Modular vs. integrated software systems

Integrated software systems are software packages that combines many applications in one program, in the effective running of the accountancy profession accountants needed a utility program to load data from one program to another, this became very complicated especially where there are huge work volumes therefore necessitating integration of two or more modules that interact and as a result make it easier to access data from different programs.

Integrated software packages can use data from different programs that has common commands and nature of files to create multiple applications at the same time without greatly affecting the efficiency of the overall system, the integrated software package is most efficient where identical information is supposed to be used among various activities for different purposes in the day to day running of a company. For example, Ms Office lets the Accountant do word processing, outlining, telecommunications, graphics, data base and spreadsheets and save each as a frame that can be integrated with other frames.

Therefore integrated accounting software for instance, ensures all relevant records are linked, thus one entry into the computer will automatically update all the relevant accounts. (Mehdi, 2006) With integrated software systems, it is easier to use and access data from different programs without necessarily having to switch between programs, due to this integration the danger of different programs advancing at different rates is eliminated or effectively reduced.

This is especially due to the fact that instead of the company trying to improve lots of different programs at the same time, multiple companies that

use the integrated software system support the integrated software set thus making it advance at a uniform pace. (Clark & Baldwin, 2000) Despite its high initial cost this integration reduces the company's cost of managing the software since running costs related to maintenance of many different un-integrated programs is eliminated Disadvantages of integrated software systems

One of the most pressing limitation of integrated software systems is that, in case of upgrades, the whole system will have to be upgraded, you can not fix just one part because all the software is integrated into one application, this eventually makes the software develop some weak areas, for instance, the software may have a brilliant word processing application but a poor spreadsheet program, all these requirements necessary for effective running of an integrated software makes the overall program take more memory space than other stand alone packages (Beynon, 2004)

Modular Information systems These are information systems that are divided into smaller parts called modules that can be independently created and then used in different systems to drive functionalities. This kind of a system has lesser customization and less learning time thus making it less costly initially. The modularity concept offers flexibility in design and allows augmentation in the sense that new solutions can be added by merely plugging in a new module or exclusion of the same. (Clark & Baldwin 2000)

One of the weaknesses of modular information systems is that they are not optimized for performance. This is usually due to cost of putting up interfaces between modules An example of information system that can be designed as either modular or integrated is Enterprise Resource Planning

(ERP), This is an information system that can be used to run and effectively manage resources necessary for day to day running of a company, these would normally include financial resources, personnel, company’s asset both fixed and current, raw and other materials etc.

Usually built on a centralized database within an organization, the ERP system mostly utilizes a common computing platform to consolidate all business operations into a cross-functional and enterprise-wideenvironmentplatform. (Mureel & Shields, 2001) An ERP system can either reside on a centralized server (thus making it an integrated software system) or be distributed across modular hardware and software units that provide services and communicate on a local area network (this makes it a modular information system).

(Mureel & Shields, 2001) This distribution allows an entity to use different modules from varying suppliers without need for assembly of multiple copies of expensive and complicated systems in areas that might not use the systems to their full capacity. (Mehdi, 2006) The configuration stage of the ERP determines whether the system will be modular or integrated, (Beynon, 2004) if the organization is a large multinational e. g. coca cola, then it would most definitely work well with an integrated option of the ERP software system, where all the business functions e. g. manufacturing, accounting, human resource etc. are linked, this helps to determine for instance the costs to be allocated to different departments thus creating a clear path for organizational financial control and decision making.

However some companies might not need some modules or they might not need the interconnectivity of the modules they need, therefore they only

implement the modules they need without integrating them, thus making their system a modular ERP system. For example, a service company will not likely need a module for manufacturing they will therefore implement a modular ERP system to make exclusion of the ERP manufacturing Module possible.

For proper financial control, the company can use the configuration table to tailor particular aspects of the system to the way it chooses to do its business. (Turban et al, 2008) For example, an organization can select the type of inventory accounting they would prefer to use e. g. First In First Out (FIFO) format of accounting for inventories or Last In First Out (LIFO) format of inventory accounting it will employ or whether it wants to recognize revenue by geographical units, departments, brands, product lines or distribution channels (Turban et al. , 2008)

Use of the two types of systems in decision making Integrated ERP systems connect the necessary software in order for accurate forecasting to be done, this allows inventory levels to be kept at maximum efficiency especially in large multinationals that has multiple branches in order to increase the overall profitability, integration also ensure propercommunication, productivity and efficiency which would not be possible with many modular software applications that might communicate or interface effectively.

Integrated ERP systems as opposed to modular ones, centralize data in one place therefore eliminating the problem of synchronizing changes between multiple systems e. g. consolidation offinance, marketing and sales, human resource and manufacturing applications thus providing real time information for management anywhere, anytime to make proper decisions.

However for relatively small and local companies use of modular ERP software would still make the above decision making process possible since their operations are not as diverse and as complex as their multinational counterparts. For relatively small companies operating within small localities, integrating the ERP system might be a very costly affair, therefore it is more profitable for them to use the modular system that can allow them to implement the functions they need most e. g. Finance & accounting and customer service.

It might also be very costly for these small companies to switch between systems meaning if they use an integrated system and then make a mistake in linking the different functions, the applications might not work effectively and when this happens the company might be forced to switch to another system a luxury they might not afford. This eventually denies management the chance to make strategic control decisions and reduces the flexibility of decision makers at the corporate level. Conclusion

For an organization to have an effective and efficient running of its day to day operations it is inevitable that it employs a system that is suitable to its level of operations, for large multinational manufacturing entities, integrated software systems would be their best option as it eases the overall financial and other operational control processes and also eases the financial analysis and accounting process due its integration within various operations in different geographical locations.

The smaller local counterparts on the other hand who might for instance be in the service industry, use of integrated software systems though advisable might be very costly and might not make much difference after all, therefore

since modular information systems are less costly to run and occasionally upgrade while still providing effective financial, accounting and overall organizational control, these small companies should use them References

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