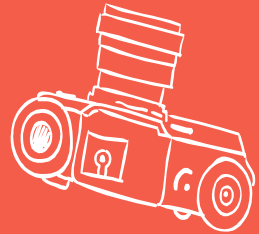


# System Analysis



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## Definition of system analysis process

- ✘ system analysis is on gathering data on the existing system, determining the requirements for the new system, considering alternatives within identified constraints, and investigating the feasibility of alternative solutions .



# Identify key participant in Software development and there roles

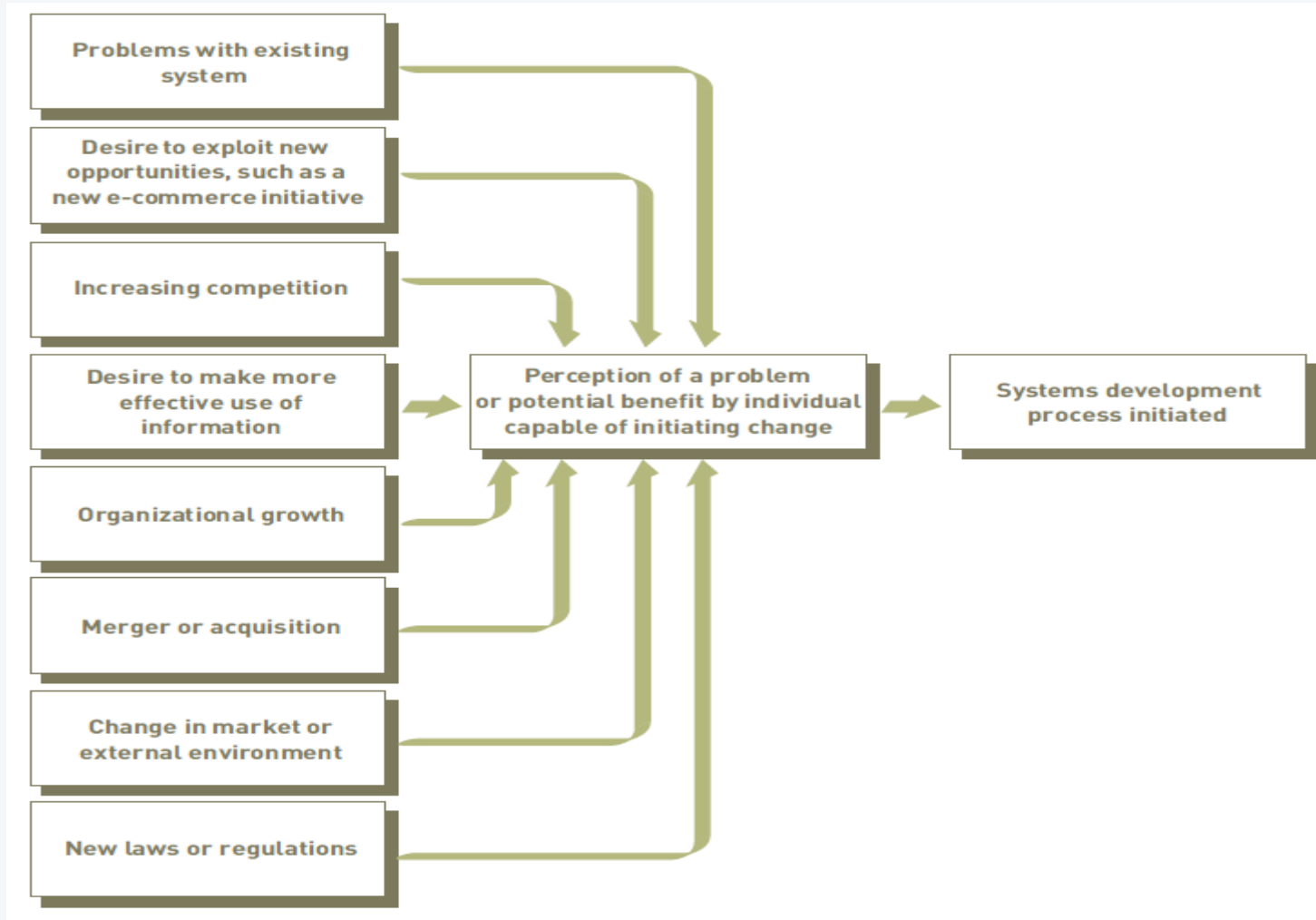
- ✗ **Stakeholders** :People who, either themselves or through the organization they represent, ultimately benefit from the systems development project.
- ✗ **Users** :People who will interact with the system regularly.
- ✗ **systems analyst** : A professional who specializes in analyzing and designing business systems.
- ✗ **Programmer** :A specialist responsible for modifying or developing programs to satisfy user requirements



## systems analyst role

- ✘ The systems analyst plays an important role in the development team and is often the only person who sees the system in its totality. The one-way arrows in this figure do not mean that there is no direct communication between other team members. These arrows just indicate the pivotal role of the systems analyst—a person who is often called on to be a facilitator, moderator, negotiator, and interpreter for development activities.





