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KNOWLEDGE SHARING PLATFORM FOR SUPPORTING A RISK MANAGEMENT IN INFORMATION SECURITY

KEERTHI K, MADHURIMA K

M Tech Scholar, CSE Dept, TITS, JNTUH TS.

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Abstract: User's data info of data of knowledge} security is one among the vital consider information security management as 70-80% security incidents occurred as a result of negligence or unknowingness of users. During this paper we've analyzed the utility of data management tools to apace capture, store, share and propagate the information the data the data security connected knowledge with the read that it ought to be effectively applied by the data system users. We tend to found that the data management tool may be accustomed enhance the data security.

Keywords: Knowledge Management, Information Security, Knowledge Management Tools, Information Security Challenges.

Corresponding Author: MS. KEERTHI K.



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INTRODUCTION

Due to quick pace of modification in IT technology and its vital applications, new security threats evolves around it. New and good strategies of data security also are devised by researchers to mitigate the danger occurred as a result of these threats. Within the last decade method based mostly data security management system (ISMS) like ISO27001 and COBIT have emerged. Several organizations since then have adopted such ISMS. Data Management (KM) is another management discipline enterprises use, with aim to foster a more practical management of knowledge.

Organizations typically pay considerably on firewall, proxy, antivirus, intrusion detection mechanism, digital signatures, special network devices and protocols etc., forward that security of data will somehow be ensured by procuring these technology solutions from the market. This can be a wrong notion as a result of security management is additional of managing associate degree end-to -end system instead of simply putting in technical solutions. As like every alternative full-fledged system, this has several parts as well as folks, policies, procedures, processes, standards and technology.

Information could also be hold on during a server, PC, Laptop, movable or in the other device, it's going to be in transit from one place to a different place through some channel, or could also be below process through a program, security of the data could also be broken at any stage. Confidentiality, integrity and convenience square measure the 3 major data security issues. Protection info knowledge is simply not smitten by solely information security folks of the corporate however all the users. All the user of data system square measure like on the gates of a building and therefore the gate gap by any of the worker might prove fatal for the security of the entire data system. Examine the domestic and foreign every sort of data security event to find that 70-80% square measure as a result of the interior personnel negligence or intends to give away creates, 20-30% square measure as a result of the hacker invades or alternative external reasons create.

2. INFORMATION SECURITY CHALLENGES

In general, the data security management of a company broadly speaking deals with the processes and procedures that the worker ought to adhere to so as to shield the confidentiality, integrity and convenience of data and alternative valuable assets. the quality approach to managing data security involves conducting a risk analysis to spot risks to confidentiality, integrity, and convenience of data systems, that is followed by risk management wherever safeguards square measure utilized to mitigate those risks .With this definition in mind, the

most goals info data knowledge security inside organizations square measure to cut back the danger of systems and organizations ceasing operations; maintain information confidentiality; make sure the integrity and dependableness of information resources; make sure the uninterrupted convenience of information resources and on-line operations; and guarantee compliance with national security laws and privacy policies and laws. Thus, management info of knowledge} security involves implementing and maintaining information security policies and procedures to attenuate 'opportunities' for threats like laptop fraud.

Knowledge of data security is important for all the staff or users as per their necessities. Ton info knowledge on information security is accessible through books, internet, journals etc., however folks don't use this data because: Getting particular useful information out of a glut of information is very difficult and time consuming. Users may not aware about importance of information security; they feel that it is the work of information security staff or IT department. Lack of motivation in getting Information security knowledge. Information Security experts not willing to share the knowledge with the users. Communication gap or social gap between users and experts. Users may not know who the expert for particular security issue is. Users are very busy in their regular work. Infrastructure not available to communicate. Geographical distance between users and experts. Lot of knowledge is experience based or in tacit form and need to be codified to be shared or require a proper platform to share.

So, there could also be range of reasons of unknowingness concerning security threats and remedies. however the result's very frightful in terms of security incidents which can cause data leaks, non convenience, compromise on integrity etc. and large losses in terms of name, loss of consumers and direct dissuasive loss[5].

3. ROLE OF KM IN INFORMATION SECURITY

The role of information management is absolutely vital to manage the data of data security as data Management has been outlined as "the capability by that communities capture the knowledge that's important to their success, perpetually improve it, and create it accessible within the handiest manner to people who would like it". in line with Granneman the majority don't secure their computers or act during a secure manner. the most reason being that the typical user simply doesn't grasp what to try and do. this can be horrifying, considering that sixty five.9% of the Australian population square measure web users and therefore the success of the 2000 LOVELETTER virus and 2003 Blaster/SoBig worms were mostly as a result of people uneducated in data security problems .A holistic understanding of e-security and privacy

problems is significant for the individual furthermore as for the society. so key issues and attainable solutions include:

Education and Awareness – Education and awareness efforts targeting existing and rising new threats, risks, vulnerabilities, countermeasures and safeguards square measure needed.

