Enterprise Systems Engineering
BS-SE(13)

Name: Babar Kamal
ID: 5507

Q1:
Exploitation vs Exploration:

Exploitation: Innovation that emerges from existing assets of the organization and improves them through innovation. This kind of innovation is relatively moderate, focused mainly on enhancement and efficiency most managers of organizations feel comfortable with it. It deals with questions familiar to them: improving existing products, improving the product for a proximate market, etc. They know the customers and their expectations and thus find it relatively easy to address the challenge of exploiting.

Exploration: This type of innovation requires the organization to leave its comfort zone and examine new markets, products, and business models unfamiliar to them. From the managers' perspective, this type of innovation obliges them to venture into unfamiliar territory.

Q2:
Rule of thumb on encouraging a variety:
A rule of thumb is a heuristic guideline that provides simplified advice or some basic rule-set regarding a particular subject or course of action. It is a general principle that gives practical instructions for accomplishing or approaching a certain task. Typically, rules of thumb develop as a result of practice and experience rather than through scientific research or a theoretical foundation.

Understanding Rules Of Thumb: Investors may be familiar with a variety of financial rules of thumb that are intended to help individuals learn, remember and apply financial guidelines. These rules of thumb address methods and procedures for saving, investing, purchasing a home and planning for retirement. Although a rule of thumb may be appropriate for a wide audience, it may not apply universally to every individual and unique set of circumstances.
The Rule of 72 is such a quick, useful formula that is popularly used to estimate the number of years required to double the invested money at a given annual rate of return. While calculators and spreadsheets have inbuilt functions to accurately calculate the precise time required to double the invested money, the Rule of 72 comes in handy for mental calculations to quickly gauge an approximate value.

Examples of Financial Rules of Thumb

There are several well-known financial rules of thumb that provide guidance for investors, including the following guidelines:

- A home purchase should cost less than an amount equal to two and a half years of your annual income.
- Save at least 10-15% of your take-home income for retirement.
- Have at least five times your gross salary in life insurance death benefit.
- Pay off your highest-interest credit cards first.
- The stock market has a long-term average return of 10%.
- You should have an emergency fund equal to six months' worth of household expenses.
- Your age represents the percentage of bonds you should have in your portfolio.
- Your age subtracted from 100 represents the percentage of stocks you should have in your portfolio.
- A balanced portfolio is 60% stocks, 40% bonds.

There are also rules of thumb for determining how much net worth you will need to retire comfortably at a normal retirement age. Here is the calculation that Investopedia uses to determine your net worth:

- If you are employed and earning income: ((your age) x (annual household income)) / 10.
- If you are not earning income or you are a student: ((your age – 27) x (annual household income)) / 10.

Q3:

Determine level of selection:

Business requirements: Develop a clear and comprehensive list of your requirements for your ERP. Use every resource available to make this list excellent. Talk to your production workers and your purchasing manager. Listen to executive management, and your customers and suppliers. Call in former employees and current salespeople. When every thought is written, then prioritize the entire list. Reach a solid consensus as to which requirements are absolutely “must have”. The next priority tier includes things that are not mandatory but there is general agreement that including them will benefit the company. Any other listed items are in a lower category.

Upper management support: This could seem like an obvious criterion. Too often, it is not recognized for its importance. One can select the absolute best ERP for their organization, yet without upper management support, the project is likely doomed. Support goes beyond simply getting a spending approval. You want your management to actively embody their support. When a resource from another department is needed, the manager can throttle progress by providing lukewarm support. When a choice arises to support the new ERP or use the present system, you want confidence that the manager truly supports the ERP even if there is a short-term cost at the point of the choice.

User support: People in every functional area will be users of the new ERP. Gain their support by ensuring their needs and desires are included in the requirements list. Those users, wherever they work, will have much to gain through the success of your ERP implementation. Let those users know they will have the support they need such as training and equipment they need to use the ERP and receive value for them as well as for the overall organization. Make certain they know they will have support helping them through the needed changes. In return, they will support your efforts to use and benefit from your new ERP. Make sure here that the documentation users will need is available when and where needed by users and is of sufficient quality to meet their needs.

functional requirements: Your business has certain functional requirements that must be satisfied even before your change and update requirements. Does this ERP support sales orders that include both physical products related and services? If that is what your business sells, it has to. Your business operates in multiple countries around the globe. Do the accounting components of ERP include multiple currencies and the ability to work with the variety of tax systems in those countries?

Integration with existing systems: Most businesses considering an ERP selection have other systems that are quite adequate for their purpose and the business is not interested in changing multiple systems along with their ERP. The question now to be asked: how will those systems integrate with ERP? Almost always, there are common data elements. Can ERP read and use the existing data in that other system? Will you allow the same data to exist and how will you keep those separately updated data elements compatible? Will you be better served by changing the other system to use that data from ERP? What integration tools come with this ERP? It should have simple integration such as .csv files for occasional data updates. That type of update is inefficient and likely too slow for everyday use. Web services and XML files that allow different systems to quickly transfer data between systems are a more modern way to work.

budget and resources: How much money is available for an ERP system? If you only have $10, then you have to have a very strict selection criterion. A 2019 Software Path report stated that on average you can expect to spend about $7,200 on each user of your system - that's a big investment and a reminder that ERP selection is a long-term consideration. Most ERP systems will be used for a decade or longer so ongoing maintenance and support for the ERP as well as the infrastructure related are a budget concern. Your choice today will lock costs into future budgets.