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Information Systems
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 Information Systems
 Rainforest (RF) has acquired an online widget retailer and is exploring options to expand the organization into international markets. RF currently has retail outlets in twenty-two states which use numerous databases and software packages to manage customer, vendor, and other business processes; the recently purchased online business unit also uses multiple databases and software applications to manage business processes. The main objective is to consolidate both business units’ systems into easily manageable information systems. Any proposed information systems should be efficient, effective, and details should be provided of how Rainforest will benefit from implementing them. Thus, if Rainforest can successfully transition its multiple systems into one easily manageable information system, the expansion to international markets will be guaranteed the highest success rate.

 Information Systems Assessment
MIS
 Management information systems (MIS) is a “collection of people, procedures, databases, and devices” that allows organizations to remain competitive by managing and delivering information to the right people at the right time (Stair & Reynolds, 2012, p. 269). By creating an information systems framework, a business can more effectively direct the flow of common business processes, and provide employees with the tools required to achieve organization goals; these tools would include MIS reporting features, project management software, and database applications. Business managers, who are responsible for operations, will find a MIS extremely valuable. Managers can use MIS reporting features to provide insight into the business operations, which can present the strengths and weaknesses of the business. By determining what the weaknesses are, managers can make better decisions in matters of business operations.
GIS
 A geographic information system (GIS) is an electronic system that incorporates “the assembling, storing, manipulating, and displaying geographically referenced information” (Stair & Reynolds, 2012, p. 288). GISs present compiled data in graphical form; this compiled data includes “geothermal information, available warehouses and distribution centers, population, age brackets, or traffic counts” (Cheng & Phillips, 2011, p. 132). Data collected from a GIS can be assessed and analyzed to solve problems; for example, a GIS can be used to optimize a supply chain. A GIS may also be used to represent complex data, such as maps, demographics, and trends, in a compiled visual format. Companies can leverage this data to gain a market advantage by knowing exactly when and where the business should expand.
DSS
 A decision support system (DSS) allows companies to implement solutions for problems that are unstructured or semi-structured. DSSs consist of “people, procedures, software, databases, and devices” which are used in the decision-making process (Stair & Reynolds, 2012, p. 288). The benefits of a DSS include faster access to information, flexible reporting, and the presentation of data in either textual or graphical format (Stair & Reynolds, 2012). The advantage of a DSS is streamlining a business strategy that helps companies reach their goals. A DSS works by laying out each of the specific tasks that must be performed, along with the proper sequencing order to reach the main objective. Subsequently, a DSS can handle numerous amounts of managerial and policy-based concerns, not just a single task or goal (Cheng & Phillips, 2011). DSSs make the decision-making process more effective by collecting and analyzing data from various segments of the organization, and as a result of this process, can generate higher sales and increase profit margins.

Proposed Information Systems
 Upon further evaluation of the various types of information systems, the two systems that would fulfill the needs of Rainforest are MIS and GIS. The primary advantage of implementing a MIS at Rainforest is data integration (Goodhue, Wybo, & Kirsch, 1992). Data integration will make it much easier to share information throughout the organization. Centralizing data will also promote communication and teamwork by providing a single platform for collaboration. Additionally, the data integration in a MIS supports aggregate knowledge and data collections (Goodhue et al., 1992). RF managers can leverage the information contained in knowledge bases and data collections to make more informed decisions about how the business should operate. There are a few important caveats that managers should consider when implementing a MIS: (1), current systems will have to be migrated to the new system and could pose particular problems; (2), time will have to be allocated to train staff on the new system; (3), maintaining a MIS is not cheap–there are licensing costs, hardware upgrades, and potentially may require other changes to the Rainforest infrastructure.
 The MIS vendor that has been chosen is from Clarity; it has been selected because of its rich set of features. For example, Clarity has a database solution that will facilitate the consolidation of the multiple databases at Rainforest. The Clarity MIS software solution also includes enterprise management software that can replace the numerous software applications throughout the organization. The Rainforest business units currently use separate applications for customer relationship management (CRM), price quoting, order processing, production, and management. The continued maintenance and administration of these decentralized systems are costly and affect the workflow of business processes within the organization. Clarity would provide a centralized information system that would save the company money by reducing administrative and financial overhead, improve the natural workflow of business processes, and provide a smoother transition to international markets–due to the benefits of consolidating multiple, complex systems into one highly efficient, scalable system.
 The second information system that has been selected is GIS. The main advantage of using a GIS at Rainforest would be to facilitate efficiency during the growth of the organization. A GIS would provide critical data consisting of compiled geographic statistics that could be assessed and used to identify which regions would be appropriate for expansion. Additionally, GIS data can be leveraged for supply chain optimization by providing geographical compiled data in a visual format. As Rainforest grows, it will be crucial that the organization creates an efficient supply chain that will keep RF widget costs low; likewise, having the ability to compile data on the patterns of manufacturing, sales, and distribution will be essential to cutting costs and to remaining competitive in international markets (Stair & Reynolds, 2012). There are just a few important concerns that managers should be aware of when implementing a GIS: (1), time will have to be set aside to train personnel; (2), the cost of the system will have to be budgeted for; (3), the GIS will have to be tested for compatibility with the MIS.
 The GIS vendor that is being evaluated is CartoPac. CartoPac offers a collection of geographic management features–including geodatabases, field asset management, and mobile data collection (CartoPac, 2014). The primary benefit of the CartoPac GIS software is that it delivers all the necessary geographical data that is required for Rainforest to transition into international markets. The gathered data would include maps, demographics, manufacturers, distribution centers, and warehouses (CartoPac, 2014). The secondary benefits of a GIS solution will give Rainforest the ability to standardize RF assets into one easily accessible database, and improve productivity by streamlining the supply chain. Thus, the CartoPac GIS solution would facilitate global expansion, and provide essential services to maintain RF assets and inventory in international markets.

 Summary and Concluding Discussion

 The real value of information systems is in the decision making process. If a company makes good decisions throughout the life of the product being offered, they can remain confident that the sustainability of sales will equate to a market advantage (Stair & Reynolds, 2012). This is where MISs, GISs, and DSSs become important factors in the development of a successful business strategy. If Rainforest can transition its current multiple systems into the MIS and GIS that have been suggested, Rainforest can successfully consolidate its systems. By consolidating its systems, Rainforest can increase profits by reducing inefficiencies in business processes, and be able to make better informed decisions as the company expands into international markets.

References

CartoPac. (2014). Our Products CartoPac Server. Retrieved from http://www.cartopac.com/products/server.html

Cheng, L., & Phillips, J. (2011). Geographic Information System Applications in Supply Chains. *International Journal of Business Research*, *11*(5), 131-136.

Clarity. (2014). Clarity Software. Retrieved from http://www.clarity-software.com/products\_compare

Goodhue, D. L., Wybo, M. D., & Kirsch, L. J. (1992). The Impact of Data Integration on the Costs and Benefits of Information Systems. *MIS Quarterly*, *16*(3), 293-311.

Meador, C., Guyote, M. J., & Rosenfeld, W. L. (1986). Decision Support Planning and Analysis: The Problems of Getting Large-Scale DSS Started. *MIS Quarterly*, *10*(2), 159-177.

Stair, R. M., & Reynolds, G. W. (2012). *Principles of Information Systems* (Tenth ed.). USA:
Course Technology, Cengage Learning.