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ROLE OF IT IN INDIAN ORGANIZED RETAIL

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ABSTRACT:

The importance of Information Technology is widely recognized in the business world. However, the overflow of the information clubbed with plethora of IT systems are not benevolent to the efficiency of the business as being the major driver of cost and time for any organization. Retail has added number of variables in every vertical of the business management thus making it more vulnerable to failure. An IT landscape model to fit the need of retail industry and making it more efficient is critical today. This paper aims to present a study on such model with review of literature published in the area and presents the findings of primary data collected during the research on the subject with help of statistical analysis. Various business verticals and levels of IT applications in such verticals differ significantly and can play a significant role in improving the efficiency of the organized retail in India.

KEYWORDS:

Retail chain, Standalone Kirana store, Supply chain drivers, Information technology, facilities, transportation, inventory; retail industry technology; retail IT support; Retail IT; IT landscape

INTRODUCTION FOR THE PROPOSED STUDY:

Information Technology is an essential part of the retail supply network. The retail perspective assumes more importance due to increased complexity of the network and business dynamics. However, the attraction of its implementation has a flip side and sometimes exhausts organisations wealth without gains. Implementation of IT in the organisation if done without changes in processes will reduce the benefits of its implementation. IT's role should be supporting the process rather than driving the process.

Information Technology projects has two major cost drivers so far as retail profitability is concerned; first is the direct cost of implementation getting derived from the software cost and the allied manpower cost, second is the hidden cost of the changes in technology and business needs allied with degradation in the business process resulting in the loss of business time and opportunity.

The major factor behind the upper edge of the organised retail Industry over the unorganised retail (neighbourhood kirana stores) is IT, which enables the organised retail industry over the global competition as well. Mainly the three dominant factors for the organised retail industry in IT deployment are availability of plenty of packaged solutions (well researched and made to the need of the Retail Industry), supply chain optimisation and store operations. This has led to increase in the IT budget and thus requires a pragmatic approach to allocate the resources and wisely manage the implementation of the package options to suit the need of the specific needs of retail industry. This ensures survival and profitability of the retail industry with rajor thin margins.



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Application of Information Technology in Indian Organized retail is in its primitive stage. Not much research work has been conducted in understanding its enablers and barriers. Some models are suggested such as: diffusion on innovation (DOI) theory, and the technology, organization, and environment (TOE) framework) given by (Tornatzky and Fleischer 1990) DOI (Rogers 1995).

Information Technology has become a means for survival as the neighbourhood kirana is facing competition from organised retail and organised retail in turn is facing competition from online retail (which is completely based on Information technology application). Thus if the retailers do not get readied for the fulfilment of their specific IT needs they will be wiped off from the industry scene.

As markets are no longer local and retailers have to prepare for the global markets the only enabler in the effort is Information technology. No longer is IT merely a tool to automate business processes but it has become a vehicle for the retailers to transport their best practices and processes to new markets.

Objective of the Study:

The role of Information Technology in today's retail industry is very critical but still it is simply an enabler and not a one stop solution like a silver bullet. Unless combined with the significant process improvements, it will not contribute to the bottom line improvement of retail companies in this information era. Worldwide business is investing more than \$19 billion annually on information technology systems to improve their supply chain performance, the actual value delivered is less than satisfying, and many companies are disappointed with the results.

Thus Information Technology has become a critical survival factor for both larger verticals the one of internal processes and another of the external (sales and customer needs). Application of technology has allied cost which in turn decides the efficiency of the organisation and can ruin the profits if not picked wisely and can otherwise ruin the business if not applied strategically. Finding the best path of above two critical needs is the rationale behind the present study.

Here with this research paper, I am trying to find a matrix of information technology systems. This model will have systems in various verticals of the retail industry which would be a basic fit model for the application of information technology in retail.