Foster a security acutely aware culture – A security culture wherever compliant attitudes, behaviors and sensitivity to privacy and security become habit and assumed throughout daily life.

Knowledge management is sanctioning and enhancing capabilities to perform such processes, as well as sourcing and readying of the proper data assets, so as to attain the specified results. Data assets embrace embodied data in people; embedded data in technology, systems and processes; enculturated data in work relationships, groups and networks; and unjust data and insights.

Three major phases of KM cycles are:

1. Knowledge capture and /or creations
2. Knowledge sharing and dissemination
3. Knowledge acquisition and application

Knowledge capture refers to the identification and sequent codification of existing data and acumen within organization and/or from the atmosphere. Data creation is that the development of the new data and acumen or innovations that didn't have previous existence with within the company like from consultants, analysis papers etc.. Once it's been set that the new or freshly known data is of ample price, subsequent step is to contextualize this content. Contextualize suggests that giving link to the contributors of that data and trade it towards the target users. Then the knowledge is shared and disseminated. The data is disseminated to the users victimization portals, emails and alternative klick tools. Users apply the data and with their expertise additionally new data is generated and captured. data management advocates completely different sort of recognitions and incentives for the folks that square measure sharing their data and therefore the folks that square measure actively victimization the data to boost their data and performance.

Knowledge management has multi dimensional edges at completely different levels from people to organization like for people, it helps folks to do try to try associate degreed do} their

job in an economical approach through higher deciding and downside determination. Facilitate folks to stay up to this point. On community level, promotes peer to look data sharing. At the organization level, diffuse best practices, builds structure memory. In alternative words, data of however a company functions within the context of management of data security will considerably impact the effectiveness of procedures in minimizing 'opportunities' for laptop fraud.

A handy content platform should be able to handle multiple content varieties, sources and access patterns. Theses content sources embrace security connected libraries, activities and personnel directories. Content may be structured or unstructured. a number of it's generated on-line throughout varied data activities(e.g. on line brain storming).

Organizations might use content management system for data security best practices, lesson learned, security case studies etc.. Content groups, meta data, data maps, and a progress contextualization will guarantee effective recycle of the content. Advanced content management system embrace options for seamless exploration, authoring templates, maintaining integrity of sites and links, periodic review, archiving, meta-data, version management, rule setting, indexing, audits, approved access, administration alerts, and versatile repurposing for multiple platforms and formats.

4. APPLICATION OF KM TOOLS FOR INFORMATION SECURITY:

In order to style booming tools for data sharing, a method must be chosen. Hansen et al. distinguish 2 main data management strategies: codification and personalization. Codification is that the people-to documents strategy. Here the hassle is to load intranets and databases with best practices, case studies and how-to guides to assist folks in their daily work[11]. Personalization is that the people- to-people strategy. Here the hassle is to link folks with people and to grow networks and community of practices. stress is on informal-knowledge sharing.

Following klick tools could also be used for rising data security:

Following KM tools may be used for improving information security: Content Management, Knowledge Taxonomies, Groupware, Online Communities of Practice, Enterprise Portal, Social Network Analysis and Design, E-learning, Storytelling and Narrations, Wireless tools for knowledge Mobilization, Innovation and idea management system, Tools for extending KM across organizational boundaries,

4.1. Content Management: Taxonomy is that the observe and science of classification in line with natural relationships.

The info-glut or “digital sprawl” on company intranets has light-emitting diode to users not having the ability to search out relevant data in time and various taxonomy development tools square measure coming back to the rescue. It should replicate the requirements, behaviors, tasks and vocabulary of the users, and be able to offer multiple ways and points of read. Taxonomy ought to be simple to keep up and users ought to notice it simple to know, navigate and contribute. it'll facilitate the users to simply find specific data security data.

4.2. Groupware: Desirable options for collaboration within the context of klick embrace affinity building, data mapping, threading, polling, cluster document creation, rating, namelessness and access management. A notable trend in tools for collaboration between networked workers is that the convergence between asynchronous (e.g. cooperative document management) and synchronous(e.g. instant messaging) service. it's a crucial tool for data sharing among the peer teams. it's a crucial tool to propagate data security data instantly to a gaggle like data relating to new virus attacks.

