BUSINESS REPORT:

GLOBAL INFORMATION SYSTEMS FOR NIKE

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**Executive summary**

The purpose of this report is to examine three systems development approaches that will help Nike’s development team implement global information systems, and further illustrate one of the examples in more depths. Advantages and disadvantages will be discussed. The example picked is considered the most appropriate back up with comparing the advantages and disadvantages of the approach. A brief concise explanation will state why the other methods were not chosen.

**Introduction:**

Nike inc. is a global company; that has suppliers from countries such as china and manufacturing plants in Indonesia and Vietnam. A local information system is not enough handle the flow of data because the systems branch out two times from the normal small private company. By creating a system with the bigger picture in mind, this will help the organisation run efficient, effetely, and responsive application for the business environment.

**Approaches for Global systems development at Nike**

A large organisation such as Nike would implement multiple e-business systems around the world. This raises problem of managing a global systems development. As expected, a conflict will occur for instance trouble accepting a common paradigm and model for process method. (O'Brien & Marakas, 2006)

Another issue to be aware of is that, if the global system is built on one platform that connects to the other smaller systems. For example: If Nike had an interruption during the peak hour, the net traffic was too much for the servers to handle. This will interrupt the services provided by the system, not only one system will be affected however, all the platforms linked to the one system .Or another way to implement the system is each system has its own platform. A requirements for the system development to be considered would have to be the how flexible implementing the system. (O'Brien & Marakas, 2006)

Other concerns include global standardisation of data definitions. This means “countries have do not use the same exact meaning for words such as Germany uses ’order schedule’ and in the United Kingdom ‘order booked’, and an ‘order produced’ in France for a sale”(). Further, apply this concern to Nike, a solution would be to implement business structure which help standardize data definitions into database design, and data modelling. This would help develop shared data architecture for help the global system. (O'Brien & Marakas, 2006)

Firstly, software prototyping is building an early prototype application to simulate the final software product. This allows users of the software to give early feedback to the developer proposed finish product. By having hands on experience as the end user; the client can describe and point out requirements that the developer was unaware of. (Sadabadi & Tabatabaei, 2009)

There are serval benefits to using prototyping:

Reduce time and costs: stated by Prototyping allows improvement of the quality of requirements and specification to developers. Because showing users early in the development for what they want saves time and cost with incomplete product. And in fact, some unfinished products can lead into becoming the final product. (Overmyer, 1991)

Lots of communication between user and developer: Establish an early communication with the user. With each development cycle, the client can see a new design of the system. The development team gathers feedback from users as they explore the new model and see the project in a different perspective.

However, the many disadvantages of prototyping:

Developers getting overly attached to the throwaway prototype, a throwaway prototype are a model that will be discarded after the requirements are finalised. A simple model of the system is constructed for the users to give feedback to the developers to implement in the finish system. (Sadabadi & Tabatabaei, 2009)

Too much reliant with client, this can be seen as a negative aspect because clients are changing their original requirements when a new version of the prototype, disturbs the workflow as the whole developer’s team has to figure out a new solution.

Rapid application development (RAD) is the process that uses less planning so applications are faster and at a higher quality at a lower cost and smaller than typical lifecycles. The approaches allow the development team to easily recognize the category of data and process models required to meet the product requirements. (ZIMAN, 2011,)

There are many advantages using RAD:

Better quality: due to the nature of this development approach. The main focus is on the development cycle of the system. As there is less requirement phase which gives more production time.

More projects completed on time and within budget: this model helps client’s reviews for the project giving the developer more time to work.

Although, disadvantages of RAD include:

RAD requires a complement development group and individuals who are experts at identifying the types of data and models. There is less emphasis on requirement planning so during the development phase; more requirements may arise thus costing the company more time and money.

Another disadvantage is to hire a development team and designers who are highly skilled group of people. This is a rare feature as developers come with all different backgrounds.

Thirdly, dynamic system development management (DSDM) is a system development deprived version of RAD which strikes a balance for the requirements planning with clients and developments. This approach is an iterative and incremental development which is known to be an efficient method of implementation. Implementations happen in phases and meet a deadline. (Howard, 1997)

There are many advantages of DSDM:

Good at adapting to change. Developers are known for rapid changing to keep up with current treads in the market and to provide competitive edge. (Howard, 1997)

However, the disadvantages of are

Empowerment of users and developers, not much time to asses if decision was the best because there is a rush to meet development. (Howard, 1997)

Choosing the appropriate approach is a hard decision between prototyping and dynamic system development. Rapid application development was not considered because the model does not simply emphasis on requirement planning. Additionally, DSDM is based on RAD but the agile development is really good for systems development .Out of the three development approaches the most best fitted for developing a global information system environment is software prototyping. Firstly, this approach is requires good communication back and forth between developments and users. And getting to know your client, ultimately they are the ones using the system, so feedback from them is important. If we apply this to a situation such as creating a point of sales system, the development team gathers the requirements from local shops and all around the world. These include basic input and output information. The development group begins to construct a program with basic functions. Then the team demonstrates the throw able prototype. The end-user sales team in this case, examines the prototype and gives their opinions and any feedback for changes. The team will take feedback into consideration and repeat the previous task until a final product that meets all stores requirements.

**Methodologies for Global systems development at Nike:**

To successfully lead the system development process, the introduction of information methodologies reduces the chances of failure for a project. The methodologies divide the software development works into stages so that the activities are better managed and planned. This provides companies coordination and organises the development of information systems within the business environment. There are two categories of methodologies hard and soft, hard methodologies will include large portions of formalisation of procedures and developments structures within the approach. Soft methodologies share similarly characterises as hard methodologies, although they are not formally structured as the hard approaches to information systems development (O'Brien & Marakas, 2006). As time went on, information systems development methods had no guidance until computing and technology became important in the business environment and daily lives. Not only does a system developer need programming skills but an analyst person is just as important skill to have. Thus organisation began to take advantage; the methodologies provide a competitive business advantage. The requirements good information systems development methodologies should look for:

* Enhances the process of information systems development.
* Easy to maintain the development process.
* Succeed in analysis of systems and business requirements.
* Enables efficient information systems to be completed within the timeframe.