The salient objectives of this study are:

- To review the existing literature in the area of IT applications for retail in global scenario and find its applicability for Indian organised retail
- To analyse the Information Technology needs of various verticals of the retail industry and find their strategic level for Retail Industry.
- To verify the fit of the above model with help of views perceived by the industry experts.

Review of the Literature

Present form of retailing in country is passing through a phase where the application of information technology is limited only to the organised retail and the other big industries. The present forms of retailing like chain stores, malls, supermarkets, hyper markets are benefitting through use of latest technology without which they can't think of running their operations so smoothly and



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successfully. IGNOU eGyanKosh on Technology in Retailing (2011) says that, “Technology is like a catalyst. It enhances the efficiency of any activity or process where it is applied in the correct manner. Technology has had a strong presence in business from times untold. The magnitude of advancement has been different in different places. The latest development of technology and its applications has increased the efficiency of retail business. Business efficiency and smooth transactions are the key outcomes of technology efficiency.”

WalMart a retailer from United States has developed its information technology systems to a scale that it has become a forerunner among the retailers to recognise the value of the investing in an information system to support their process. They have pragmatically adopted Collaborative Planning, Forecasting and Replenishment (CPFR). (Foote and Malini 2001) have tested the Wal Mart’s model in 2001 “The lowly bar code, which became widely adopted in the 1980s, was the portal through which a flood of data now poured into the increasingly sophisticated computer networks and data storage banks put together by all the big chains, above all Wal-Mart. This enabled the retailers to accurately forecast sales, reduce inventory to a minimum, adopt uniform product labelling standards, and exchange sales and production information, routinely and automatically, with their many vendors”. “Such innovations brought contractors increasingly under the supervision and control of the major retailers, even as the new telecommunications infrastructure made possible the shift of so much consumer product manufacture to East Asia and Central America”. (Appelbaum Richard, Barbara Santa, 2006).

Cohen and Roussel 2004, jointly conducted by PRTM and SAP, aimed to examine how supply chain planning and systems are linked to business performance. It concluded that there is a solid linkage between supply chain planning and systems, and business performance. “Well-developed supply chain planning processes are critical to achieving a competitive advantage. Companies with mature planning practices are 38% more profitable, have 22% lower levels of inventory, and provide 10% greater delivery performance than average companies. Companies that combine mature planning processes with advanced planning systems gain added performance improvements, including 27% greater profitability and as much as 40% advantage in supply chain performance metrics across the board”.

e-business and supply chain management – (Simon Croom, 2005) The impact of e-business on supply chain is recognised in the information strategy (IS) literature. Galliers (1999, pp.230) states: “with the advent of inter-organizational systems and e-commerce in particular it is clear that questions of alignment go beyond what we have come to know the business – IT alignment issue. It is no longer simply a case of internal alignment alone. Such issue now include alignment with collaborating companies business and IT strategies and customer requirements (recent heightened interest in customer relationship management)”.

In July, 2008 Infosys published a white paper which examines the challenges retailers face in the present time of globalisation while implementing their IT “IT can be a great enabler when meeting these challenges, allowing retailers to take on the competition and capture new markets. In order to deliver in the flattening world, retailers must leverage IT and develop cutting edge technology



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solutions. However, very few retailers are asking how they can proactively shape their IT landscape for the impending flat world”.

Booz Allen Hamilton (Heckmann, Shorten, and Engel 2003) conducted a survey, which shows that “45% of the companies in the study are disappointed with the results. SCM managers need more than IT solutions to improve their supply chain performance. Therefore this study broadly draws the linkage from supply chain integration, complexity management, aligning strategy and supply chain, and IT with process improvement to supply chain cost metrics”.

Use of technology is critical in helping retailers to lower the operations costs and improve service. IT assumes the core position in retail operations and is an important driver of the business performance.

Ayer B. James (2001) concluded that; “Innovation in supply chain management principles and techniques puts new demands on information system implementers. Companies implementing major systems such as ERP have or soon will have an important enabler that can lead to improved competitiveness. But many will apply their new capability to outmoded supply chain processes. Putting technology ahead of competitive position and operational requirements is a frequent shortcoming of many management teams. New process design based on the competitive and life cycle positions of products should drive supply chain design. A candid self-assessment, a conscientious redesign, and careful implementation will reap competitive benefits”.

