CHAPTER IV:

KNOWLEDGE MANAGEMENT PRACTICES IN SELECTED SOFTWARE DEVELOPMENT COMPANIES

The present chapter gives a brief sketch of the Knowledge Management practices prevalent at the selected software development companies. The study includes in all 50 companies spread in Mumbai, Pune, Nagpur, Aurangabad, Nashik and Jalgaon regions. The region wise current KM practices of the selected companies are presented.

MUMBAI REGION

4.13i Infotech, Mumbai :

3i Infotech is an Information technology company, giving its services to more than 1500 customers across 50 countries. The company is involved in Application development and management, Consulting, Business process Outsourcing, Testing and Compliance and BI (Business Intelligence). 3i infotech provides its services to varied verticals such as government, manufacturing, Retail, Distribution, Telecom and HealthCare. The company has many quality certifications such as ISO 9001:2008, ISO/IEC 27001:2005 and ISO /IEC 20000-1:2005

Software Development process at 3i Infotech :

3i Infotech is involved in developing varied types of services ranging from application development, e-portal, mobile computing and more to its clients spread across the world. There is a global team of enthusiastic engineers work on the project to make their applications quick to deploy and easy to maintain. At 3i infotech there is a five step process for application development:

1. Initiation
2. Preparation
3. Execution
4. Launch and sustenance
5. Next steps
### 4.1 Software development Process

(Source: http://www.3i-infotech.com/content/services/adms/application-development.aspx)

**Knowledge management efforts taken at 3iInfotech:**

3i Infotech’s Knowledge Management System is at evolving stage with some efforts being taken to establish a defined KM system in the organization. There is environment of knowledge sharing, where experienced staff share their knowledge in the form of KT (Knowledge Transfer) with the inexperienced staff, when a new project comes in. The software development team also reuse their previous knowledge in various stages of SDLC (Software Development Life Cycle). The company portal has taken various measures for knowledge sharing such as its link to social networking sites, white papers providing insights on new technologies, various articles shared and also displaying the success stories of the company thereby providing a means of knowledge sharing environment.

**4.2 CyberTech, Mumbai:**

Cybertech system and software is leading company in providing geospatial services and Enterprise level IT solutions. The company offers its services to companies from all verticals including education, government, business, public safety, telecom, defence and more. The company provides networking solutions, Cybersupport, enterprise solutions, geospatial solutions, BI Analytics. Cybertech also has brand products for GIS, public safety, SAP and more. CyberTech is ISO 2000 certified having its global presence in USA, India.

**Software development process at CyberTech:**

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Cybertech offers Application Management and Support to companies by providing SAP solutions. Cybertech makes use of its proprietary modules developed like helpdesk module (CyberHelp), cost optimizing module, cost optimization module (CyberOpR) and SAP support solution (RemoteSaver). The functional areas include

- Production Support

- Questions are answered regarding How to perform operation

- New process implementation

- Configuration implementation

- Application maintenance

- Application enhancement

- Testing

**Knowledge Management efforts at CyberTech:**

Knowledge Management is at its evolving stage at cybertech. The company is striving to utilise its knowledge base and is taking efforts to maintain knowledge sharing culture, knowledge retention and dissemination facilities. Company has a healthy culture in the organization, provides facility to employees to share their views, rewarding employees as an appreciation is done, Cross training to employees, knowledge transfer among team member is done, CyberHELPDesk provides a 24X7 interaction for its customers thus, overall the company is taking necessary initiative to provide knowledge base environment.

**4.3 Datamatics Global Service Ltd (DGSL), Mumbai:**

Datamatics is a global IT and KPO (Knowledge Process Outsourcing) organization providing business solution to major companies from Fortune 500 and helping them to face the business challenges and avail competitive advantage. Datamatics provides solutions such as Billing and Payment, Web enablement, eRetail solution, Research and Analytics, Point of scale (POS) solution, Services such as Product Engineering service, Embedding Service, Finance and Accounting services, Information Management services and more apart from these DGSL also has its own brand products for Application Management, Application Testing and Document processing and more. Datamatics has its footprints across the globe in
all 5 continents. The company has been honoured with many awards and recognitions for its excellence in the field.

**Software Development Process at Datamatics:**

Datamatics provides agile software development service. Datamatics Global Services provides comprehensive agile software development services. Datamatics development team adopted agile methodology for its software development which involved integration of various processes to meet clients requirement, control iterations, addressing of high-risk element in the early stage of development life cycle.

**Knowledge Management efforts at DGSL:**

DGSL does not have a defined KM process but has knowledge sharing culture. The company portal has provides insight on latest technology and trends. DGSL also has connectivity with social networking sites like twitter, facebook, linkedIn and also there is reusability of knowledge both explicit and tacit knowledge during the software development process.

**4.4 Genesys Intl, Mumbai:**

Genesys company is involved in providing geospatial solutions and IT services to clients across the world. The company was established in 1995 headquartered in New York, having its offices in Europe, India and U.S. The company is ISO 9001:2000 certified. Genesys has also developed its brand products GenViewer and MARS (Market Analysis and Route planning System).

**Software development process at Genesys:**

Genesys provides software solutions to its clients to help them having smooth business functioning and staying ahead in this competitive environment. Application development is done either onsite or offsite. The development team includes solution architects, developers, database administrators and implementation experts. Genesys incorporates the software engineering practices during the development process. As an overview following can be summarized as the steps performed during the development process.

- Defining solution outline
- Defining the solution architecture
• Development of prototypes
• Design the details of the solution
• Development of solution
• Testing and validation of the solution
• Solution rollout
• User training
• Solution support

Knowledge Management efforts at Genesys:

Till now Genesys does not have a defined Knowledge Management System. The company provides the culture to its employee where knowledge sharing, retention and dissemination are implemented.

4.5 iGATE PATNI, Mumbai:

iGate Patni is one of leading company which is providing full spectrum consulting, technology and process outsourcing and product engineering services. iGate Patni was established three decades ago with collaboration of two companies – iGATE and Patni. Having a manpower of more than 26000+ people having its location across many countries the company delivers its solutions to more than 1000 clients spanning across verticals like: banking & financial services, insurance & healthcare, life science, manufacturing, retail, distribution & logistics; media entertainment leisure & travel. Communication, energy & utilities and many more. iGATE Patni has certified standards of ISO, SEI-CMMi, Six Sigma, ITIL and COPC. iGATE Corporation is listed on NASDAQ (IGTE), and Patni Computer Systems Limited on BSE(532517), NSE(PATNI) and NYSE(PTI).

iGate Patni ensures that its employees enhance their competencies, efficiency which help them in their career development and makes sure that these activities are aligned with organizational objectives to achieve growth for both employees and the organization. iGate has taken many steps towards Learning and Development (L&D) for its employees such as iLEARN which offers technical training, tie up with BITS Pilani for Masters degree programme in Software Engineering, providing ‘behavioural’ and ‘soft skill’ training to employees, e-MBA, Boosting through Knowledge Management.

Software Development Methodology at iGATE Patni:
iGATE has an efficient and faster and productive application development process. iGate follows a standard methodology for application development including Waterfall Model, Iterative Model, Spiral Model, Prototype, Rational Unifiered Process (RUP), Rapid Application Development (RAD) or Agile. The methodology for developing software varies as per the requirement of clients or based on the type of project the team is working on. iGATE’s tool chest of technology makes the application development process much more efficient, easier and faster. Following are the tools available in the tool chest.