# List the reason for initiating system development project




A collection of light blue line-art icons scattered around the slide, including a keyboard, a USB drive, a pen, a notepad with a drawing, a smartphone, a coffee cup, a spoon, a pair of glasses, earbuds, and various cables.

## Define Information System Planning







- ✘ **information systems planning** Translating strategic and organizational goals into systems development initiatives



# Discuss System development methodology advantage and disadvantage

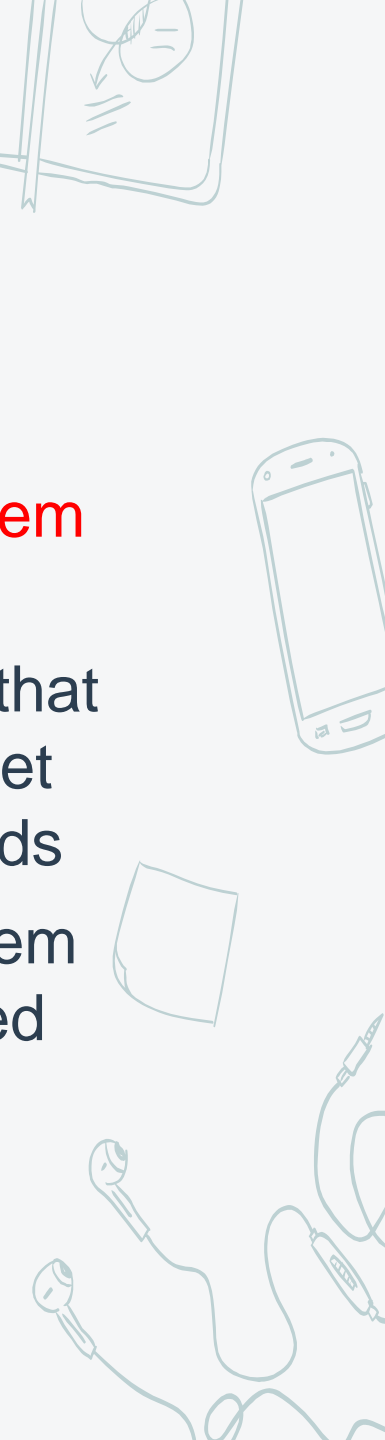


✘ **The Traditional Systems Development Life Cycle**








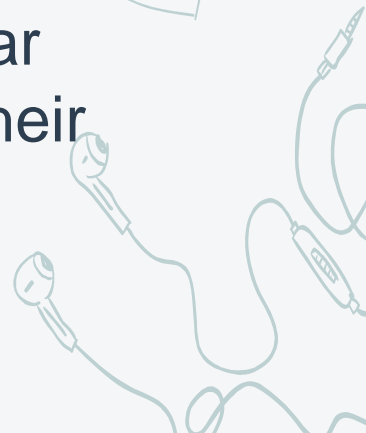
✘ **Advantages :**

- ✘ **Formal review** at the end of each phase allows maximum management control.
  - ✘ This approach creates **considerable system documentation**.
  - ✘ It produces **many intermediate products** that can be reviewed to see whether they meet the users' needs and conform to standards
  - ✘ **Formal documentation** ensures that system requirements can be traced back to stated business needs.
- 





## ✗ Disadvantages :

- ✗ Users get a **system that meets the needs as understood by the developers**; this might not be what is really needed.
  - ✗ **Documentation is expensive** and time consuming to create. It is also difficult to keep current.
  - ✗ Often, **user needs go unstated** or are misunderstood.
  - ✗ Users **cannot easily review intermediate products** and evaluate whether a particular product (e.g., data flow diagram) meets their business requirements
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# Prototyping

- ✗ **Advantages :**
- ✗ Users can try the system and provide constructive feedback during development.
- ✗ An operational prototype can be produced in weeks.
- ✗ As solutions emerge, users become more positive about the process and the results.
- ✗ Prototyping enables early detection of errors and omissions.



