). Improving Business Processes. New York: Makron Books.
- Hasnah Ali & Faridah Shahadan. (1995). Pendahuluan. Dlm. Rahmah Ismail (pnyt.). Industri Kecil Malaysia, Isu Pembiayaan, Teknologi dan Pemasaran. Bangi: Penerbit UKM.
- Jamalludin Harun, Baharuddin Aris, Zaidatun Tasir. (2003). *Pembangunan Perisian Multimedia Satu Pendekatan Sistematik*. Kuala Lumpur, Malaysia: Venton Publishing.
- Johansson, H.J., McHugh, P., Pendlebury, A.J., & Wheller, W.A. (1993). *Business Process Reengineering: Breakpoint Strategies for Market Dominance*. England: John Wiley & Sons.
- Kazem, A., & van der Heijden, B. (2006). Exporting Firms' Strategic Choices: The Case of Egyptian SMEs in the Food Industry. *SAM Advanced Management Journal*, 71(3), 21-33
- Kementerian Perdaganganan Antarabangsa dan Industri Malaysia. (2006). *Pelan Induk Perindustrian Ketiga (IMP3) 2006-2020: Malaysia Ke Arah Daya Saing Global.*
- Kendall, K. E, & Kendall, J. E. (2008). *Systems analysis and design* (7th ed.). New Jersey: Pearson Education, Inc
- Kothari, C.R. (1990). *Research Methodology: Methods and Techniques*. (2 ed). New Delhi: Vishwaprakash.
- Lois, E. R. (1998). *Performing A Literature Review*. Mathematician, System Engineering Division. Naval Air Warfare Center Weapons Division., China Lake.
- Malaysia growth and development retrieved on 18 December 2010 from http://www.bnm.gov.my/files/publication/qb/2009/Q1/bm p3.pdf
- Majlis Pembangunan PKS Kebangsaan. (2007). *Laporan Tahunan PKS 2006*. Kuala Lumpur: Bank Negara Malaysia.
- Mampu. (2003). ICT stratgey plan (ISP) guideline: Standarts, Policies and

- Guidelines, version 1.0. Government of Malaysia. http://www.mampu.gov.my/mampu/pdf/ISPlan/ispdoc/ICT%20Strategic%20Plan%20%28ISP%29%20Guidelines.pdf
- Martin, J. (1990). Information Engineering Book II: Planning and Analysis. Englewood Cliffs: Prentice Hall, NJ.
- Martin, J. (1989). Information Engineering Book I: Introduction. Prentice Hall; Englewood Cliffs, NJ.
- McNurlin, B., Sprague, R., & Bui, T. (2009). *Information Systems Management in Practice*, (8th Ed). Upper Saddle River, New Jersey: Prentice Hall.
- MIMOS. (2004). Use of FOSS in AgriBazaar. Agribazaar, MIMOS Bhd. http://r0.unctad.org/ecommerce/event_docs/fossem/azzman_agribazzar.pdf
- Moha Asri Abdullah et al. (1997a). *Industri Kecil dan Sederhana di Malaysia tinjauan terhadap perkembangan program Bantuan,* Shah Alam; Fajar Bakti Sdn. Bhd.
- Mohamed Khaled Nordin. (2009). Memantapkan Budaya Keusahawanan Di Kalangan Generasi Baru Melalui Sistem Pendidikan Nasional dan Pengajian Agama: Gagasan dan Cabaran Merealisasikannya. Kertas Kerja dibentangkan di Kongres Ekonomi Islam Ketiga (Ke-13), Dewan Merdeka, PWTC, Kuala Lumpur, 12-15 Januari 2009).
- Moodley, S. (2002). 'E-Business in the South African Apparel Sector: a Utopian Vision of Efficiency?' . *The Developing Economics*, 67-100.
- National SME Development Council, (2007). *Key Programmes for SME Development*, Section 3.Page 51-121. http://www.bnm.gov.my/files/publication/sme/en/2006/chap_4.pdf
- Nanthakumar et a. (2004). Perusahaan Kecil dan Sederhana(PKS) Kajian Kes:

 Pesisiran Pantai Timur Semenanjung Malaysia, The 4th International Malaysian Studies Conference. MSC4:UKM, Bangi.
- Newstraaitstimes. (2010, June 21). Tech: From planting to selling.
- Nielsen, J. (1993). Usability engineering. Boston: AP Professional.
- Nik Rahimah Nik Yacob et al. (1992). *Asas Pemasaran.* Shah Alam: Penerbit Fajar Bakti.
- Nurulnadwan Aziz, Nur-Hazwani Roseli, & Ariffin Abdul Mutalib. (2009).