Though many supply chain management efforts have failed to achieve the desired results, with addition of information technology the retailers are adopting an integrated strategic approach to supply chain management. Tan (2002) investigates the contemporary practices and concerns of supply chain management and relates the practices and concerns to firms’ performance.

The author identifies 25 SCM practices and then reduces them to six underlying factors (Table); and the nine SCM concerns are reduced to three underlying factors

Table: Supply Chain Management Practices and Underlying Factors

Factors	Scale Items
Supply Chain Integration	<ul style="list-style-type: none"> • Searching for new ways to integrate SCM activities • Improving the integration of activities across your SC • Reducing responses time across the supply chain • Establishing more frequent contact with SC members • Involving SC in your product/service/marketing plans
Supply Chain Characteristics	<ul style="list-style-type: none"> • Communicating your firm’s future strategic needs • Creating a greater level of trust among SC members • Identifying additional SC • Communicating customers’ future strategic needs • Creating a compatible information system • Extending SC beyond immediate suppliers/customers • Creating SCM teams to include different companies
Information Sharing	<ul style="list-style-type: none"> • Use of informal information sharing • Use of formal information sharing agreements • Participating in the marketing efforts of customers • Determining customers’ future needs
Strategic Location	<ul style="list-style-type: none"> • Locating closer to your customers • Requiring suppliers to locate closer to your firm



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	<ul style="list-style-type: none"> • Use of a third-party SCM specialist
Customer Service Management	<ul style="list-style-type: none"> • On-time delivery directly to customers' points of use • On-time delivery directly to your firm's points of use • Contacting the end users to get feedback
JIT Capability	<ul style="list-style-type: none"> • Increasing your firm's JIT capability • Aiding suppliers to increase their JIT capability • Participating in the sourcing decisions of suppliers

Hayashi Koichi et al. 2005, in their study suggested that “the system based on the distributed hub architecture could encapsulate the complexity of the diversified standard”. Singh Nitin (2003) in his paper on Emerging Technologies to Support SCM states that in the area of communication, automatic data capture (ADC) technology is fast becoming an important tool to support business transactional information and supply chain processes. “Bar code scanning systems are currently integral to the supply chain infrastructure of many firms, and radio frequency identification (RFID) is gaining increasing acceptance too. While RFID systems are more expensive than bar codes, they can be read at very high speeds, and can collect 40 times the data collectible through traditional bar codes, which can help minimize or eliminate information lag: the gap between an item being sold or shipped and records show it in need of replenishment. The elimination of this gap would ultimately reduce replenishment time itself”.

Samuel Fosso Wamba, Harold Boeck (2008) states that “the flow of information between supply chain members is recognized to be a strategic activity that enhances supply chain performance. Indeed, exchanging and sharing information to improve supply chain performance is becoming critical to achieving competitive advantage. The integration of information flow in a given supply chain involves many activities such as the sharing of information about production, inventory level, delivery, shipment, capacity, sales and performance within firms and between supply chain members. A high level of information flow integration is considered to be a key determinant of a firm's efficiency within a given supply chain. Firms can gain performance benefits from integrating information flows across the supply chain and optimizing physical stocks and flows from a supply chain-wide perspective. As a matter of fact, logistical problems are viewed as primarily information-sharing problems. In general, four types of information are shared among supply chain members:

- (i) order information (e.g. order quantities and prices),
- (ii) operation information (e.g. inventory levels),
- (iii) strategic information (e.g. point-of-sale (POS) information), and
- (iv) strategic and competition information (e.g. demand information regarding a competitor's products)”