## ✗ Disadvantages :

- ✗ Each iteration builds on the previous one. The final solution might be only incrementally better than the initial solution.
- ✗ Formal end-of-phase reviews might not occur. Thus, it is very difficult to contain the scope of the prototype, and the project never seems to end.
- ✗ System documentation is often absent or incomplete because the primary focus is on development of the prototype.
- ✗ System backup and recovery, performance, and security issues can be overlooked in the haste to develop a prototype.



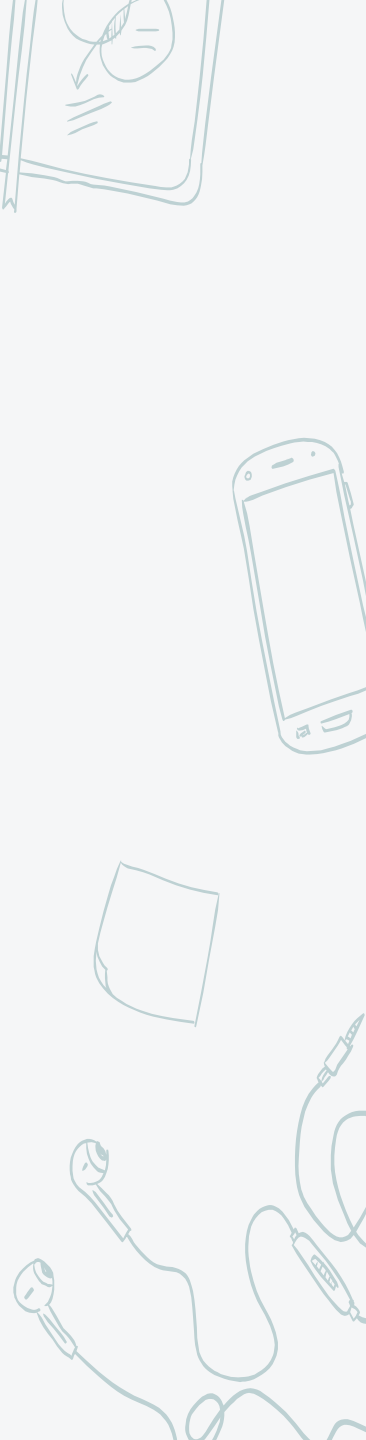
# Rapid application development (RAD)

## ✗ Advantages :

- ✗ For appropriate projects, this approach puts an application into production sooner than any other approach.
- ✗ Documentation is produced as a by-product of completing project tasks.
- ✗ RAD forces teamwork and lots of interaction between users and stakeholders.



## ✗ **Disadvantages :**

- ✗ This intense SDLC can burn out systems developers and other project participants.
  - ✗ This approach requires systems analysts and users to be skilled in RAD systems development tools and RAD techniques.
  - ✗ RAD requires a larger percentage of stakeholders' and users' time than other approaches
- 







# The End-User Systems Development

- ✗ **Advantage:**
- ✗ managers and other users can get the systems they want without having to wait for IS professionals to develop and deliver them