- Requirements Elicitation & Management Framework
- Model-driven Requirement to test cases (iAuthor)
- Code Generator iCodeGen (JEE)
- iCodeGen (.NET)
- TestAutomation (ITAK)
- Code Quality iCOmpliance (JEE)
- Architecture Verification

Knowledge Management efforts at iGATE Patni:

iGate Patni took key initiatives to implement knowledge management practices to enhance the domain knowledge of its employees. The main goal of iGATE Patni’s knowledge management initiative is “Shared Learning”. iGate has its K-Portal covering diverse ranges of industry and technology practices. The K-Portal is user-driven, wall-to-wall collaboration that empowers its employees to contribute and access resources. The KM practitioners at iGATE has introduced a Social and Collaborative Knowledge Management SCKM™ with an aim of making KM practice widely accepted within enterprise.

4.6 Kale Consultants, Mumbai:

Kale Consultants, now known as Accelya Kale consultants as it became part of Accelya Kale group in 2011, is a global leader in providing Airline Solution. Accelya has nearly 200 airline customers helping them in managing their Financial Process and also providing decision support system tools and data analytics with which they can have a deeper insight into their business performance. The company has its expertise in Revenue accounting, Recovery, Credit card management and others. Accelya Kale consultants has its physical presence in 10 countries with over 2000 dedicated professionals.

Software Development Process at Kale Consultants:
The company follows the traditional waterfall model for its software development process comprising of following steps

- Requirement analysis
- Design
- Code generation
- Testing
- Maintenance
- Deployment

**Knowledge Management efforts at Kale Consultants:**

The company has many efforts being taken to provide the knowledge sharing, knowledge capturing and knowledge harnessing environment. Though undefined but the company implements knowledge management techniques in following ways;

- knowledge centre at the company portal, where there are expert views, insights, blogs.
- knowledge sharing facility with social network

**4.7 Marketplace Technologies Pvt. Ltd. , Mumbai. :**

Marketplace Technologies, one of the budding company headquartered in the financial capital Mumbai, India, is founded by team of professionals involved in stock exchange. The company provides IT solution to Exchange Traded Equities, Derivatives & Commodities markets in India. It has pioneered itself in developing software products for Stock Exchange. Marketplace has its clients across 17 major cities in India. It also provides web based solution for brokerage. Marketplace has a strong team of 75 professionals, having its existence from only last three years the company has made its place in this competitive market.

**Software Development Process at Marketplace :**

The company ‘s development and delivery analysis includes following steps

1. Feasibility study/ Impact analysis
2. Design
3. Code generation
4. Unit testing
5. Version Maintenance
6. Package and Release

**Knowledge Management efforts at Marketplace technologies:**

As such there is no defined knowledge management system at Marketplace Technologies but, it does use the concept of knowledge sharing and reusability of knowledge. Marketplace has many brand product solution for brokerage, when there is a requisition for change in the product or there is version enhancement then there is a reusability of code and experience. Also there is a knowledge transfer between the experienced and inexperienced staff.

**4.8 Navteq, Mumbai:**

Navteq company is involved in developing Maps, it has combination of technology and geography together. Though Navteq was established long ago in 1985 and today Navteq became the company to pioneer the field of developing maps. In 2008 Navteq got acquired by Nokia, now Navteq is part of Nokia’s Commerce and Business Location. Navteq Maps is headquartered in Chicago supported by more than 7000 employees having its production centres in many countries including India.

**Software Development process at Navteq:**

Since Navteq is involved in making GIS application, its development procedure is different as compared to another application software. Navteq has group of different teams who help the customer fulfil their requirement. Following are the four teams who help throughout the development process

**Strategic Program Management (SPM):** This team is responsible to help customers understand the early stage know-how of the product and bring in the new product to market.

**Technical Customer Support (TCS):** This team helps the customers in development of the new product. They assist customers to define their requirement, support related to data format, tools and compilation.

**System Assessment Team (SAT):** This team helps the customer in giving their insights and technical expertise during the testing phase.
Customer Engineering: This is the team provides the software assistance needed throughout the project.

Knowledge Management efforts at Navteq:

At Navteq there are no defined knowledge management efforts. But at Navteq’s extranet can be considered as its knowledge portal as it is used for knowledge sharing among the developers customers spread across different geographical areas.

4.9 Oracle, Mumbai:

Oracle is a world renowned company providing hardware and software solution and services. Established in 1977 Oracle has a broad range of services and solutions, with more than 380,000 customers including 100 of the Fortune 100 across 145 countries. Oracle company has been honored with various awards and recognitions for its excellence in twelve different categories to name few are CIO of the Year, Data warehouse leader of the year, Database administrator of the year, Java Business of the year, Oracle Fusion Middleware Innovation and many more. Oracle is ranked amongst the world’s top 10 companies. Oracle is the only software company to offer a full suite of e-business products.

Knowledge Management Efforts at Oracle:

```
Requirement Analysis  Fit Gap Analysis
  Business objective  Base Functionality
  Business requirement  New Functionality
  Technical Requirement  Gaps Identified

Configuration
  Dev, Test, Stage Install
  UI Customization
  IM Configuration
  Data Dictionary Setup

Deployment
  Setup Environment
  Conducted User Testing
  Roll out

Testing
  Load Content
  System Testing
  User acceptance

Solution Design
  UI Customization
  IM Repository
  Data Dictionary
```
Oracle is one of the most admired company for knowledge management. Oracle not only has a strong knowledge management system but also it is one of the leading provider for knowledge management system to other companies. Oracle’s knowledge management initiatives goes way back in 1999. Oracle had developed an internet portal for all its employee spread across different countries , to communicate and share their knowledge. Today Oracle has Knowledge management Team, many communities working as Knowledge Portal and many other initiatives to capture , store and distribute knowledge. Oracle Knowledge Management provides solution management functionality to other Oracle Applications, such as Oracle iSupport, Oracle TeleService, Oracle Field Service, Oracle Depot Repair, Oracle Customer Support, and Oracle EMail Center.

4.10 Polaris, Mumbai:

Polaris software lab was established in 1993, Headquartered in Chennai. Polaris is ranked by NASSCOM among Top 10 company for providing Application development solutions to banking, financial and insurance sector. Decades back Citigroup bank hired Polaris for its banking solution as partner and today Polaris is one of India’s leading institutions contributing to the knowledge economy of the global financial services marketplace having its physical presence in 30 Geographies with a manpower of 13500. Polaris employees are unique blend of techno-bankers, banking & insurance, technology experts & quality process experts. Polaris is SEI-CMM Level 4 Quality processes ISO-9001 certified and also honored with many awards for its excellence in the field.

Software Development process at Polaris:

Polaris has its edge in the market for developing Financial technology software. For developing banking and financial solutions Polaris uses its Intellect Suite™ . Polaris has a unique form of developing banking software. It has two frameworks COPARIS and knowledge shelves L0. For rapid customization of products Polaris provides workbenches to its people who are trained for using tools such as COPARIS and LO. Following are the workbenches designed for developing their software:
- Business Process Studio Workbench
- Prototype workbench
- Process management workbench
- Coding workbench
- Business Analyst workbench
- Integration workbench

Knowledge Management efforts at Polaris:

Polaris School of FT: To keep its employees aligned with the new technologies and with an aim of developing nearly 1000 “techno-bankers” a year this training center has been set up in Hyderabad. This facility is used as a Talent Development and Skilled manpower Training centre by Polaris.

Innovative KSW (Knowledge Shelving and Writing) tool: This is a unique tool designed by Polaris which provides a single window view of the banking and insurance world where all business views are organized into element level charts. KSW L0 simplifies the knowledge framework into shelves under which relevant information can be ‘filled’.

Workstations: It acts as a knowledge Portal. Polaris has Relationship Manager and Dealer workstations. These workstations provide integrated and consolidate information online.

Relationship Manager Workstation: It is an integrated gateway to all information and actions. Self and team dashboard, performance monitoring and analytics, online connectivity with data feeds, helps decision making with quick alerts online.

Dealer Workstations: it acts as a single workbench or dashboard for complete trading, aids in quick decision making towards higher profitability and managing risk.

