



Case Studies In Information Technology

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Outsourcing The Content Management Activity For E-Learning Packages

‘Adhyayan Solutions’ is a software company into development of e-learning softwares for 5 reputed banks in India. Adhyayan develops the web-based e-learning software for the concerned banks and make it available on the websites of the banks, through proper authorization. The employees in the bank, at different grades and with different areas of functioning, go through the learning modules, with their own pace. There is an evaluation process followed by feedback, which informs the learners about their score along with weak areas. Teams specialized in to banking domain, along with a strong team of content developers and animation experts at Adhyayan have many success stories to their credit. Adhyayan has recently received a proposal from an outside agency, regarding managing the contents of the e-learning packages. With the idea of having more focus on developing the contents rather than managing them, the core employees of Adhyayan are overjoyed. But there is a group with different view that outsourcing the activity of content management may, at some point of time, hamper the reputation of organization. Identifying the reliability and reputation of outside agency is a difficult task. In spite of the fact that some money and time will be saved, some of the staff members are worried that outsourcing may result into retrenchment.

Confidentiality and security is another important facet and most critical in the view of Mr. Shastri, CEO of Adhyayan. He is aware of some past experiences of other IT companies where outsourcing was totally unsuccessful. Any relaxation on the front of confidentiality would result into heavy penalties, followed by loss of reputation. Mr. Shastri decided to have a feasibility study on the above issue and appointed a team of 3 persons to evaluate the proposal. Team constituted of a technical expert, a senior person with thorough knowledge of banking domain and a networking expert. Team is expected to study the proposal and submit the report within a one month time.

Questions:

1. What Technology related aspects should be considered by the evaluating team in the above situation?
2. What parameters can help in judging the reliability of the agency? Prepare a Checklist for evaluating a similar kind of proposal.

Use of Global Positioning System (GPS) in Logistics Management

‘Smart Telematics’ is a transport agency with a fleet of different types of vehicles. There are special types of vehicles for the transport of liquid, gaseous and solid material. Also, there is a separate set for carrying heavy machines. As a step towards improvement of quality of the service, Telematics plans to implement a Vehicle Tracking System supported by Global Positioning System (GPS).

Vehicle tracking systems are electronic devices installed in vehicles that help in online tracking of a vehicle at a given point of time. This needs to be combined with a cellular communication system to maintain constant contact with the driver and other staff members in the vehicle. This will be supplemented by an alarming system to help in tracking a vehicle in case of stolen vehicles.

GPS allows receivers to accurately calculate the distance of the vehicles from the GPS satellites. The receivers do this by measuring the time delay between when the satellite sent the signal and the local time when the signal was received. This delay, multiplied by the speed of light, gives the distance between the object and the satellite. The receiver also calculates the position of the satellite based on information periodically sent in the same signal. By comparing the two, position and range, the receiver can discover its own location.

The position calculated by a GPS receiver relies on three accurate measurements: the current time, the position of the satellite, and the time delay for the signal. Errors in the clock signal can be reduced using the method above, meaning that the overall accuracy of the system is generally based on the accuracy of the position and delay.

Telematics expects following activities to be handled by proposed implementation of vehicle tracking system.:

1. Effective fleet management has direct bottom-line implications, such as telling a customer when a package will arrive, spacing buses for the best scheduled service, directing the nearest ambulance to an accident, or helping tankers avoid hazards, in case of mishaps.
2. Tracking exact location of vehicle, in case of traffic jams, provide alternate routes, wherever and whenever necessary is another aspect that needs to be handled.
3. Reducing overall cost of logistics through efficient handling of the whole activity.

Q1. Suggest an action plan for the effective implementation of GPS for Logistic management. Mention different hardware and software components required for the implementation of the system.

Q 2. Do you see any limitations of the above system? Explain the same supported by suggestions to overcome them.

Q 3. What are different tangible and intangible benefits of the above-mentioned system to the employees of the organization, to the top management and to the customer?