In the retail industry context, in addition to information technology applications such as Materials Requirement Planning (MRP), Manufacturing Resources Planning (MRPII), Warehouse Management System (WMS) and Advanced Planning and Scheduling (APS), many firms are exploring the potential of new customer-focused concepts such as Quick Response (QR), Efficient Consumer Response (ECR), Vendor Managed Inventory (VMI), Point of Sale (POS) and Collaborative Planning, Forecasting and Replenishment (CPFR) in order to support their intra- and inter-organizational



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business processes and information flow. For example, suppliers are using VMI to monitor retailers' inventory levels and thereby enhancing the decision-making process for replenishment frequency, order quantities, delivery mode, and the timing of replenishments

After Wallmarts reaping benefits of IT in their retail operations Metro group has also running an RFID-enabled "Future Store," where RFID technology is used live for various applications throughout the supply chain since 2003,. By early 2005, Metro Group was already noticing an ROI: a 14% reduction in warehouse labor, 11% increase in stock availability, 18% reduction in lost goods, and a tag read rate at the pallet level of almost 90%. Since then, this read rate has improved dramatically, reaching 100%. Moreover, based on their early deployment, Metro Group found that the combination of RFID and Advanced Shipping Notice (ASN) over Metro Link electronic data interchange (EDI) would lead to potential savings of almost \$10.9 billion per year. "Wal-Mart RFID-enabled stores" were 63% more effective in replenishing out-of-stocks than stores without RFID. Moreover, the results highlighted the fact that a 16% reduction in out-of-stocks was achieved, and that products equipped with EPC tags were replenished three times faster than comparable items using standard bar code technology. Finally, manual orders placed by these stores were reduced by almost 10%, contributing to the overall inventory reduction.

Kohavi Ron Rothleder Neal J. Simoudis Evangelos (2002), "Emerging Trends in Business Analytics", Business value is measured in terms of progress toward bridging the gap between the needs of the business user and the accessibility and usability of analytic tools. Consequently, data collection, storage, processing, and other issues specific to analytics are incorporated into overall system design. Broadening the effects of analytics in the business process, solutions go beyond customer-centric applications to support sales, marketing, supply chain visibility, price optimization, and work force analysis. Finally, in order to achieve the greatest possible business value, analytic solutions have to produce results that are actionable, along with ways to measure the effects of key changes.

Inter-organizational systems (Keng Siau, IOS 2003) are vital strategic business tools. They change the "rules of the game" as well as the table stakes, and present new dimensions and possibilities. Although many researchers argues that IOS is increasingly becoming a necessary way of doing business, innovative and creative companies can still use IOS as a competitive weapon. Successful companies use the power of modern information technology such as the internet to radically redesign their business processes in order to achieve dramatic improvements in their performance.

Ayer B, James (2001) concluded that, technology element, in particular, has come in for criticism lately. "Technology often advances faster than the readiness of users to put it to work. Along with the recent implosion of the dot.coms, the claims of technology purveyors are more likely to be met with well-deserved skepticism. Monday morning quarterbacks have discovered that, although the dot.coms had products and technology, the inventory and supply chain management components of the business model were not there. The result was "hot" companies wasting a lot of investor money".

On the other hand, no company can long ignore the promise inherent in the technology. How can



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an organization do a better job in planning its evolution from “here” to “there”? What should “there” look like? The latest wave of supply chain solutions brings exhortations to implement ever more advanced generations of software. These include an alphabet soup of application package categories including ERP, MES, APS, WMS, CRM, and many others. The Internet is an enabler of this connectivity and enhances collaboration along the supply chain. Another enabler is the commodity exchange, also likely to be Internet based. The basis of competition has shifted from the individual company to the supply chain. Companies must continuously review and adjust their business models to stay in the game.

Information sharing

Togar M. Simatupang, Sridharan Ramaswami, (2005) finds Information sharing refers to the access to private data in all partners' systems enabling the monitoring of the progress of products as they pass through each process in the supply chain (Simatupang and Sridharan, 2002). This activity covers data acquisition, processing, representation, storage, and dissemination of demand conditions, end-to-end inventory status and locations, order status, cost-related data, and performance status.