4.11 Quinninox, Mumbai:

Quinninox is an IT company providing IT services and solution to major companies from Fortune 500, established in 2002 with a manpower nearly 5000 people having its client across the globe. Quinninox is headquartered in the US with its offices in UK, Japan, Germany and India. Quinninox is ISO 9001:2008 QMS (Quality Management System), ISO 27001:2005 Information Security Management System (ISMS) as well as CMMi Level 3 appraised.
Quinnox provides cloud computing and mobility computing solutions and ERP, Application management, e-solution, testing services.

**Software Development Process at Quinnox:**

Quinnox’s Application Management System offers a team of experienced and expert developers. At Quinnox current applications are optimized and assessing which legacy applications should be updated, retired or consolidated. Throughout the process the software development model depends on the requirements. Quinnox uses any of these methodology:

- Waterfall model
- Agile Development
- Rapid Action Development
- Rationalise Unified Process

Quinnox offers wide range of solution and services like e-solutions, application development, mobile solution and many.

**Knowledge management efforts at Quinnox:**

Quinnox has actively implemented knowledge management practices. Following are the tools KAMP i.e Knowledge Acquisition and Management Process. KAMP features are:

- Knowledge capture, retention, dissemination and measurement framework
- Project related information and data is available to local knowledge repository
- Common information and data is available to centralized knowledge repository.
- Data can be mined to analyze and also reports can be generated.

**QuickAct:** QuickAct is Transition management tool, it is a knowledge transition methodology is a risk-based, best-in-industry transition approach which significantly cuts down the knowledge acquisition curve and prepares the steady state team earlier.

**4.12. Rolta India, Mumbai.**

Rolta India is an organization actively involved in providing IT services and solutions to companies from varied field. Rolta is a leading company providing innovative IT solutions to its clients and helping them to gain valuable business insights. Rolta also provides business
Software Development process at Rolta:

With an increase change in market conditions, technological advancement, customer requirement developers at Rolta uses suitable methodology for its software development process. During its development process Rolta has implemented following methodologies for its various projects

- Structured analysis and design
- Agile Development
- RUP (Rational Unified Process)
- OOAD (Object Oriented Analysis and Design)
- RAD (Rapid Action development)

Knowledge Management efforts at Rolta:

The knowledge management concept at Rolta is at its evolving state, the company has taken measures to implement a knowledge sharing culture, knowledge capturing in the form of whitepapers, webinars, videos, blogs etc and knowledge dissemination by taking advantage of social networking sites.

4.13. TechMahindra, Mumbai:

TechMahindra is one of the leading company providing IT solutions. TechMahindra was established in 1986 under the name Mahindra British Telecom, later the name was changed to reflect its diversification. TechMahindra core area is telecommunication sector, the company expanded its IT spectrum in 2009 by acquiring Satyam Computers as Satyam Mahindra. The company has its global footprints operating in around 31 countries having 13 delivery centres and 17 sales centers across the globe. Powered with experienced talent of 40,500 professional the company has made its niche in the international market. Certified
with ISO 9001:2008, CMMi Level 5, ISO 27000 & BS25999, the company is honoured with many awards for its excellence.

**Software development at TechMahindra:**

TechMahindra offers end to end application development solutions from requirement analysis to deployment and roll out. The company’s framework MASTER™ provides faster, low-risk predictable high quality development and maintenance. The complete application development and maintenance process undergoes following steps:

- Application Development
- Application Maintenance
- Application Support
- Application Integration/Migration/Transformation
- Application Management

**Knowledge Management Initiatives at TechMahindra:**

The knowledge management system at tech Mahindra is at its evolving stage. TechMahindra has incorporated the techniques of Knowledge management to improve its efficiency and calibre. KM is implemented in various functional areas including Application Development and Maintenance. The tool used in Application Development and Maintenance is as follows:

- MASTER™: This is a framework used to ensure low-risk, high-quality, predictable development and maintenance services.

**4.14 Tondon Advance Devices, Mumbai:**

Tondon Advance has its existence since 1978 then was known as Tondon Magnetics. The company was then involved in manufacturing magnetic recording heads for floppy disk drives. The products were being used by the first generation of IBM PC. Tondon Group has been a business partner with all leading giants such as Compaq, Dell, IBM, Apple and Western Digital. Tondon Group comprises many companies including Tondon Information Solutions which is involved in providing all software solutions and IT enabled services. The company is headquarter is based in Mumbai with its offices in USA and other cities in India.

**Software development process at Tondon Advance Device:**

The software development process implements the techniques defined by standard CMM/CMMi frameworks as well as waterfall model in combination with Agile methodologies. The basic philosophy of Agile Software Development is
• Individuals and interactions over processes and tools
• Working software over comprehensive documentation
• client collaboration over contract negotiation
• Responding to change over following a plan.

**Knowledge Management efforts at Tondon Advance Devices:**

Knowledge management is at growing stage in Tondon Advance Devices. The company is taking efforts to enhance its knowledge culture and implement the knowledge management techniques. The company portal provides means of knowledge sharing, retention and dissemination. Also there are group discussion seminars and training for knowledge upgradation.

**4.15 Wipro Technologies, Mumbai:**

Wipro was established in the pre-independent India in 1945 then was known as Western India Products. At that time its main area of business was the production of Sunflower Vanaspati Oil and later on soaps and other consumer care products. With the passage of Wipro diversified into newer areas including IT hardware and IT services. With its existence from last 50 years, today, Wipro has evolved as a leading global IT company. The company has pioneered in many innovations in the IT services, BPO and R&D services. Headquartered in Bangalore, Wipro has its physical presence across the globe. Wipro Technologies has over 130,000 employees and clients across 54 countries.

**Software Development Process at Wipro:**

Wipro adopts its Six Sigma methodology for its projects. The method uses in-process metrics and cause analysis throughout the software development lifecycle. Following are the components of six sigma methodology.

**Knowledge management initiatives at Wipro:**

Wipro technologies has received Information Todat’s KMWorld- KM Reality Award, validating wipro’s leadership in knowledge management. Wipro’s KM system is known as KNET. Following are the components of KNET.

DocKNet – The repository of documents. Place to go to for anything ranging from technical documents, proposals to training material on various subjects
War Rooms – It is a virtual workspace for time-bound and task-oriented jobs.

KoNnEcT – The Yellow pages with an associated database of experts, queries, responses and ratings. Popular and very useful! The repository of software reusable components and tools developed in-house.

**Fig. 4.3 Knowledge Management System**

*Source: www.wipro.com*
4.16 Zycus, Mumbai:

Zycus is a company involved in developing solutions for spend analysis. Zycus has evolved its portfolio to complete suite of Procurement Performance Solutions. The company is striving hard to position procurement part of the business performance. Zycus’ AI (Artificial Intelligence) driven automated solutions are being used by more than 80 of the Fortune 500 customers. The company has its footprints across the globe in US, Europe and having its R&D Centre situated in Mumbai, India. Having provided 200 solution deployment to more than 1000 global clients Zycus has a large and still growing manpower of 600+. Zynapse is division of Zycus pioneering in ERP (Enterprise Resource Planning) and MDM (Master Data Management) solutions.

Software Development Process at Zycus:

Zycus is involved in developing its brand software for procurement performance. For this development Zycus follows the traditional waterfall model for new software or there is enhancement of the previous version of the software where there is maximum reusability of the complete process.

Knowledge Management efforts at Zycus:
Zycus do not have a defined Knowledge Management system but it implements the knowledge management techniques by having following

- knowledge hub in the company’s portal where there are whitepapers, insights, blogs, eBooks, research reports, analyst reports, case studies etc

- Webinars, provides videos of expert speakers on particular topic.

- intranet and extranet facility for knowledge sharing among geographically separated centres.