Q 4. Discuss different factors that constitute to the cost of implementation of such as system Also mention risks involved in implementation.

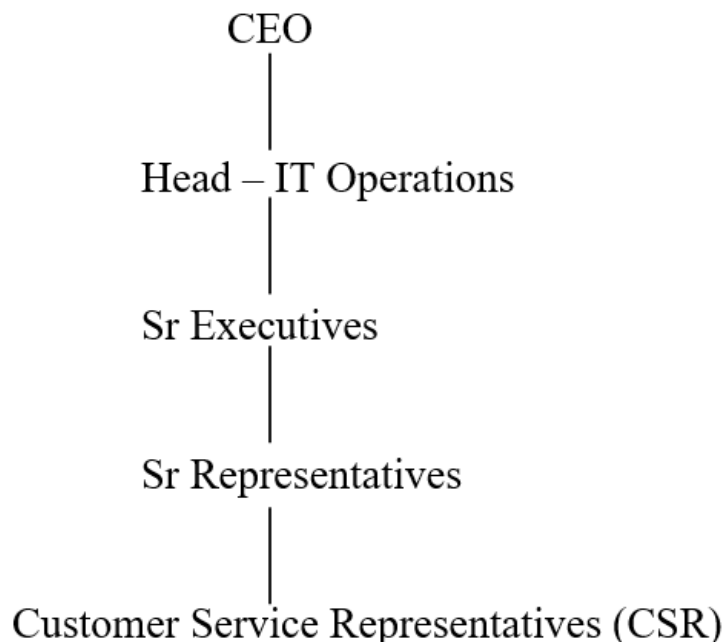
Knowledge Management System (KMS) for Improving Overall Effectiveness of a Call Center

“Do you really think it will work? I have my own reservations about that software”, said Mr. Mishra, CEO of a reputed call center, URVoice Pvt. Ltd, providing service to a well known telecom company. “I don’t think our employees are mentally prepared for such a software. On top of it, the software itself is very costly”.

“I am still optimistic , I think a well planned implementation of a KMS will not only improve our effectiveness, but also increase our credibility amongst our customers.”, insisted Ms. Charu , a dynamic and young lady Heading IT operations at URVoice.

URVoice CEO and IT Operations Head have different opinions about implementing a Knowledge Management System in the organization.

Following is the organization structure of URVoice:



There has been lot of demand for service contract with URVoice, because of its good past record and professional culture. But URVoice has been facing a major problem in managing the load of calls per minute, for almost last 2 months. Organization has a voice based call system with voice recorder and automatic call distributor(ACD). Employees have opinion that they are not able to locate the correct answers to the queries put by the customers. Which in-turn keeps caller waiting for more time. Many times, the callers get irritated with recorded messages and abandon the

call in between. Not to forget, there is legal accountability for information provided to customers. The whole thing has been affecting the performance of each CSR and organization as a whole.

Another thing that is disturbing the CEO is high attrition rate in call center. Rate has been consistently more than 40% for last 8 months. Training the new employees has been a big headache, not only time consuming but a cost overhead also.

URVoice in past followed a system, in which, an ACD distributed the calls automatically, all the discussions were recorded, along with details of caller and CSR. Calls unhandled by CSR, were forwarded to Sr. representatives for further discussion. Any unresolved problem was brought forward in daily group meetings and with the Sr. executives' involvement, problems were sorted out. Head, operations was referred for any policy related decisions.

With increased network of a telecom company, CEO is expecting more business. But, is unsure of the effectiveness. Ms. Charu has put up an option of implementing a Knowledge Management System, with a good user-friendly interface for interaction and a flexible database to back the operations. The KMS is expected to handle queries online, through an interactive front-end. All the solutions to the calls handled can be stored, for further use that can reduce the response time in future. It also automatically records calls handled by each CSR based on the recordings. That can help in finding out the performance by each individual. CSRs don't have to wait for meeting till the end of the day for unhandled calls, but can interact to Sr. representatives and executives for the solution, on-line. A newly joined person can interact with software at his/her own pace, to know the kind of queries that come and possible solutions for the same. System can help in capturing, managing and updating knowledge as well. There is a facility of analyzing the call logs and other statistics to find out the high priority areas.