The interaction of information sharing with other features of the framework plays a key role in integrating other features into a whole. The chain members are interested in the utility of information sharing rather than information for its own sake. What makes information sharing valuable to the chain members is ultimately the ability to make better decisions and to take actions on the basis of greater visibility (Davenport et al., 2001). For example, demand and inventory visibility can be used to eliminate stock-outs by accurately replenishing hot products (Fisher, 1997).

Trkman et al. (2007) in his research on process approach to SCM says that; It should be noted that the mere use of IT applications is insufficient to realise the benefits. It has been found that adoption of the internet by itself demonstrates no benefits in terms of reduced transaction costs or improved SC efficiency in Scottish small and medium-sized enterprises (Wagner et al., 2003), and has not led to a decrease in the inventory level in Slovenian enterprises (Trkman, 2000). Further, the coordination of activities is also critical (Disney et al., 2004). While it should not be claimed that the internet in itself reduces certain costs, the strategic utilisation of information is crucial and business process modelling and renovation can be of great help for achieving this desired co-ordination. However, other studies have shown that information transfer brings little benefits and that most benefits from IT are due to the shorter lead-times and smaller batches (Cachon and Fisher, 2000). Similarly (Steckel et al., 2004) emphasise the importance of shorter cycle times and the non-sharing of information as the main advantage. Gavirneni (2002) summarises different findings that show reductions in costs of between 0 percent and 35 percent.

E-business is the execution by electronic means of interactive, inter-organisational processes (Cunningham and Froschl, 1999). E-business represents a shift in business doctrine that is changing the traditional organisational models, business processes, relationships and operational models that have been dominant for the past 20 years. The new doctrine of e-business requires an enterprise to integrate and synchronise the strategic vision and tactical delivery of products to its customers with the IT and service infrastructure needed to meet that vision and process execution (Phipps, 2000).



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Further, the most often quoted problems of online purchasing are not related to technology but to logistical and SC problems (Hoek, 2001). This is even more relevant to traditional companies that are usually even less prepared for the new e-commerce-related challenges.

So far as adaptation of new technology by the customers is concerned Indiana University – KPMG Study IU Center and KPMG conducted a national survey of consumers' acceptance of retail technology. The primary goal of this research was to provide retailers with a road map to help guide their decisions concerning the adoption and implementation of new online and in-store technologies. They published a key finding from this research is that consumers are willing to embrace new technologies, both online and in the physical store, but only if they enhance the shopping experience. Consumers didn't ask for barcode scanners, touch-screen kiosks, liquid-crystal displays, stereo glasses, Internet access or any other specific technology. They wanted more accurate price information, more complete and current product information, help in finding items that meet their needs, better selections of merchandise, fewer out-of-stocks and faster checkout.

In a study by Mr. Paneerselvam on management of supply chain drivers in kirana stores for Bangalore city, conducted in June, 2012 by Journal of Asian research Consortium it may be understood that computers have not been used in kirana stores extensively. Less than quarter of the kirana stores (23%) have only used the computers in management of their stores. Of which, 41% of the kirana stores used computers for managing inventory and 50% of the stores used for accounting applications. It is obvious that many of the kirana stores are not taking full advantage of the computer applications, more so with regard to customer database.

Consumers are increasingly using their mobile devices to bridge the online and offline worlds. Shoppers are using smart phones to look up product information, run price comparisons and even make online purchases while window shopping on a high street or in a store. In many cases, consumers are using bricks and mortar retailers as showrooms to evaluate products that they then buy from online retailers.

A Neilson study of Indian mobile users reveals that; Smartphone use is booming in India and is quickly becoming the dominant way many of the country's 900 million mobile phone users stay connected while they're on the go. Looking at recent trends, the country may have as many as 40 million of these devices in use by early this year. The dramatic growth is being driven by a desire among users to stay connected and have instant access to social networking sites – a global trend that represents an exponential growth opportunity in developing countries like India. It is interesting to note that the youth are quick to adopt internet connectivity on their smart phones with over half of all data users falling in the sub-25 year bracket.

