Information System Development

[Author Name(s), First M. Last, Omit Titles and Degrees]

[Institutional Affiliation(s)]

Author Note

[Include any grant/funding information and a complete correspondence address.]

Information System Development

**Introduction**

Information System Development is the process or activity is that done where an organizational activity or the entire organizational setting that is supported by the introduction of a new socio-technical information system or by the modification of expansion of an existing thing. The process of Information System Development mainly includes activities like sub-activities of assessment, analysis, designing, development, implementation, and execution or implementation (Ahituv, Hadass, & Neumann, 1984). This project and paper mainly aim to cover some important aspects of Information Management Development.

In details, the paper is about to provide details regarding the process and concept that how a business or business user can be found involved in the key activities of information system development. This paper also covers how some particular software development methodologies work in tandem with management for the purpose to benefit the organization and information system. Furthermore, the last phase of the paper is about an in-depth analysis of the process that is used and can be used by the project and IT managers to make sure that the ISD projects are allied with the organizational or business strategies and objectives or goals.

**Thesis Statement**

Based on the nature of the paper and the areas of Information System Development it covers, the thesis statement is;

*In order to understand Information System Development from all possible aspects, it is crucial to analyze the core activities involved in developing it and methodologies used by it. Further to know that how the alignment between ISD projects and organizational strategies and objectives could be ensured by some particular managers.*

**Involvement of Business Owner in Core Activities of Information System Development**

A business owner can get involved in the core activities of Information System Development in many ways. But the way through which a business owner is involved in those activities is the development and execution of the Information System Development for different organizational and business concerns. It means that business owners get involved in core activities of ISD when he/she needs the IS for his or her business. So, for this purpose, he/she gets involved in its activities. The activities of Information System Development in which a business owner involves in are;

* Planning of Information System
* Designing the System
* Development and Implementation of IS
* Testing and Integration of the IS
* Maintenance of the IS, executed

Each of the above core activities of ISD further includes different which are taken into action by business owners. Hence the details of each core activity are as follows.

1. **Planning of Information System**

The planning phase or activity is the most important activity than the rest in the development of an information system. This is so important because the success and failure of an information system are determined by this step up to an extent. In this step, the business owner makes the decision that what exactly needed to be done and what issues would be covered with this development. This mainly includes defining the problems or issues and goals, the proposition of the solutions to the defined problems, and how to bring the results through the solutions (Teixeira, et.al, 2016).

1. **Designing the System**

The second activity is the analysis of the ISD. Here, the requirements and details of the system are determined and documented. It mainly includes the expectations for and from the IS and its performance. In short, a feasibility study is conducted by the business owners in this step.

1. **Development and Implementation of IS**

After the step or phase of understanding the requirements and details, the next step of ISD is designing the system. In this step, the components of the system are defined such as modules, security level, interfaces, and data type for the IS (Teixeira, et.al, 2016). In short, business owners design system in a way which shows, how the system will look, work, or perform, and how it would be functioning.

In this step or core activity, the actual development of information System is also done. In this, the actual coding and configuration etc. are done for certain requirements and functions.

In this phase, the system is made ready and installed to operate. Additionally, this activity mostly takes a long time as compared to other activities of ISD.

1. **Testing and Integration of the IS**

Testing and integration is the step where the entire integrated system is created and then introduced to inputs it takes and outputs it gives. This activity is highly important when there is the involvement of customers or customers’ satisfaction.

1. **Maintenance of the IS, executed**

This is the last core activity of Information System Development. In this, the activities are put into action to ensure on-time maintenance of the system. As well as to ensure that the Information System is saved from becoming obsolete (Ahituv, Hadass, & Neumann, 1984). In short, this is the step where business owners ensure continuous improvement and updates to meet the set standards and eliminate security issues.