(O'Brien & Marakas, 2006)

Structured analysis, Design and Implementation of information systems (STRADIS) was first introduced by Chris Gane and Trish Sarson in the late 1979s. It follows a high detailed structured approach to information systems development (O'Brien & Marakas, 2006) where problems are split up in a detailed and formal way. It is a linear methodologies therefore it follow a strict structural approach based on data (Isaias & Issa, as cited in Litan et al., 2011) The STRADIS method approach uses data flow diagrams to propose an organised method for the information system problems.

This essentially decomposes systems functions by formalises them. The phases of STRADIS are:

Initial study – Outline the problem and analysis the project if it’s worth undertaking. The cost is considered of the systems project.

Detail study – A detailed study of the stakeholder’s analysis and existing structures.

Definition of solutions – sorting out all the best opportunities to solve the problems.

Physical Design. (Isaias & Issa, as cited in Litan et al., 2011)

Advantages

Improves the management of systems development:

Introduce discipline also known as system development lifecycle (SDLC) approach is a model that successfully produced many projects so this gives it validation. (O'Brien & Marakas, 2006)

Flexible catering, this method does not discriminate for large or small development system projects. This is a good feature because allows developments groups to work on various size projects. (O'Brien & Marakas, 2006);

Disadvantage

Linear approach, the top down approach is not ideal for system developments because its not catered for coding.

Structured System Analysis & Design Method (SSADM) was originally used by the government department, for the reason being able to hold vast-scale of information. Data (Isaias & Issa, as cited in Schumancher , 2001). Its original purpose was to analyse and design system frameworks made by British Central Computer and Telecommunications Agency in the late 1980s. (Isaias & Issa, as cited in Edwards et al., 1989) As mentioned before the system can cater for large-scale information systems, however SSADM can also be used for projects of all numbers big or small. The methodologies are split into two parts, in order to gain control and the interaction between multiple phases, and the usage of modellings method and diagrams to present a compressive and logical definition to use and implement. With this Structured and analysis approach, it is possible to break up the system into smaller units so that the purpose of defining the order, meaning, and connections between multiple phases that decomposes a vast –scale information stems. (Isaias & Issa, as cited in Mantegi & Jahromi et al., 2012)

Advantages

User involvement is necessary for a successful development cycle. The end user must participate from the beginning to the end (Isaias & Issa, 2014) having another person’s opinion during the project cycle may lead to unexplored ideas.

Disadvantages

Lot of report documentations, each stage must be reported extensively in a document therefore those records on the progress and outcome of are always up to date. (Isaias & Issa, 2014) In addition this allows a continuation of work flow.

Agile development is based around the disciplined process that the development of Information is a creative work, where design activities occupy a key role (Isaias & Issa, as cited in Tumbas and Matkovic et al., 2006) However, they evolve around the fact that the development process constantly involves dynamic changes and alteration that give rise to a need for flexible approaches and methods. Developers begin to realise that the customers do not always state specifically or know what they want in the early stages of development. So, developers build flexible methods that are capable of adapting to changing circumstances and specification along the design and development phases. (Isaias & Issa, 2014)

Advantages

Flexible implement approach and methods. This is good because the experience improves the process of information systems as they are prepared for change.

People-oriented approach encourages face-to-face meetings with the clients This is a unique feature as other methodologies do not push this idea. Generally, body language plays a key role for delivering a message. (Paelke & Nebe, 2008)

Disadvantage

Constant change of requirements this can be a negative too because everything keep changing and there is no telling when the end user will settle down, creates a stressful environment for the developer.

For methodologies that promotes communication. The meetings with clients are spoken in informal contents. This creates a casual atmosphere between the parties; however some customers may not take the developer serious because they prefer more professionalism. (Paelke & Nebe, 2008)

In the context of developing global system methodologies for NIKE goes to Agile development. Since Nike is a large company that handles changes within their systems, the flexible approach will greatly help enhances the system development process, easily maintainable development process, allow systems to be delivered within the timeframe, and succeeds in analysing and designing in their environment. The positive outweigh the negatives because they can also be good points depending on perspective. The strict iterative manner allows deliverables to be done before deadlines.   
  
SSADM was not picked because of the linear up down data flow approach. STRADIS is very similar to the SSADM which is not flexible method of implementing an information system.

**Conclusion:**

Overall, a prototyping approach in an agile development environment will be the most effect, efficient for the company for the global information system and the development process. Prototyping enables careful requirement planning after, a throw able model will help gather feedback from clients. Agile methodologies will be prepared for any changes as the environment is prone to constant change. This would create an efficient, effect, and responsive system as well as improve systems development, and easy to maintain development cycle. Therefore the mixture of system approach and methodologies come together to create a near perfect global information systems.

Ethics based risk.

Risk assignment involves identifying potential risks to a project activity or undertaking.

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| Risk Assignment for NIKE | | | | |  |
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| No. | Rank | Type | Stakeholder | Risk Type | Impact |
| 1 | High | Primary | Founder | Disbands organisation | People will be jobless |
| 2 | High | Primary | CEO | Stops the project |  |
| 3 | Medium | Primary | Executives |  |  |
| 4 | Low | Secondary | End users |  |  |
| 5 | Low | Secondary | Developers |  |  |

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