- having connected to social networking sites such as twitter, facebook, RSS etc.

PUNE REGION

4.17 SailPOint, Pune:

SailPoint is the fastest-growing, independent identity and access management (IAM) provider and helps the world's largest organizations securely and effectively deliver and manage user access from any device to data and applications residing in the datacenter, on mobile devices, and in the cloud. The company's innovative product portfolio offers customers an integrated set of core services including identity governance, provisioning, and access management delivered on-premises or from the cloud (IAM-as-a-service).

Software Development Life Cycle at SailPoint:

SailPoint implements Agile Scrum Methodology for the development of software. Company also adopts Waterfall model

Knowledge Management Initiatives at SailPoint:

CustomerSuccess Customer success is SailPoint’s top priority. SailPoint strive to bring customers together whenever and wherever possible to share best practices and lessons learned with one another.

Compass Community Portal: This is online SailPoint community which provide support centre, a knowledgebase, training information, technical documentation and discussion forums.

Navigate User Conference SailPoint's annual conference having in-depth case studies, product demonstrations, hands-on training, technical sessions and more.

4.18 Accenture, Pune:
Accenture is a multinational company providing IT solution, services, and Business Process Outsourcing serving to clients across the globe with its physical presence in 120 countries and huge manpower of 257,000 skilled and trained employee. It has its relationship with world's leading companies; 92 of Fortune 100 have been clients of Accenture. Accenture traces back its existence from 1950 since the installation of first computer. Accenture has received many awards and recognition proving its excellence in this field.

**Software Development process at Accenture:**

Accenture’s Application Development and Maintenance services provides complete end-to-end solution to its clients right from requirement analysis, design to implementation and maintenance of the software. Accenture throughout its journey of software development has incorporated many lifecycle models like waterfall, RAD, RUP, Agile and Object-Oriented. Accenture provides an innovative, faster, cost effective, design, build and run framework for application development. This framework has been very successful and satisfactory for the clients as it gives accelerated speed, reduced cost and improve performance. Around 200 organizations has got benefited from this innovative framework of design, build and run.

![Fig 4.5: The Design, Build and Run Framework.](source: www.accenture.com)

**Knowledge management Efforts at Accenture:**

Accenture one of the largest IT company, it does implement the concept of Knowledge Management and also made its entry into MAKE (Most Admired Knowledge Enterprise) list. Accenture had started implementing the concept of Knowledge Management since 1993. The company had following tools for knowledge management:

KX (Knowledge XChange): The KX is a knowledge repository of the company, KX being established in 1992 went over many enhancements since then and now today is a full-fledge KMS providing knowledge sharing, retention and dissemination. KM at Accenture is designed on SECI model of Nonaka. Some other tools implemented for knowledge management are PX (Pocket Exchange), SmartWorkplace, OCTEL etc.
4.19 Amdocs, Pune:

Amdocs is one of the world’s leading company providing business solutions to its customers and helping them improve their efficiency and reduce cost. Amdocs established long back in 1982, today is one of the leading company with a manpower of 17000 and branches across the globe covering 50 countries. Amdocs provides IT products, solutions and services such as Smart Agent Desktop, retail experience solutions, Mobile payment Solutions, OSS (Operations Support Systems) Solutions, Customer Management services, Revenue Management services and many more. Today many big companies rely on Amdocs for its solutions and services. Amdocs, Headquartered in USA, is a global company with its presence in countries from continents USA, Asia, Europe, Middle East. Amdocs is honoured with number of awards for its excellence.

Software Development at Amdocs:

Software development methodology at Amdocs is decided on the basis of requirement of the project. The company implements Waterfall, Agile, Rational Unified Process or Rapid Action Development model based on the requirements.

Knowledge Management at Amdocs:

Amdocs has efficiently implemented knowledge management techniques. Its AMLS tool acts as a knowledge sharing portal. Also the company has many efforts for knowledge sharing, retention and dissemination.

4.20 Capgemini, Pune:

Capgemini is world’s leading company for consulting, IT services, outsourcing and local professional services. Established 40 years back Capgemini today has having a talent pool of around 120,000 people across more than 40 countries. Capgemini, India is empowered with nearly 370000 employees having its branches in 7 major cities of India.

Software Development Process at Capgemini:

Capgemini follows Service Oriented Architecture (SOA) approach for its application development. With this approach business can expand and improve over the time via small, discrete development projects. Also capgemini provides CMMI Level 5 factory framework
approach which reduce cost and improve efficiency for its clients. Software are designed and built using the company’s Accelerated Solutions Environment.

**Knowledge Management efforts at Capgemini:**

Capgemini has implemented Knowledge Management tools and techniques to give its client sustained competitive advantage. Also Capgemini has helped its client to implement knowledge management system. Capgemini uses following tools for leveraging knowledge management

- **Integrated architecture framework**: this is used to approach and govern all Enterprise Information Management initiatives
- **Knowledge management roadmap and scorecards**: used to assess business and technology needs
- **Rapid design and visualization toolkit**: used to rapidly validate requirements and compress design time cycles

**4.21 Cybage, Pune:**

Cybage is a leading IT company involved in providing software services to its clients. The company has its offices in India, US and UK, headquartered in Pune. Cybage has its existence since last 16 years with a total manpower of 4000 IT professionals. Cybage is SEI CMMI Level 5 and ISO 2007 certified and also honoured many awards and recognitions for its services.

**Software Development Process at Cybage:**

Cybage has its own methodology, Cybage Software Methodology, this unique methodology designed is always reviewed for improvement. Following are the stages of development process

- Initiation Phase (Scoping, Feasibility, Proposal)
- Requirement/System Study
- Analysis
- Design
- Construction and Unit Testing
- System Testing
• Deployment, Acceptance Testing and Knowledge Transfer
• Warranty
• Maintenance and Support

Knowledge Management efforts at Cybage:
Cybage does not have a defined Knowledge Management System but the company still maintain a practice of knowledge sharing, acquisition and dissemination via its portal.

4.22 Cognizant, Pune:
Cognizant was established as an independent company in 1996 with a huge employee size of 145,200 headquartered in New Jersey (U.S), having its footprints across the world. Cognizant is one of the top companies providing Information technological, consulting and Business Process Outsourcing services to world’s leading companies helping them to make their business more efficient and stronger. The company has been ranked in among the top performing and fastest growing company.

Software Development methodology at Cognizant:
Cognizant follows the traditional form of development steps beginning from defining the requirement, write specifications and then design, code, test and integrate the software across multiple platforms. It follows one of the two approaches for its application development and integration.

1. Full life-cycle application development, in this approach the company takes the full responsibility of start to finish development of software i.e. the company performs all the steps of SDLC right from analysis, design, implementation, test and integration of systems using the traditional Waterfall Software Development Life Cycle (SDLC) Model.
2. Cooperative development, here the experts from Cognizant works with in-house IT personnel of Client company so that they can jointly analyze, design, implement, test and integrate new systems.

Knowledge Management efforts at Cognizant:
At Cognizant there are various majors taken to provide a knowledge sharing environment where people can share their knowledge and create a knowledge repository as well as disseminate knowledge, to help company achieve its goal efficiently.
Cognizant 2.0:
Cognizant has provided a platform called Cognizant 2.0 or C2 with which employees across the globe are connected via a single platform. Cognizant has its delivery centers scattered across the globe but with the help of Cognizant 2.0 still they can share knowledge, services and resources easily and efficiently even when they are geographically separated in different countries or cities.

Cognizant eCommunity:
The Cognizant eCommunity is an online community made specially for the senior IT executive and business leaders. Here they can form shared interest groups, view various multimedia presentations and articles. They can publicize their profile and interests.

Cognizant Journal:
This is a leadership journal published biannually for readers across the globe, it contains insights, emerging strategies and practices to enhance their IT excellence.