No doubt, this needs a change in the mindset and behavior for successful deployment of such software. But, a knowledge driven ambiance in an organization can really help in overcoming routing problems and handling off-bit problems with ease, which may further lead to rise in employee satisfaction and morale.

Following are the issues open for discussion:

1. What steps should be followed to implement a Knowledge Management System (KMS) for URVoice Pvt. Ltd.
2. In your opinion, what benefits, a KMS will yield to URVoice Pvt Ltd.?
3. What kind of changes in behavior pattern, do you expect, the employees in organization should adopt for successful deployment of KMS?
4. How KMS can be utilized in training newly joined employees in a call center?

Technology with a human face – Robodoctor

Dr. Krishna Rao , Dean of a famous hospital in India is facing agitation from a group of doctors in the hospital. His decision of pilot implementation of Robots in the hospital is considered to be a big revolution in the field of medicine. Though, the decision is being strongly supported by the Management of the hospital, it is facing a strong resistance by some of the patients and a group of staff as well.

Hospital, in past has experienced problems on account of strikes of doctors and supporting staff. Also, there has always been a high pressure on visiting doctors.

Mr Sahil, a very young and dynamic representative from the company manufacturing the robots, explained following facts about robots to Dr Krishna Rao.

'A robot is made up of several components. A typical robot has a movable physical structure, a motor of some sort, a sensor system, a power supply and a computer "brain" that controls all of these elements. Essentially, robots are man-made versions of animal life -- they are machines that replicate human and animal behavior.

The vast majority of robots do have several qualities in common. First of all, almost all robots have a movable body. Some only have motorized wheels, and others have dozens of movable segments, typically made of metal or plastic. Like the bones in your body, the individual segments are connected together with joints.

Not all robots have sensory systems, and few have the ability to see, hear, smell or taste. The most common robotic sense is the sense of movement -- the robot's ability to monitor its own motion.

Robots can also be used to describe an intelligent mechanical device in the form of a human, a humanoid robot. This form of robot is commonly referred to as an android. One such android of 5'3" height and 100 kgs weight with a camera and tilting screen is being tested out for the hospital, which runs on Windows XP Professional and operates over a wireless 802.11b network which provides a 600Kbps data stream up and downstream.



This robot is controlled remotely by a doctor, whose face appears on the monitor which acts as the robot's 'head'. This is taking telemedicine a step further because one can make the consultation 'patient-centric'. The doctor's control centre has a double screen, webcam and joystick for controlling the robot. As well as being used for patient consultations, the device can help with mentoring and training medical staff remotely.

Dr Rao is fully convinced about the advantages of using a robot in the hospital. In his view, robots will bring multifold benefits to the hospital and patients.

It takes about 15 minutes for doctors to learn to drive the robot. Patient can easily get conversant with the robot since they feel that they are talking to a physician because the physician's face is displayed on the screen. And while the robots won't be floating around your local hospital for a while yet, there are plenty of situations where they could come in handy. For example, an accident and emergency team at a village hospital could call on an expert at a distant hospital who could investigate an injury first-hand. Alternatively a specialist at a big hospital could do his rounds quicker by using the robot - so patients could get discharged faster.

The doctors and staff members resisting the above idea feel that the doctors will be replaced by these robots at some point of time, though this objection is totally ruled out by the management of the hospital and Dr. Krishna Rao. Patients are worried about chances of mistakes in diagnosis through the robot and also think that loss of personal touch with the doctor may delay the process of recovery.

Questions:

Q1. What is your opinion about use of Robots in the hospitals where human life is at stake? Especially if any mishap takes place on account of this system, who will be hold responsible for?

Q2. Do you think a refined version of robots can make the job easy? If yes, what Technological advancement would you suggest for the same?