Marketing Information Systems: part 5

Course code: PV250 <u>Dalia Kriksciuniene, PhD</u> Faculty of Informatics, Lasaris Iab., ERCIM research program Autumn, 2012

Timetable

 Part 1:
 Oct.22 Mon
 14:00–17:50 C525

 Part 2:
 Oct.23 Tue 8:00–11:50 G101

 Part 3:
 Nov. 05 Mon
 14:00–17:50 C525

 Part 4:
 Nov. 05 Tue
 8:00–11:50 G101

 Part 5:
 Dec.10 Mon
 14:00–17:50 C525

 Part 6:
 Dec.11 Tue 8:00–11:50 G101

 Assessment session:
 1-2nd week of January

Syllabus 4

 Marketing planning, process modelling and decision making by using MKIS.
 Tools &software, lab work: Marketing plan Pro

Assignment 3

3rd team assignment and lab work training -Marketing planning and its linking to the design of MkIS structure and processes of the enterprise

Tools & software: Marketing plan Pro

Interrelationship of MIS, MkIS and IT concepts

Marketing IS concepts	Management IS creation concepts (O'Brien, 1990)	IT concepts (O'Brien, 1990), Zikmund et al 2003)
1 Integration of functional modules	Management operations processing	Transactional processing
2 Project and campaign	Creating strategic	Analytic applications,
3 Value chain system	advantage	EAI (enterprise application
4 Competitive system	ERP (enterprise resource planning)	integration), CRM
5 End-user "ad hoc" support	CRM	
6 Support for marketing management processes	Decision making support (DSS) Expert systems (ES)	data warehouses, data mining, OLAP (online analytical processing)
7 Marketing intelligence system	Executive information systems (EIS)	analytical proceeding/
8 Multidimensional MkIS	Business intelligence systems (BI)	

Marketing IS concepts

- 1 Integration of functional modules
- 2 Project and campaign
- 3 Value chain system
- 4 Competitive system
- 5 End-user "ad hoc" support
- 6 Support for marketing management processes
- 7 Marketing intelligence system
- 8 Multidimensional MkIS

1 Integration of functional modules

- This concept is the most prevailling.
- MkIS modules are composed by creating collection of functional modules, each of them designed for specialized marketing-related function.
- The concept correspond to the theoretical works which present marketing function of the enterprise as list of activities and personal responsibilities
- The input information for each module is different and related to functions (e.g. sales, customer service, advertisement)
- Output- standardized reports and analytical possibilities

Example : SAP integrated system:

System modules are composed of various functional blocks.

mySAP Customer Relationship Management - Enterprise

Marketing	Marketing Planning	Customer Segmentation		npaign Igement	Trade Prom Managem		Lead Manageme	ent Personalization
Sales	Sales Planning & Forecasting Service Planning & Custom			Activity anagement	Opportunity Managemen		Order Manag	ntract Incentive & ement & Commission ising Management
Service		Customer Ser Support			Planning & ization		ice Operations anagement	Professional Services
Analytics	Customer Analytics Pro	oduct Analytics	Marketir	ng Analytics	Sales Anal	ytics	Service Analytic	cs Interaction Channel Analytics

2 Project and campaign

- This concept corresponds to the idea that marketing lacks structure and rules.
- Each marketing activity is organized in an unique and original way; unexpected and innovative solutions created competitive advantage.
- It includes creating marketing campaigns, surveys of loyalty and satisfaction are organized by applying project management priciples
- Such type of systems have mainly general functionality (not necessarily related to marketing).
- Examples- Microstrategy campaign module, marketing 4P mix search
- This concept involves matching information and goal

M. Porter's Five Competitive Forces Model





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3 Value chain system

- These are MkIS aiming effective supply of marketing department by information from various sources emanatinng in the enterprise value chain: warehouses, point of sales terminals, mobile communications, call centres, etc
- Information from various sources is stored in data warehouses for further analysis

The Value chain Framework (M.Porter)

Firm Infrastructure

- ¥Web-based, distributed financial and ERP systems
- ¥On-line investor relations (e.g., information dissemination, broadcast conference calls)

Human Resource Management

- ¥Self-service personnel and benefits administration
- ¥Web-based training
- VInternet-based sharing and dissemination of company information electronic time and expense reporting

Technology Development

- ¥Collaborative product design across locations and among multiple value-system participants
- ¥Knowledge directories accessible from all parts of the organization
- ¥ Real-time access by R&D to on-line sales and service information

Procurement

¥ Internet-enabled demand planning; real-time available-to-promise/capable-to-promise and fulfilment

- VOther linkage of purchase, inventory, and forecasting systems with suppliers
- ¥Automated requisition to pay
- V Direct and indirect procurement via marketplaces, exchanges, auctions, and buyer-seller matching