Price Water House Coopers in an study on retail in 2012 have suggested the way forward for retail in time to come. The Consumer Adaptive Retailing model encourages leveraging existing service based offerings and a system in consideration with the ever-evolving consumer ecosystem, to deliver a service that is intuitive and responsive.



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Methodology & Data Collection:

The data sample includes two sets of data; one for industry experts on Retail and Information Technology and second on the customer feedbacks on their expectation from the retail store.

The target list of the first questionnaire was only Senior and Middle level executives of the Retail Industry and questionnaire was sent to over 200 Industry experts out of which 140 responses were received after follow-ups. Out of the received responses 103 responses were found complete and were considered for the further analysis. Approximately 52% responses were useful of the total universe of the expected responders.

Second questionnaire was sent to more than 500 retail customers and data is analysed for more than 204 customer responses in this paper. Approximately 40 % responses were received of the total population.

The expert questionnaire has quantitative questions on Supply Chain practices, qualitative aspects of SC strategy, and data on performance and structure. An ordinal scale was proposed for major questions to rate the options with lowest to highest of the possibilities for a variable.

The executives who are targeted have relation with retail and IT or FMCG companies. Telephonic support was provided wherever it was required to explain the questions.

Data Analysis & Findings:

Mapping supply chain objectives with business objectives on a five point ordinal scale; the question put to the responders was:

“Best in class Information Technology systems should be implemented in following functions in order of priority to get retail efficiency improvement:

Please rate them on a 5 point scale from: 1 lowest – to – 5 highest

One sample response is appended herewith for reference:

Sr.	Scope	Ratings (1 to 5) :-
i	Enterprise Planning	5
ii	Inventory Management	5
iii	Warehouse Management	4
iv	Business Intelligence / Decision Support System	5
v	Transport Management	4
vi	Collaborative planning in supply chain	4
vii	Customer focussed IT systems	5
viii	Integrated Human Resource Management with other retail functions	5
ix	E-commerce	5
x	M-commerce	5
xi	Other support functions	4

Of 103 completed responses statistical tools were applied & following results were found:



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Score	Best in Class IT Systems Priority										
	IT EP	IT Inventory	IT WH	IT BI DSS	IT TM	IT CPSCM	IT Customers	IT HRM	IT E-com	IT M Com	IT Support Sys
	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
Lowest	1	0	0	0	0	0	2	4	1	1	0
Low	2	3	2	0	1	4	4	3	5	3	8
Moderate	17	9	21	13	21	25	19	44	14	26	27
High	56	48	48	38	67	50	48	35	44	49	49
Highest	27	43	32	52	14	24	30	17	39	24	19

ANOVA

Descriptive

Score									
					95% Confidence Interval for Mean		Minimum	Maximum	
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	m		
IT EP	103	4.0291	.77278	.07614	3.8781	4.1802	1.00	5.00	
IT Inventory	103	4.2718	.74352	.07326	4.1265	4.4172	2.00	5.00	
IT WH	103	4.0680	.77031	.07590	3.9174	4.2185	2.00	5.00	
IT BI DSS	103	4.3786	.70177	.06915	4.2415	4.5158	3.00	5.00	
IT TM	103	3.9126	.61208	.06031	3.7930	4.0322	2.00	5.00	
IT CPSCM	103	3.9126	.79344	.07818	3.7576	4.0677	2.00	5.00	
IT Customers	103	3.9709	.90159	.08884	3.7947	4.1471	1.00	5.00	
IT HRM	103	3.5631	.93588	.09222	3.3802	3.7460	1.00	5.00	
IT E-com	103	4.1165	.88894	.08759	3.9428	4.2902	1.00	5.00	
IT M Com	103	3.8932	.82738	.08152	3.7315	4.0549	1.00	5.00	
IT Support Sys	103	3.7670	.84254	.08302	3.6023	3.9317	2.00	5.00	
Total	1133	3.9894	.82896	.02463	3.9411	4.0377	1.00	5.00	