**Agile in Tandem with Project Management to Benefit ISD Projects and Organizations**

Agile can work in tandem with project management to benefit both Information System Development and organization in several ways. But mainly Agile provides a conceptual framework to undertake software engineering projects. Beyond this, most of the methods of agile help minimize the risks through software development in a short time. This also assists in other activities like planning, analysis, designing, coding, documentation and testing etc. It is a fact that iteration might not add high-level functionality for warranting to release the product while the agile can be found capable and efficient enough in such operations like releasing new software at the end of releasing every iteration (Jitpaiboon, Smith, & Gu, 2019). And in the end, all priorities of the project are reevaluated.

More than above, the methods of the Agile also emphasize real-time communication, mainly include written and face to face communication. The teams of agile include people that are required for the completion of software. This involves the people like programmers who define the product like managers, analysts, and customers while not ignoring designers and writers etc. The agile method and software also highlight working software that measures the progress which is combined with verbal and face to face communication. At last, the agile software development benefits both entities through producing much little documentation as compared to other software development methods (Jitpaiboon, Smith, & Gu, 2019).

**Alignment of Information System Management Projects and Organizational Strategies and Goals**

Many ways and approaches exist that can be used by the project and IT manager for the purpose to make sure that the ISD projects are aligned with the strategies and goals of the organization. But it is a fact that priorities and ranking exist almost everywhere. Hence some of the key ways and approaches that can be used by those managers are elaborated below.

**Project Identification**

It is always important to identify the project and its nature so that it can be made sure that what the project is doing, Through project identification, the project and IT manager can make sure that are the project and goals and strategies of the organization are aligned with one another or not.

**Determining the Desired Results**

The determination of desired results helps the project manager to know that what the organization would have as on the completion of the ISD project. So in the case when the manager knows the desired results then he/she would be able to compare with organization strategies and goals (Botchkarev, & Finnigan, 2014). Hence and as a result, the alignment between thrice would be ensured.

**Describing Project Tasks**

When you have enough and required details and information about the tasks of each component of the project then you will be able to compare with what they have planned to achieve. It means that the project and IT manager can ensure the alignment between organizational objectives and ISD project by linking the tasks to be done by the project with set organizational objectives (Nilsson, 1989).

**Timeline Determination**

It is one of the best ways that can be used by the project and IT managers to ensure the link between strategies and goals of the organization and the project of Information System Development. In detail, when the managers know the timeline of the project’s components then they would be able to check it with the duration or timeline of the strategies and goals (Juergens, 1977). For example, if the timeline of ISD project is long then it may be aligned with long term goals and vice versa.

Furthermore, the project manager can also make sure that the Information System Development projects are aligned with business goals and strategies by participation in ISD planning. This means that the project and/or IT manager can participate in executive and strategies planning sessions to better understand the needs and goals of the business or organization and develop vision and strategies accordingly (Botchkarev, & Finnigan, 2014). Here, the managers especially project manager recognizes the value of projects and consider the associated entity as shaving executive level access to better align projects and organization’s or business strategies and goals.

**References**

Ahituv, N., Hadass, M., & Neumann, S. (1984). A Flexible Approach to Information System Development. MIS Quarterly, 8(2).

Botchkarev, A., & Finnigan, P. (2014). Complexity in the Context of Systems Approach to Project Management. ArXiv preprint arXiv: 1412.1027.

Jitpaiboon, T., Smith, S. M., & Gu, Q. (2019). Critical Success Factors Affecting Project Performance: An Analysis of Tools, Practices, and Managerial Support. Project Management Journal, 50(3), 271-287.

Juergens, H. F. (1977). Attributes of information system development. MIS Quarterly, 31-41.

Nilsson, A. G. (1989). Information Systems Development: A frame of reference and classifications. In Proceedings of the First International Conference on Advanced Information Systems Engineering, CAiSE'89, 9-11 May 1989, Swedish Institute for Systems Development-SISU, Kista, Stockholm, Sweden.

Teixeira, L., Xambre, A. R., Figueiredo, J., & Alvelos, H. (2016). Analysis and Design of a Project Management Information System: practical case in a consulting company. Procedia Computer Science, 100, 171-178.