4.23 Elves Technology, Pune:
Elves technology is a company providing web-based solutions such as web site development, search engine optimization, E-commerce development, web hosting &consulting, apart from this the company also provides business software development solutions. The company has its branches in major cities of India like Pune, Mumbai, New Delhi.

Software development process at Elves Technologies:
Elves is dedicated for developing web sites, following are the stages of web site development

- Concept Analysis
- wireframe and design
- database development
- programming
- Testing and Bug Fixing
- Enhancements and optimization.

**Knowledge Management efforts at Elves Technologies**

Knowledge management is not established strategy at Elves. The company does not implement much efforts for incorporating knowledge management, KM can be suggested to company for improving its efficiency.

**4.24 Fujitsu Technology, Pune:**

Fujitsu is one of the world’s leading company providing IT products, solutions and services. Fujitsu is a Japanese company headquartered in Tokyo, having its historical existence since 1935. Today Fujitsu has its branches in nearly 100 countries with manpower of 173,000 skilled and trained professionals worldwide. The company provides IT Products, solutions and services to clients from every verticals. The company’s core area of business lies in providing Application Management Services, BPO & KPO services, Consulting, Data Centres, ERP & SAP, Product support services and many more.

**Software development process at Fujitsu:**

Fujitsu is a huge company with historical existence. The company throughout its journey in providing IT solution and services has implemented various methodologies for software development from traditional methodology to latest ones. The company has implements following methodology

- Waterfall model
- Rational Unified Process
- Agile software development
- Rapid Action Development.

**Knowledge Management at Fujitsu:**

Fujitsu is one of the active company in implementing knowledge management. The company also provides knowledge management implementation service to its clients. Fujitsu has been listed by KMWorld in “100 companies that matter to knowledge management”. Fujitsu’s Interstage Suite enables knowledge management practices in the company which helps to turn the intellectual assets and process into strategic advantages.
4.25 IBM, Pune:
IBM (International Business Machines) one of the most oldest company completing its century, provides IT solutions, with its operation in overwhelming 170 countries. IBM is a world leader in providing technological solutions and innovations. IBM has its presence in India since 1992. IBM India distinguishes itself from others as it provides its solutions to nearly all industries like finance, education, business, government, health, automotive and many. IBM offers hardware, software and outsourcing solutions and services. From custom application to ERP to e-business from BPO BPM to KPO the company has huge functional area. With a overwhelming employee size of 433,362 people the company is still growing, adapting new trends and innovating new technologies. IBM has been honoured with many awards and recognitions.

Software Development process at IBM:
IBM has covered a long journey in the field of software development, throughout its journey IBM has been improvising innovating its software development methodology. Starting earlier with a traditional waterfall model to today new buzz Agile development model, IBM has implemented various methodology. But today IBM’s main focus is on Agile software development framework. The adaption of Agile framework provides low cost & risk and high performance. The key capabilities of Agile development are

- provides integrated tool for plan build and deliver agile software
- provides a free open delivery platform
- provides facility to deliver complex embedded systems, support large and distributed team

Knowledge Management efforts at IBM:
IBM is one of earliest adapter of Knowledge Management technique since 1994. IBM has also won awards for its knowledge management initiatives. IBM has implemented following tools to leverage KM facility

KnowledgeView: it’s a knowledge sharing program, containing knowledge repository, discussion forum. IBM has supported Asset reuse program with which the assets are reused for another project thus saving time cost and improve efficiency.
Xtreame Portal: portal is designed for knowledge sharing and collaboration for software sellers

Providing knowledge sharing culture, knowledge incentives and rewards training are few more efforts by IBM.

4.26 Infosys, Pune:

Infosys established in 1983 by seven people is today’s world leader which provides business consulting, technology, engineering and outsourcing services to clients across 30 countries to help them enhance their efficiency. Infosys has pioneered in the GDM (Global Delivery Model) where it takes work to the best talent. Infosys has global footprints with 60 offices and 69 developing centers around the world with huge talent pool of 153,761 employees. Honored with many awards consistently by its clients, industry bodies, media and other influencers. Few awards among the many are “Most innovative Company”, “Leading technology company”, “Most Admired Knowledge Enterprise”, “Titan Award” and many. Infosys has been recognized by major certifications such as ISO, CMMi etc.

Software Development Process at Infosys:

Infosys follows a “software development factory approach” across the lifecycle with frameworks, test Automation tools, Integration of engineering tools, virtualization tools, readily available resource to ensure optimum productivity.

![Fig. 4.6: Overall project management process.](source: www.infosys.com)
Knowledge Management Efforts at Infosys:

Infosys has been awarded with prestigious MAKE (Most Admirable Knowledge Enterprise) award for its excellence in transforming enterprise knowledge into wealth-creating ideas, products and solutions. KM at Infosys is central to a core strategy. Infosys offers a knowledge management framework that encompasses business strategy, people, processes and technology.

Infosys manages organization-wide knowledge using three centrally operated knowledge repositories- knowledge-Shop (K-Shop), Process Asset Database (PAD), People Knowledge Map (PKM), Incentives for Knowledge sharing, Recognizing and Rewarding Innovation and KM.
Fig 4.8: Three components of Knowledge management

Source: www.infosys.com

K-Shop: Infosys built the K-Shop architecture on Microsoft site serve technology and all employees can access it through a web interface.

Process Asset Database: Here a database is maintained which contains the employee’s experience on projects, project artifacts such as project plans, design documents and test plans. This helps new projects with information on similar, previously executed projects.

People Knowledge Map (PKM) is a directory of experts in various fields. It is an internet-based system where employee can search and locate experts.

Incentives for knowledge sharing is another feature of KM at Infosys. When an infosyian submits a document to the K-Shop, experts review it and publish it if accepted. The author of the document is then awarded with Knowledge Currency Unit (KCU).

Recognizing and Rewarding Innovation and KM is done through Funding for presentation at conferences, publications on Web Sites, “ideas beget wealth”- the Syslabs awards for technical innovation, best practice sharing, KCU (Knowledge Currency Unit).

4.27 KPIT Cummins, Pune Region:

KPIT Cummins is a leading technology solution company. It is solution partner to global manufacturing corporations. The company leverage IT solutions and Product Engineering to its clients. It provides IT solutions to help its client to run their business more efficiently and it provides Product Engineering where it provides solution to its clients for making their products more efficient.

KPIT has its major focus on Automotive, Energy Utilities, Industrial Equipments and Semiconductor industries across the globe. The company is very huge and diverse in its functionality. Software Development is one of the services provided by the company. The company was established 20 yrs ago and Headquartered in Pune, India with an employee size of 7700+. The company is ISO 9001:2008, CMMi-Dev, ISO 27001, BS25999:2007 certified.

Software Development Methodology used at KPIT Cummins:
Agile Offshore Software Development
Frameworks and Bizdgets for Faster Development
Reusable Asset Repository to Speed Up Development
Framework for Zero Defect Delivery.

**Knowledge Management efforts at KPIT Cummins:**

-TechTalk, is a quarterly theme based journal for all technologists, customers, and employees to come together and share their knowledge and expertise.

-TecXpedition, is an annual theme-based event which is designed to reveal the ‘techie’ talent. It gives an opportunity to exhibit the technology prowess and also exchange the functional know-how.

-TechXchange, is an internal blog where people at KPIT share their views, post questions or view any latest update in technology.

**4.28 Mphasis HP Company, Pune:**

Mphasis company was established in the year 2000 as a result of merger of a US-based (Mphasis Corporation) and Indian-based (BFL Software Ltd.) company. Mphasis company is involved in providing Application services, BPO services, and infrastructure services to its clients from varied verticals and helping them to improve their efficiency. The company has its footprint across the globe having delivery centres in many countries and headquartered in India. The company has a manpower of 40,000 trained and skilled professionals. Mphasis is certified with ISO/IEC 27001:2005, assessed at CMMI Level 5, Six Sigma, SEI CMMI services.