Inbound Logistics	Operations	Outbound Logistics	Marketing and Sales	After Sales Service
¥ Real-time integrated	¥Integrated information	¥ Real-time transaction of	¥On-line sales channels	¥On-line support of
scheduling, shipping, warehouse management,	exchange, scheduling, and decision making in	orders whether initiated by an end consumber, a	including Web sites and marketplaces	customer service repre- sentatives through e-mail
demand management	in-house plants, contract		manwerphaces	response managment.
and planning, and	asseblers, and	channel partner	¥ Beal-time and	billing integration, co-
advanced planning and	components suppliers		outside access to customer	browse, chat, call me
scheduling across the		¥Automated customer-	information, production	now, voice-over-IP; and
company and its suppliers	Real-time available-to-	specific agreements	logs, dynamic pricing.	other uses of video
¥ Dissemination throughout	promise and capable- ¥to-promise information	and contract terms	inventory availability, on-line submission of	streaming
the company of real-time	available in the sales	VCustomer and channel	quoles, and order entry	VCustomer self service
inbound and in-progress	force and channels	access to product	,	via web sites and itelligent
inventory data		development and	¥On-line product	service request
		delivery status	configurators	processing including
		W Collection and a late and late	¥Customer-tailored market-	updates to billing and
		¥Collaborative integration with customer forecasting	ing via customer profile	shipping profiles
		systems	ing via obsorrer prome	¥ Beal-time field service
		oporonio	¥Push advertising	access to customer
		¥ Integrated channel	÷	account review,
		management including	¥Tailored on-line access	schematic review,
		information exchange, warranty claims, and	V Real-time customer feed-	parts availability
		contract management	back through Web server	and ordering, work-order update,
		(versioning, process	opt in/opt-out marketing	and service parts
		control)	and promotion response	management
	design of sources in the last second s		tracking	
+web-dist	ributed supply chain manage	CHIPCTIL P		

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4 Competitive system

- MkIS system has functionality which creates barrier for competitors to entry.
- Functions are specialized for business
- Airline reservation (Smart Amadeus, SABRE), pharmacy (SKS Vaistai, Microstrategy Inc., SAP), parcel sending services (UPS)

5 End-user "ad hoc" support

- Information supply for the "ad hoc" needs of the user (high level, mid level managers)
- Include expert, executive information, rule based procedures.
- Mainly are related to dashboards

6 Support for marketing management processes

- MkIS modules for planning, control, audit, accounting methods
- Information sources and methodology is selected by the marketing specialist
- E.g. marketing planning software

Application of Quality Function Deployment methodology for marketing

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7 Marketing intelligence system

- Marketing knowledge and intelligence management
- Includes methods and functions for capturing information (surveys, social network, transcation)
- Data mining methods, computational intelligence for detecting hidden relationships

8 Multidimensional MkIS

Multidimensional MkIS is defined as a system, created for providing information for marketing management processes (decision support, planning, control, organizing marketing activities), where the input information, describing the marketing-related phenomena, is transformed into multidimensional space, and analysed along the following dimensions: marketing relationships, knowledge and balanced scorecard.

The levels of analysis in MkIS

- The analyzed MkIS can be applied for one or two levels of analysis and only for partial presentation of situation and dynamics.
- The most advanced systems from the multidimensional point of view are the CRM systems, created for enterprise relationships. They present possibility to map customer relationships, connected with related information created in various functional modules of the integrated system or ERP (MS Axapta, Microstrategy, SAP).
- The software for control by interrelated indicators (e.g.balanced scorecard, KPI, Six Sigma, etc.) is implemented in several certified integrated systems.
- The control modules exist separately and cannot express the marketing processes, situation and development in enterprise, however they present possibility for their ²⁰ conceptual integration into multidimensional MkIS.

Structure and functioning of multidimensional MkIS



 In the marketing relationships dimension the chart of main marketing relationships gives logical view of enterprise marketing structure.

 The knowledge dimension of MkIS is formed by attaching sources of information related by context to the marketing relationships.

- The balanced scorecard dimension implements the goals level, created for feedback and control of the MkIS.

New conceptual element of MkIS structure is the multidimensional marketing relationship (MMR). It is formed and parameterized at the three dimensions of MkIS. 21

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Structure and functioning of multidimensional MkIS

- The understanding of vertical MkIS structure, consisting of the set of multidimensional marketing relationships, which can be formed and adapted for each enterprise is used instead of traditional horizontal MkIS structure, combined of operational modules of various functionality.
- The functioning of MkIS is based on the decomposing principle, where all the marketing processes and activities are represented as groups of related MMR



The multidimensional MkIS structure

The existing MkIS can be mapped as parts of the presented system view