Selecting Software Development Lifecycles

For each of the four problem scenarios, evaluate and score each of the project characteristics listed on page 2 as either Agile Home Ground or Planned Home Ground. Create a summary table of your results for each project and suggest whether the project should be (1) planned, (2) hybrid/iterative, or (3) agile. Write a short paragraph for each project justifying your response as to why you think the approach you identified is the best.

1. An organization is rewriting its Accounts Payable system to move it from an old batch-type mainframe system to a Web-enabled system. No new functionality will be added. The statement of work calls for conversion “as is”. Only the input and output systems will be altered for the new environment. Because it is a financial application, testing and verification will be emphasized within the development activities. The schedule allows five months for the project, with two people working on it. What do you think is the most appropriate life cycle approach? What is the advantage of this approach for this project?

2. An electronics company has recently decided to venture into a business area developing smartphones. The smartphone will be designed to run on high-speed networks. The company has considerable previous experience with low cost, voice and text only, mobile phones and believes that a cheaper price could present a value-added challenge to the smartphone market. It would like to have a working model to present at a national electronics fair coming up 90 days from now. What do you think is the most appropriate life cycle approach? What is the advantage of this approach for this project?

3. A leading consumer goods company has recently completed a 3-year process to develop a global configuration management system. It is now ready to move into the next phase, where new releases will be issued approximately every three months. An average of 12 new features and an appropriate number of bug fixes will be included in each release spread across teams composed of one to three engineers, located in India, Russia and the United States. Development times for the new features can range from one to five months. Some features can require multiple releases for full implementation. What do you think is the most appropriate life cycle approach? What is the advantage of this approach for this project?

4. The marketing department of an investment management organization has created a new business division focused on developing a new mobile phone app and taking the app to market. Approximately 12 people will be transferred from key areas of the company to form the base for the venture. Given the competitive landscape, a primary goal of the team is to release the app as soon as possible. Significant enhancements and revisions are expected to follow after the initial release and last for a period of 12 to 18 months. What do you think is the most appropriate life cycle approach? What is the advantage of this approach for this project?

Table

Description automatically generated

Source: Topi, H. & Spurrier, G. (2019). Invited Paper: A Generalized, Enterprise-Level Systems Development Process Framework for Systems Analysis and Design Education. *Journal of Information Systems Education,*30(4), 253-265.

1. An organization is rewriting its Accounts Payable system to move it from an old batch-type mainframe system to a Web-enabled system. No new functionality will be added. The statement of work calls for conversion “as is”. Only the input and output systems will be altered for the new environment. Because it is a financial application, testing and verification will be emphasized within the development activities. The schedule allows five months for the project, with two people working on it. What do you think is the most appropriate life cycle approach? What is the advantage of this approach for this project?

|  |  |  |
| --- | --- | --- |
| Characteristic | Score | Explanation |
| Goals & Values | Plan- Driven Home Ground | Predictable, high assurance (since financial system) |
| Industry | Plan- Driven Home Ground | Stable |
| Organization | Agile Home Ground | Agile organization (since they are open to moving from a legacy system to a web-enabled system) |
| Customer / Product Owners | Agile Home Ground | Few, dedicated, co-located (Accounts payable system is used by Accounting team) |
| Software Requirements | Agile Home Ground | Fixed scope, Single project focused (Since no new functionality will be added; only input and output systems will be altered) |
| Software Application | Plan- Driven Home Ground | Legacy app (Since existing mainframe system needs to be migrated to a web-enabled system) |
| IT Team | Agile Home Ground | Small generalists |

The project should be a **Hybrid/Iterative** one.

The Software we are trying to build here is a financial application and requires high assurance since it will be used by the accounting team and needs to be accurate from day one. The Financial Industry is a stable one where the accounting rules don’t change that often. The Organization seems to be Agile since they are trying to level up and moving towards a Web-enabled system. Since this software will be used by the Accounting Team, which is co-located and few, Agile Home Ground suits this characteristic. Also, since no new functionality will be added and only the input and output systems are changing, we can assume it’s a fixed scope project. The original system is a legacy system; so, we are safe to assume that it has a huge code base. Since only 2 people will be working on it , it’s a small team of high performing and knowledge sharing individuals.