**Software Development at Mphasis:**

Mphasis is CMMI-Level 5 certified company, during its software development process within the CMMI Level 5 framework, Mphasis has incorporated various methodologies along with the traditional Waterfall model, Spiral Model or iterative model. Mphasis has also implemented the latest methodologies such as

- Agile software development
- Rational Unified Process (RUP)
- Rapid Action Development (RAD)
- Object Oriented Development.

Apart from this the company also has a Virtual Team Delivery Model for the teams who are geographically separated.

**Knowledge Management at Mphasis:**

Mphasis does implement strategies which result in incorporating knowledge management practices. The company has proper facilities for knowledge repository, retention and dissemination and also provides means for conversion of tacit knowledge to explicit and vice versa.

**4.29 Senate Technologies, Pune**

Senate is an IT company established with an aim to provide IT solution and services to clients at a global level. The company is focused on providing business solutions and consulting services focused on achieving strategic advantages. Senate develops highly productive work models and bring values to corporate systems and data. The company is specialized in industry-specific solutions, outsourcing, and integration services like Application development and maintenance, IT security and solutions, Mobile Application, Oracle and Microsoft solutions. Senate has its global presence in US, UK and India.

**Software development at Senate:**

The main goal of application development at Senate is to provide valuable, cost-effective, high speed and low cost software solution to its client. The company follows the role based division model of following stages

- Analysis
- Designing
- Coding
- Testing
- Implementation
- Maintenance.

**Knowledge management efforts at Senate:**
As senate is a small scale company it does not have a defined knowledge management system. Knowledge management features such as knowledge sharing, repository or dissemination are incorporated indirectly.

4.30 SpancoTele, Pune:

Spanco is a leading company providing IT solutions, headquartered in India and having its footprints in UK, Qatar and USA. The company has its main focus on government sector helping the central and state government improve their efficiency.

Software Development Process at SpancoTele:

The company provides custom application development to clients from different verticals having main focus on Government sector. The application development process is traditional system of following steps:

- Requirement Analysis
- Design
- Coding
- Testing
- Implementation
- Maintenance

Knowledge Management Efforts at SpancoTele:

Knowledge management system is not a defined system at SpancoTele but the company takes many initiatives for implementing knowledge culture in the company. There are efforts for providing knowledge sharing, retention and dissemination efforts.

4.31 Syntel, Pune:

Syntel is an world leader in providing Information technology solution and KPO (Knowledge Process Outsourcing) solution. Established in 1980 having its Headquarter in Michigan and global development centers in India and US, founded by Bharat Desai and Neeta Sethi. Syntel has a manpower of 19400 with revenue of $642 million as on 31 Dec 2011. Syntel has 27 worldwide facilities, located in the USA, UK, Germany, Singapore, Australia and Hong Kong. The Global Delivery Model of Syntel allowed offshore developers from India to communicate with the onsite Project managers of client’s site via international
telecommunication network. Syntel was among first US based company to offer this service to its clients.

**Software Development Process at Syntel:**

Syntel is partner to many companies from Fortune 500 for application development, enhancement, transformation or consolidation. Syntel modifies its development methodology or framework as per the requirement of project. It follows structures, repeatable and consistent development process. Syntel’s development components can be categorized as follows:

1. **Latest to legacy technology tools:** Syntel has capability to work on all latest technologies.

2. **Methodology, frameworks and tools:** Syntel implements its methodology keeping in mind requirements of project. It follows waterfall, rapid application development or iterative model depending on the requirement.

3. **Component factory:** it is focused on developing reusable models and frameworks to reduce development cost and time.

4. **Centre of Excellence:** The software development lifecycle process id supported by the centre of excellence including ECM, BI/DW,.NET and Others.

5. **Knowledge Transfer and Retention:** This process collects the intelligence and disseminate the knowledge among team members and makes the team more efficient.

6. **Rigorous Quality:** The company follows all standards such as ISO, CMMi, and PMI for its software development process.

7. **Alliance and partnership:** The company has alliance with leaders such as Microsoft, Oracle, HP etc to provide best to its clients.

**Knowledge Management Efforts at Syntel:**

Syntel has a defined knowledge management system as Knowledge Acquisition and Retention Plan (KARP™). Syntel’s knowledge management is an important part of its strategy. KARP focus on to capture, retain, retrieve and distribute tangible Knowledge Assets through the use of a structured framework of activities, tools and techniques.
4.32 TCS, Pune:

TCS is one of the world leading company providing IT solutions. Established in 1968 as a division TATA Sons later in 1995 got incorporated as separate entity. TCS offers IT solutions, business solutions and outsourcing to clients from all verticals. TCS has been rewarded and acknowledged for its reputation of maintaining excellence. TCS has its footprints across the globe in around 42 countries with a huge skilled, best trained talent pool of 238,583. TCS is certified with IEEE, ISO 9001:2000, CMMi Level 5, SMW, and Six Sigma.

Software Development Process at TCS:

TCS’ Application development and Maintenance service include custom application development, Application Management, Application modernization or application re-engineering. TCS follows the standards and framework set CMMi Level 5 model along with it TCS implements the development life cycle model depending on the requirement of the project any of the following model is used

- waterfall model
- Agile model
- RUP model
- RAD model
- OOAD model
- Structured analysis model

Knowledge management efforts at TCS:

TCS has implemented Knowledge Management system framework named 5iKM3 based on the Maturity Model. 5iKM3 model addresses the three pillars of KM people, process and technology. TCS has a well defined and implemnted KMS process. TCS is also awarded with MAKE award i.e Most Admired Knowledge Enterprise.

NAGPUR REGION

4.33 ADCC Infocad Pvt. Ltd, Nagpur:

ADCC Infocad is company under Meghe Group Company having its expertise in varied areas such as Information Technology, Manufacturing, Power, Media & Entertainment.
ADCC provides its services to major corporate as well as Government sector. ADCC leverage technological solutions as well as domain knowledge solutions to its clients and help them improve their efficiency.

ADCC was established on 5th May 1998 having its headquarter based in Nagpur, Maharashtra. ADCC has its regional offices in major cities of India, such as Mumbai, Pune, Raipur, Bhipal. ADCC employees more than 350 peoples. It has its GIS centers located in Nagpur and Hyderabad. ADCC Infocad is ISO 9001:2008 certified other certifications include CRiSi SE 1B, NSIC ISO 9001:2008

Apart from software development, ADCC’s core area of business domain include GIS & Photogrammetry, Engineering design services, automation solutions, commercial software solution,

**Software Development process at ADCC Infocad:**

The Software development life cycle has following steps

- Design
- Prototyping
- Implementation & Training
- Installation
- Maintenance

**Knowledge Management Efforts at ADCC Infocad:**

ADCC Infocad has a good sharing and learning environment. ADCC has its own Academy for training in various specializations in technology. The company portal is linked to social network providing a platform for knowledge sharing. There is a reuse of knowledge during various stages of SDLC.

**4.34 India Active Group, Nagpur:**

India Active Group Company is an Information Technology company which has its excellence in the area software development, web development as well as in film
productions. The company is making its place in the market with its existence since last 3 to 5 yrs. It has its customers across India. Its has talent pool of around 25 to 50 employees.

**Software Development Process at India Active Group:**

The software development team follows the traditional Waterfall model with following steps

- Analyze
- Design
- Coding
- Testing
- Implementation
- Maintenance

**Knowledge Management Efforts at India Active Group:**

The company’s Knowledge management system is still not at its mature stage. It has a knowledge sharing environment among its staff. There is maintenance of explicit knowledge. It uses social networking website link as a platform for knowledge sharing.