✗ **Disadvantages :**

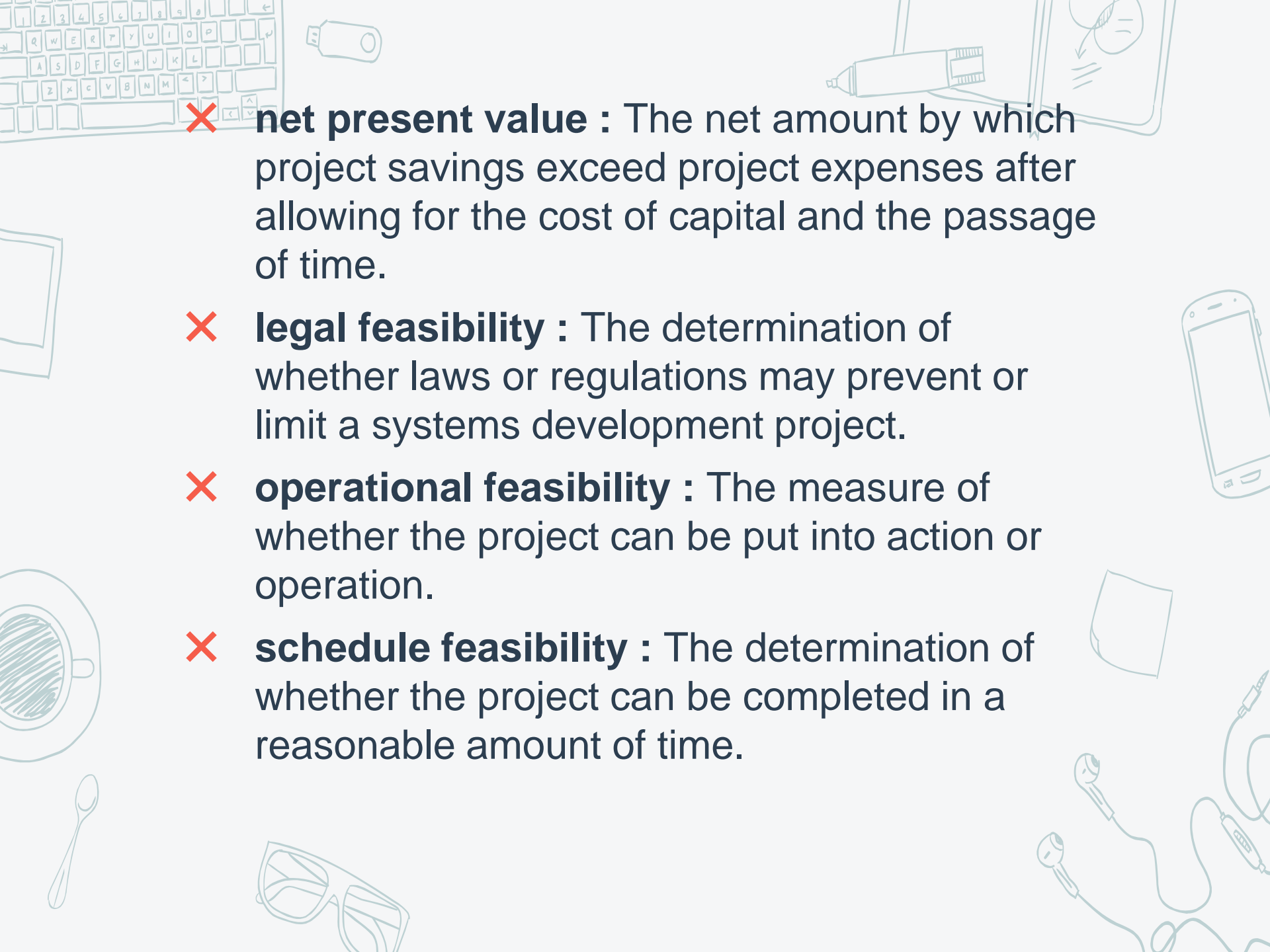
- ✗ Some end users don't have the training to effectively develop and test a system.
  - ✗ Some end-user systems are also poorly documented
  - ✗ some end users spend time and corporate resources developing systems that were already available.
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## Discuss feasibility studying in system development

- ✗ **technical feasibility** : Assessment of whether the hardware, software, and other system components can be acquired or developed to solve the problem.
- ✗ **economic feasibility** :
- ✗ The determination of whether the project makes financial sense and whether predicted benefits offset the cost and time needed to obtain them.





✗ **net present value** : The net amount by which project savings exceed project expenses after allowing for the cost of capital and the passage of time.

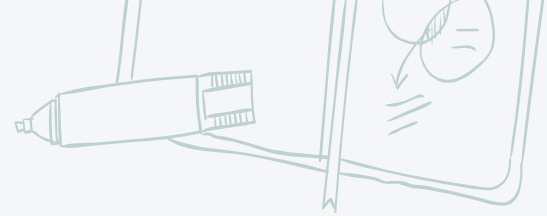
✗ **legal feasibility** : The determination of whether laws or regulations may prevent or limit a systems development project.

✗ **operational feasibility** : The measure of whether the project can be put into action or operation.

✗ **schedule feasibility** : The determination of whether the project can be completed in a reasonable amount of time.

# How company decide buy or build I.S. [advantage & disadvantage]

Strategy	Pros	Cons
<b>Buy</b>	<p>A software solution can be acquired and deployed relatively quickly.</p> <p>An organization can “test drive” software before acquiring it.</p>	<p>Unmodified, the software may not be a good match to an organization’s needs.</p> <p>Maintenance and support costs can become excessive.</p>
<b>Build</b>	<p>Customized software is more likely to be a good match to an organization’s needs.</p> <p>A custom application provides the potential to achieve competitive advantage.</p>	<p>The cost to build a system can be quite high compared to the cost of purchasing off-the-shelf software.</p> <p>Customized software can take months or even years to deploy.</p>



## Reference

✘ principles of information systems 13th