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ANOVA

Score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	52.300	10	5.230	8.087	.000
Within Groups	725.573	1122	.647		
Total	777.873	1132			

Sig.: Values are significant and are less than 0.05

The mean difference is significant at the 0.05 level

Null Hypothesis H0: The IT systems have no significant difference in their applications

Alternate Hypothesis H1: The IT systems have significant difference in their application

Thus we see from the results that the H0: The IT systems have no significant difference in their applications is not accepted and proved to be wrong and the data analysis suggests that they are different and significant and the alternate hypothesis is accepted.

Thus we can say that logically and statistically the various IT applications have their unique importance with which they differ in their impact to the overall organisational efficiency. The IT landscape proposed assumes importance in this context. The bifurcation of the operational, tactical and strategic levels for different verticals will be done in the detail in the thesis.

Plan	Supplier area	Merchandise management	Delivery management	Inventory management	Store operations	Foundation	Common processes	Customer area
Operational	VRMP	e-Procurement	WMS	Replenishment	Store management	ERP – SAP IS	Business Intelligence–DW	Online sales
	Order execution	Logistics	TMS		POS	Time & Attendance	MDM	Order status
			SO automation		Miscellaneous – sales boosters	Support applications	Barcode / GDSN	Profile management
Tactical	Catalogue management	Product management	Home delivery	Demand planning & forecasting	Reflexis	ESS	RFID	CRM
	SC visibility	Enterprise planning	Telematics	PI	Security loss & Prevention			CLP
	VMI / SMI		Reverse Logistics	Cycle count	Store Portal			
Strategic	Collaborative Planning Forecasting & Replenishment					Integrated HRMS	Data Mining	M – Commerce
								Social Networking



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CONCLUSION:

Indian retail has plenty of IT applications to serve its organisational needs. The retail IT in India is still gearing up to the diversified needs of the retail industry. Looking at the complicated structure of retail operations and myriad of IT applications, which adds to the complexity and thus an IT landscape model to improve the efficiency of the retail operations is required to support in taking decisions of deploying IT applications to gain efficient operations. The objective of the paper was to found one.

The IT application in the Indian organised retail environment is vulnerable to failure as the basic supply chain credentials are not established in the country. However, as compared to the international scenario the mix of the IT applications is not arrived at in Indian retail industry. The industry experts have assigned significant values to various IT systems asked for the ranking, based on which a landscape covering the very basic operational, tactical and the strategic part is proved to be significant. The strategic part even values the low rated Human resource management systems to be a part of the whole activity as ignoring it would be against the integrated effort of the retail industry. Now-a-days the emergence of the social networking has become the best strategic tool to get hold of the customer needs.

The organised retail shall find a strategic mix for their IT needs as the proposed here, which should be integrated across the supply chain verticals and create visibility to enhance the decision making process in the system. This will improve the efficiency of business operations and provide an edge to retailers in improving their customer credibility as well.

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Abbreviations used:

VRMP – Vendor relationship management portal, e – electronic, WMS – Ware House Management System, TMS – Transportation Management System, SO automation – Sales Order Automation, VMI – Vendor Managed Inventory, SMI – Supplier Managed Inventory, PI – Physical Inventory, POS – Point of Sales, ERP – Enterprise Resource Planning, ESS – Employee Self Service, HRMS – Human Resource Management System, DW – Data Warehouse, MDM – Master Data Management, GDSN – Global Data Synchronisation Network, RFID – Radio Frequency Identification Device, CRM – Customer Relationship Management, CLP – Customer Loyalty Program, M-Commerce – Mobile Commerce, IOS –Inter-organizational systems, IT – Information Technology, ECR – Efficient Customer Response