4.35 **Infocraft Technologies, Nagpur:**

Infocraft Technologies is an IT company established in the year 1997. The company has a team enthusiastic, hardworking, team of professionals engaged in delivering IT services and solutions to clients from varied verticals. Infocraft’s IT services and solutions include custom software development, web services, cloud computing, infrastructure services, ERP and performance management. Infocraft has delivered up till now 100 software solutions to clients across India. The company is ISO 9001:2000 and ISO 2700 certified.

**Software Development Process at Infocraft:**

Infocraft makes use of the best suitable software development methodology among various methodologies available. Infocraft does use a combination of methodologies such as Agile, RUP (Rational Unified Program) or Integrated Methodology (IM). The basic model as implemented by Infocraft is as follows

**Knowledge Management efforts at Infocraft:**

Infocraft does not have a knowledge management system as a defined process but indirectly the company implements the practices of KM by providing a knowledge retention and
sharing facility at the company portal in the form of White paper, case studies. The company also provides knowledge enhancement to its employees by arranging seminar, workshop training and discussion forum. Links to social networking is also provided for knowledge sharing and capture.

4.36 KloudData Labs, Nagpur:

KloudData is a Business and IT consulting Services Company having a special focus on CLOUD. The company also provides SaaS platform to enterprise applications. The solutions and services provided by the company cover entire enterprise by dividing them into three areas iKoud, eKloud and mKloud. iKloud provides services based on SAP, big data, text analysis, in-memory analysis etc. eKloud delivers high performance enterprise strategies and resource planning services in the cloud. mKloud manage and enhance mobile infrastructure with right apps and device management solutions. The company has its headquarter in the United States in Fremont, CA with offices in Columbia, Maryland and in Nagpur and Pune in India.

Software Development process at Klouddata:

KloudData is involved in developing mobile application software along with SAP solutions. The mobile application is developed in following phases:

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Fig 4.9: Software development framework.

Source: www.infocraftindia.com
**Fig. 4.10** : Phases of mobile software development

**Source:** http://kloudata.com/mkloud-mobility/services/mobile-app-development

**Concept:**

KloudData begins with customers, right from concept development and feasibility analysis. The concept development process involves research and analysis on the scope of the application, its USP, its target users and the mileage it will offer the client’s brand. The feasibility studies will gauge the economic, technical, schedule and operational feasibility of the app in question depending on its practicality and competitive advantage.

On completion of feasibility studies, we begin the actual app development process which follows a scheduled time frame and structured development.

**Design:**

KloudData do rapid prototyping with mock-up screens to get end users feedback and improve on the application design. Development starts once the mock-up is approved. The MVC (Model View Control) framework is used, wherein, work on is executed Model in parallel with mock-ups and implement View & Control with approved screen designs.

**Implementation:**

The final design is handed over to the development team, who use a coding standard developed in-house to allow continuity in case a team member is replaced mid-project. This
ensures there are necessary knowledge overlaps in the process. Each person also does the unit
testing for their own piece. This helps reduce the bug fixing and testing time.

**Knowledge Management Implementation at KloudData:**

KloudData identifies the importance of knowledge sharing and acquisition and have termed
knowledge sharing as one of the success factor. KlouData provides an environment for
knowledge acquisition, creation and dissemination via Blogs, Communities, Insights,
NewsRooms, Social Networking and Training.

**4.37 Microorange technologies, Nagpur:**

MicroOrange is one of the fastest growing IT company in Nagpur. MicroOrange provides IT
solutions and services to clients from different verticals. The IT solutions and services at
MicroOrange include Web Solution, Application Development and ERP solution. Armed
with well trained talented team of professionals MicroOrange is carving its niche in the
market with its ability to provide efficient productive service to its clients. The company has
a business alliance with leading IT company

**Software development process at MicroOrange:**

The company follows a proper methodology for its software development comprising of
following stages;

- Understanding the Business process

- Requirement Analysis & Work Flow

- Designing for effective presentation.

- Development & Testing

- Integration, Deployment

**Knowledge management efforts at MicroOrange:**

The company does not have a defined knowledge management system, as it is still on its
early stage of development. The company can be suggested to implemented knowledge
management system to improve its efficiency.
4.38. **Persistent Systems, Nagpur**:

Persistent company is involved in providing IT solutions since 1995, have its key areas in health, Education, Community development. Persistent has pioneered in the field of IT by providing Application development, Cloud computing, Mobility, Big Data, embedded, security solutions. Persistent has until now developed 3,000 products to nearly 300 customers. The company is honoured with many awards and recognitions. Persistent is partner with world leader companies like IBM, Cisco, Nokia, Microsoft.

**Software development process at Persistent:**

Persistent follows the role based division for its development process. The teams are divided on the basis of their role in the following stages

- Product concept
- Product Design
- Product Engineering & Development
- Professional Services
- Maintenance & support
- Industrial Design and Engineering.

**Knowledge Management efforts at Persistent:**

Persistent does have a defined Knowledge Management system but there are efforts taken where the features of knowledge management are implemented like company’s portal provides insights, blogs, whitepaper, ebooks, articles and case studies which encourage knowledge sharing, retention and dissemination.

4.39. **Platys Group, Nagpur**:

Platys is a US based company having its offices in India. The company provides IT solutions and services to clients from different verticals. The company’s core competency lies in its domain knowledge and implementation of all latest technology like cloud computing, remote support, mobile application, Web application, ERP & SAP, knowledge management and software development.
**Software Development Process at Platys Group:**

Platys dedicate ample amount of time in understanding customer requirement and business requirements. Following are the features of development process:

- Plan, design, build, test and implement application within strict quality standards.
- Fully integrate them into clients' business processes and system environments.
- Special emphasis on scalable web application development.
- Delivery on time and within the

**Knowledge Management Implementation at Platys Group:**

Platys Group does not have a defined knowledge management system, but yet the company does incorporate the features of KM by providing facilities of knowledge sharing, knowledge retention and dissemination.

**4.40 Trust System Software, Nagpur:**

Trust system software is a well established company having its existence since last one decade. The company is leading IT solution provider to clients from varied verticals with a talent pool of 100+ IT professionals. Trust system has its main focus on implementing SAP application. The company has provided SAP solution to clients from around 30 different verticals. Trust has its brand software for banking, government and finance. The company is ISO 9001: 2000 certified.

**Software Development process at Trust:**

Trust system follows a RAD (Rapid application Development) Methodology for its software development process. In RAD methodology the analysis, design, build and test phases are compressed into a series of short iterative development cycle. The iteration allows self correctness.

**Knowledge Management Process at Trust:**

Trust is a big company, its reputation in the market and diversification in its business makes knowledge management an indirect part of the organization. Though not defined but the company does incorporate the features of KM by providing facilities of knowledge sharing, knowledge retention and dissemination.
4.41 Vista Software, Nagpur:

Vista Software is a small scale IT company providing IT solutions and services. Vista software specializes in GIS applications and Document management application. The company has a small employee size of talented, skilled professionals. The company is serving its IT services to clients from diversified fields.

**Software Development Process at Vista Software:**

The development process has following steps

- Analyse
- Design
- Coding
- Testing
- Implementation.

**Knowledge management at Vista Software:**

As the company is a small scale company having a small employee size it does not have a defined knowledge management system. The company can be suggested to improve its efficiency by incorporating knowledge management practices.

**AURNAGABAD REGION**

4.42 Integrated Software Solutions, Aurangabad:

Integrated Software Solution is a small scale company involved in providing software solutions. The company has its clients from varied fields of education, health, business and more. The company also provides web solutions, hardware solutions, networking solutions. Established by few IT professionals the company today is one of the growing company in Aurangabad.