4.3. Online Communities of Practice(CoP): Online communities represent a growing a part of the structure landscape of twenty first century international players, but businesses square measure still at the first stages of individual and structure optimisation of internet based mostly communities. on-line CoPs square measure rising as powerful tool for data exchange and retention. Participation levels in CoPs may be segmental into core, active, and peripheral. Success levels may be diagnosed via the appliance of data., within the variety of interviews anecdotes and worker survey. experience directories square measure a helpful approach for connecting data employee in such forming communities, however they need to connect folks and not simply resumes. CoPs square measure notably helpful in discussing current security connected issues and are available out with solutions.

4.4. Enterpriser Portal: Portals facilitate produce the “on demand” geographical point, custom-made to individual worker wants. A well-designed portal will function a delivery channel for klick applications any time, any place, and on any device. data portals square measure the one purpose of interaction and coordination for collaboration. General user might reach the portal for obtaining their solutions of security connected issues and current security situation.

4.5. Social Network Analysis and Design: Social network analysis (SNA) is rising as a robust tool for mapping data flows and distinguishing gaps. SNA may be accustomed reinforce existing

flows and to boost data integration once activities like mergers and acquisitions. language techniques, mental image tools, and recommender systems may be controlled here, resulting in actions like distinguishing key people for retention or gone roles or making groups for cross-organizational and cross-functional activities. Direct applications of SNA embrace security method plan, role development, and improved collaboration between data seekers and suppliers. SNA will facilitate establish central folks, property levels of individual data staff, diversity of subgroups, and level of structure inter-connectivity. obtaining things done usually depends less on formal structure than on informal net-works of individuals. SNA will facilitate improve general security atmosphere by distributive data security data naturally and effortlessly.

4.6. E-learning: One fascinating rising development on the klick front is that the growing convergence of viewpoints between the klick community and therefore the e-learning community. The construct of klick may be united with the goals of e-learning to make the larger ideal of a learning organization-via intermingled online services like dial-up bulletin boards and internet communities have really helped network communities of interest across the world for years. The globe Bank has leveraged a method of “global data, native adaptation” for brokering international data exchanges. Data Security data may be accessed from everywhere world to be applied within the company.

5. CONCLUSION

We can see that to agitate the ever dynamical nature of data technology and therefore the newer security threats springing up at a really quick pace, we'd like some technique to teach the users in an efficient manner. klick tools may be accustomed evolve newer, economical and quicker strategies to agitate data security problems. klick tools like content management could also be accustomed produce content and update data security data like data security standards and best practices, taxonomies to simply perceive and find the proper and needed data, CoPs for consulting with one another and giving a sense of belongingness to share the data. Enterprise portals may be used as one purpose of contact for all the interested stakeholders. E-learning strategies could also be accustomed educate the new joiners and to coach on the most recent developments within the space. Storytelling is sweet for understanding purpose of read and social aspects. Wireless tools create the person free from a selected location and person on the move might get the most recent data. Innovation is that the key for the new solutions. ton of analysis and innovations square measure happening in data security field. klick will encourage folks to convey new ideas and satisfying them consequently. this fashion we are able

to see that there's plenty of scope to boost data security victimization data management techniques.

REFERENCES

1. Knowledge -Centric Information Security, Walter S. L. Fung, Richard Y. K. Fung, 2008 International Conference on Security Technology, IEEE
2. Information Security Management - A Practical Approach, 2007, Manik Dey, , IEEE
3. Behavioral science-based information security research, Yang yue jiang Yu yong xia, 2009, First International Workshop on Education Technology and Computer Science IEEE
4. Knowledge Based Model for Holistic Information Security Risk Analysis, 2008 Wen Huang, Yong-Sheng Ding, Zhi-Hua Hu, Jing-Wen Huang, 2008 International Symposium on Computer Science and Computational Technology, IEEE
5. Knowledge management within information security: the case of Barings Bank, Shalini Kesar, International Journal of Business Information Systems 2008 - Vol. No.6 pp. 652 - 667.
6. S. Granneman, "A Home User's Security Checklist for Windows," Security Focus, 2004. <http://www.securityfocus.com/columnists/220>
7. Nielsen/NetRating, "Top Rankings," Netrating, Inc., 2004. <http://www.nielsen-netratings.com/>
8. CERT/CC and Carnegie Mellon University, "CERT/CC Overview Incident and Vulnerability Trends," 2003. <http://www.cert.org>
9. The Multifaceted and Ever-Changing Directions of Information Security – Australia Get Ready!, Leanne Ngo and Wanlei Zhou, 2005 Proceedings of the Third International Conference on Information Technology and Applications (ICITA'05) IEEE
10. Knowledge Management in Asia: Experience and Lessons 2008, Report of the APO Survey on the Status of Knowledge Management in Member Countries.