- Guidelines for assistive courseware for visually-impaired people. In *Proceedings of IVIC'09*. LNCS 5857. Scopus: SpringerLink.
- Olson, S. F., & Currie, H. M. (1992). Female entrepreneurs: Personal value systems and business strategies in a male-dominated industry. *Journal of Small Business Management*, 30(1), 49-57.
- Overview Of SMIs/SMEs (Archive 2009) retrieved on 22 Dec 2010 from http://www.smibusinessdirectory.com.my/smisme-editorial/about-smisme/all-about-smisme/306-overview-of-smissmes-archive-2009.html
- Piccoli, G. (2008). *Information Systems for Managers: Text & Cases*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Portal AgriBazaar Retrieved on 27 Nov 2010 from http://www.agribazaar.com.my
- Preece, J., Rogers, Y., & Sharp, H. (2007). *Interaction Design: beyond human-computer interaction* (2nd Ed.). England: John Wiley& Sons, Ltd.
- Rahmah Ismail. (1995). *Industri Kecil Malaysia Isu Pembiayaan, teknologi dan Pemasaran*, Bangi: Universiti Kebangsaan Malaysia.
- Rancangan Malaysia Ke-Lapan (RMK-8). (2001). Taburan Penduduk Mengikut Kawasan Pihak Berkuasa Tempatan dan Mukim. Pencetakan Nasional Berhad Malaysia. Kuala Lumpur. Jabatan Perangkaan Malaysia
- Rummler, G.A. & Brache, A.P. (1995). *Improving Performance: How to Manage the White Space on the Organization Chart.* (2nd ed). San Francisco: Jossey-Bass Publishers.
- Saleh, A.S. & Ndubisi, N.O. (2006). 'An Evaluation of SME Development in Malaysia'. *International Review of Business Research Papers*, 2(1), 1-14.
- Sazelin Arif. (2009). Keupayaan Pemasaran dalam Kalangan Pengusaha Kecil Makanan Halal di Melaka Tengah : Satu Kajian Awal. MALIM, 10(2009), 183-208.
- Semos, A. dan A. Kontogeorgos. (2007). HACCP Implementation in Northen Greece: Food Companies' Perception of Costs and Benefits. *British Food Journal*. 109(1), 5-19.
- Shamsudin Ahmed, Masjuki Hj Hassan dan Zahari Taha. (2004). State of Implementation of TPM in SMIs: A Survey Study in Malaysia. *Journal of Quality in Maintenance Engineering*. 10(2), 93-106.

- Siti Rahayu Hussin et al.(2004). Asas Pemasaran. Shah Alam: Mc Graw Hill.
- SMIDE (2005). SME Performance Report. Retrieved on 22 Dec 2010 from http://www.smidec.gov.my/pdf/SME Performance Report 2005.pdf
- SME Annual Report 2009/10. *Transformation to the New Economic Mode*. SME Development and Outlook. http://www.smecorp.gov.my/node/1188
- Stonehouse, G., & Pemberton, J. (2002). 'Strategic Planning in SMEs Some Empirical Findings', *Management Decision*, 40 (9), 853-861.
- Utusan Malaysia. (2010). Virtual Scope bantu usahawan IKS bina laman web promosi produk. Kuala Lumpur http://utusan.com.my/utusan/info.asp?y=2010&dt=1216&pub=Utusan_Malays ia&sec=Agrobiz&pg=ag 01.htm
- Villela, C.S.S. (2000). Process Mapping as a Tool Restructuring and Organizational Learning. *M.Sc. Thesis, Industrial Engineering*, PPEP / UFSC, SC, Brazil.
- White Paper on Small and Medium Enterprises in Taiwan. (2006). Retrieve on 02 Jan 2011 from http://www.moeasmea.gov.tw/eng/2006whitepaper/2006white.asp
- Whitten, J. L., Bentley, L. D., & Dittman, K. C. (2001). *Systems analysis and design methods* (5th Ed.). New York: McGraw-Hill.
- Yusof, Sha'ri, M. dan Aspinwall, Elaine. (2000). TQM Implementation Issues: and Case Study. *International Journal of Operations and Production Management*. 20(6): 634-655.
- Zulkhairi, M.D. (2005). Implementing Information Strategy Planning in an Enterprise. Universiti Utara Malaysia Publication, Sintok, Kedah.