**Software Development process at Integrated Software Solutions:**

The development team follows waterfall model comprising of following steps

- Analysis
- Design
Knowledge Management efforts at Integrated Software Solution:

Knowledge management is not a defined process at the firm but indirectly the firm implements the concepts of knowledge management.

4.43 Qualsoft, Aurangabad:

Qualsoft is a budding software company in the less competitive market of Aurangabad. Qualsoft established in 2007 by a team of software professionals now, has a renowned name in the field of IT. The company provides IT solutions to industries of varied verticals such as education, healthcare, government, banking etc. The company not only provides custom software development but also website development, data warehousing and mining solutions, SaaS solutions, Cloud computing and more. The company has developed brand software for education, health and hotel management. The company is one of the fastest developing firm has a bright future ahead in coming years.

Software Development Process at Qualsoft:

Qualsoft follows the traditional method of waterfall model for its development life cycle having following steps:

- Analysis
- Design
- Coding
- Implementation
- Maintenance

Knowledge Management efforts at Qualsoft:

Qualsoft does not have a defined knowledge management system but the firm indirectly has a environment of knowledge sharing, repository and dissemination.
4.44 Safacom Services, Aurangabad:

Safacom is recently formed software company by enthusiastic IT professionals. In a short span of time safacom was successful in making its place in the market. The expert team of programmers at safacom has provided software solutions to many clients from varied areas such as education, hotel, hospital, government. Apart from software development Safacom also provides web based solution, networking, hardware services, data processing.

Software development process at Safacom:

Safacom follows the simple waterfall model for software development process

-Analysis
-Design
-Coding
-Testing
-Implementation
-Maintenance

Knowledge management efforts at Safacom:

Knowledge management is not implemented as a defined process at Safacom. Indirectly the company does implement the concept and techniques of knowledge management.

4.45 Cognifront, Nashik:

Cognifront established in 2007 has a unique and most valuable mission of combining education and technology together. And towards fullfiling their mission cognifront is engaged in developing products for eLearning and Multimedia Development. The professional team at Cognifront comprises of IT experts, Researchers and Academic experts.

Software Development process at Cognifront:

Cognifront is primarily focused on developing web based e-learning software. Cognifront follows the process of

- Requirement Analysis
- Web page coding
- Testing
- Uploading the web site.

**Knowledge Management efforts at Cognifront:**

Cognifront being a small scale company does not have a defined knowledge management system but, the company has a knowledge sharing, experience reuse culture so can be suggested to implement Knowledge management technique to make the company more effective and efficient.

**4.46 Omega Systems, Nashik :**

Omega systems is a well established IT company in Nashik, Maharashtra. Omega systems provides IT solutions to varied fields such as government, bank, corporate, education etc. Established in 1994 Omega systems through its excellence captured the IT market in the city and is now one of the well known IT company. The company is a business partner with leading IT giants such as IBM, HP, Acer, APC and Epson. The company has its installation centres through out the Maharashtra state. The company also pioneers itself in providing GIS solutions, networking and Web solutions. The company is enriched with experienced, hardworking and trained employees.

**Software Development process at Omega Systems :**

The company’s software development cell follows the traditional methodology of waterfall model comprising of following steps.

-Analysis
-Design
-Coding
-Testing
-Maintenance
-Deployment

**Knowledge management efforts at Omega :**

The company as its a small scale company with small employee size does not have a defined Knowledge management systems. But the company does have a learning culture, reusability of past experience and storing knowledge facilities which are key components of Knowledge management.
4.47 VirtueTech, Nashik:

Virtue Tech is a small scale software company founded by a group of 20-25 IT professional, in the year 2002. Virtue Tech provides IT products and services to clients from varied areas. The company has developed a Time Attendance System, Fingerprint reader, Location Based system. The company has hardworking professional team striving hard to make their place in IT field.

**Software Development Process at VirtueTech:**

The software development process at Virtue Tech has following steps

- Requirement analysis
- Designing
- Coding
- Testing
- Maintenance

**Knowledge Management Efforts at Virtue Tech:**

As the company is too small comprising of 20-25 IT professionals it does not have a knowledge management system established but can be suggested to implement the technique to guarantee a bright strong future.

4.48 Jalgaon Janata Infotech, Jalgaon:

Jalgaon Janata Infotech (JJIT), is a leading software solution company in Jalgaon. Established in 1997, by some IT professionals and banking experts. JJIT has done more than 800 installations in Maharashtra and other parts of India. Jalgaon Janta Infotech is a ISO certified company. JJIT has provided banking solutions for ATM, AWM, SMS Banking, HO Module and other banking solutions. JJIT has its registered office located in Pune and a branch office in Jalgaon.

**Software Development Process at Jalgaon Janata:**

The software development process has following steps
Knowledge Management efforts at Jalgaon Janata Infotech:

Knowledge management is not a defined process at the firm but indirectly the firm implements the concepts of knowledge management.

4.49 Vaneera hi-tech, jalgaon:

Vaneera Hi-Tech is a software solution company founded by Mr. Vasu Mahajan. The company’s main focus is providing IT solution in Pharmaceutical industry. It is a Export Oriented Unit registered under STPI (Software Technology Parks of India) and certified ISO 9001:2008 and ISO 27001:2005. Vaneera is armed with enthusiastic team of professionals. Vaneera provides IT consulting, Application Development and Maintenance, Design and Implementation of MIS, Financial Control and Inventory and Application re-engineering.

Software development at Vaneera Hi-Tech:

Software development process at Vaneera is achieved using Waterfall Model comprising of following steps

- Analysis
- Design
- Coding
- Testing
- Maintenance
- Deployment

Knowledge Management efforts at Vaneera:

Knowledge Management is not established system at Vaneera but, indirectly the concepts of knowledge sharing, retention, dissemination are implemented.
4.50 Gigabyte software, Jalgaon:

Gigabyte Softaware is a small company with small employee size, engaged in Website Designining, Web Development, Software Development and Web Promotion. The company is recently established and focusing on making its place in the market.

Software Development Lifecycle at Gigabyte:

Software development process at Gigabyte is achieved using Waterfall Model comprising of following steps

- Analysis
- Design
- Coding
- Testing
- Maintenance
- Deployment

Knowledge Management Initiatives at Gigabyte:

Knowledge management is not a defined process at the firm but indirectly the firm implements the concepts of knowledge management.
References:

1. http://www.3iinfotech.com/content/services/application_development_maintenance_services.aspx
5. www.igate.com/
6. www.kaleconsultants.com
7. www.mkttech.in
8. www.navteq.com
9. www.oracle.com/in/
10. www.polarisind.in
11. www.quinnox.com
12. www.rolta.com
13. www.techmahindra.com
14. www.tandongroup.com
15. www.wipro.com/india
16. www.zycus.com
17. www.sailpoint.com
18. www.accenture.co.in
19. www.amdocs.com
20. www.in.capgemini.com
21. www.cybage.com
22. www.cognizant.com
23. www.elvestechnology.com
24. www.fujitsu.com/in/
25. www.ibm.com
26. www.infosys.com
27. www.kpitcummins.com
28. www.mphasis.com
29. www.senate-tech.com
30. www.spancotele.com
31. www.syntelinc.com
32. www.tcs.com
33. www.adccinfocad.com
34. www.indiaactive.com
35. www.infocraftindia.com/
36. www.microorange.net/
37. www.klouddata.com
38. www.perspectivesystems.com
39. www.platysgroup.com
40. www.softtrust.com
41. www.nagpurpulse.com/vista-softwares
42. www.qualsofttech.com
43. www.safacom.com
44. www.cognifront.com
45. www.virtuetechindia.net
46. www.omegasystemscorp.com
47. www.jjit.net
48. www.vaneera.com
49. www.jalgaon.infoisinfo.co.in/card/gigabyte_softwares