System Analysis Course

Week 02: Business Model

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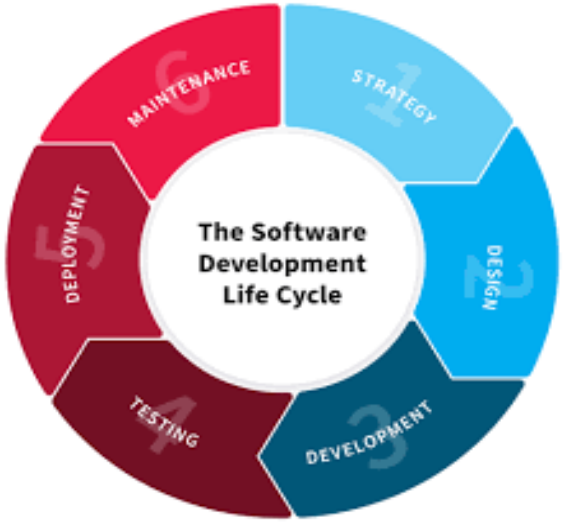


Outline

- Object Oriented Analysis
  - Agile Development
  - System Planning
  - Strategic planning
    - SWOT Analysis
  - Modeling
    - Business Model

Object-Oriented Analysis

- Whereas structured analysis treats processes and data as separate components, object oriented analysis combines data and the processes that act on the data into things called ***objects***.

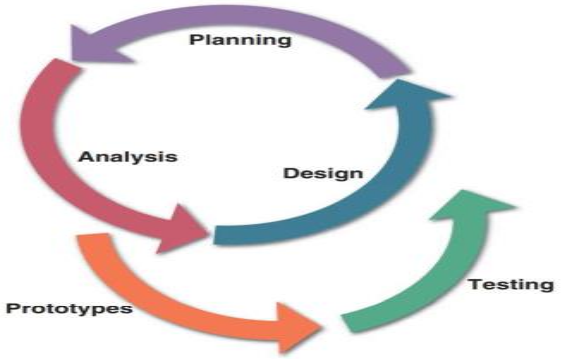
- The result is a set of software objects that represent ***actual people***, ***things***, ***transactions***, and ***events***.
- Using an ***O-O programming language***, a programmer then writes the code that creates the objects.

Object-Oriented Analysis Cont.

- An *object* is a member of a **class**, which is a collection of similar objects. *Objects possess characteristics* called **properties**, which the object inherits from its class or possesses on its own.
- In O-O design, *built-in processes* called **methods** can change an object's properties.
- One object can *send information to another object* by using a **message**. A **message** requests specific behavior or information from another object.
- O-O analysis uses **object models** to represent data and behavior, and to show how objects affect other objects.

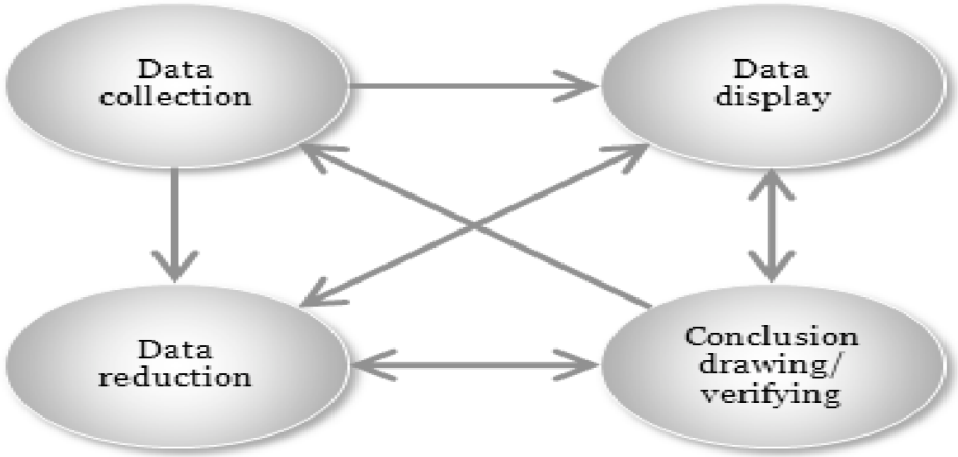
Object-Oriented Analysis Cont.

- ***Object-oriented*** methods usually follow a ***series of analysis and design phases that are similar to the SDLC***, although there is less agreement on the number of phases and their names.
- In an O-O model, the phases tend to be more interactive. shows a system development model where planning, analysis, and design tasks interact continuously to produce prototypes that can be tested and implemented.



Object-Oriented Analysis Cont.

- The result is an ***interactive model*** that can accurately depict real-world business processes.
- ***O-O*** methodology is popular because it provides an easy transition to ***O-O programming languages*** such as Java, Smalltalk, C++, Python, and Perl.



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Agile Methods

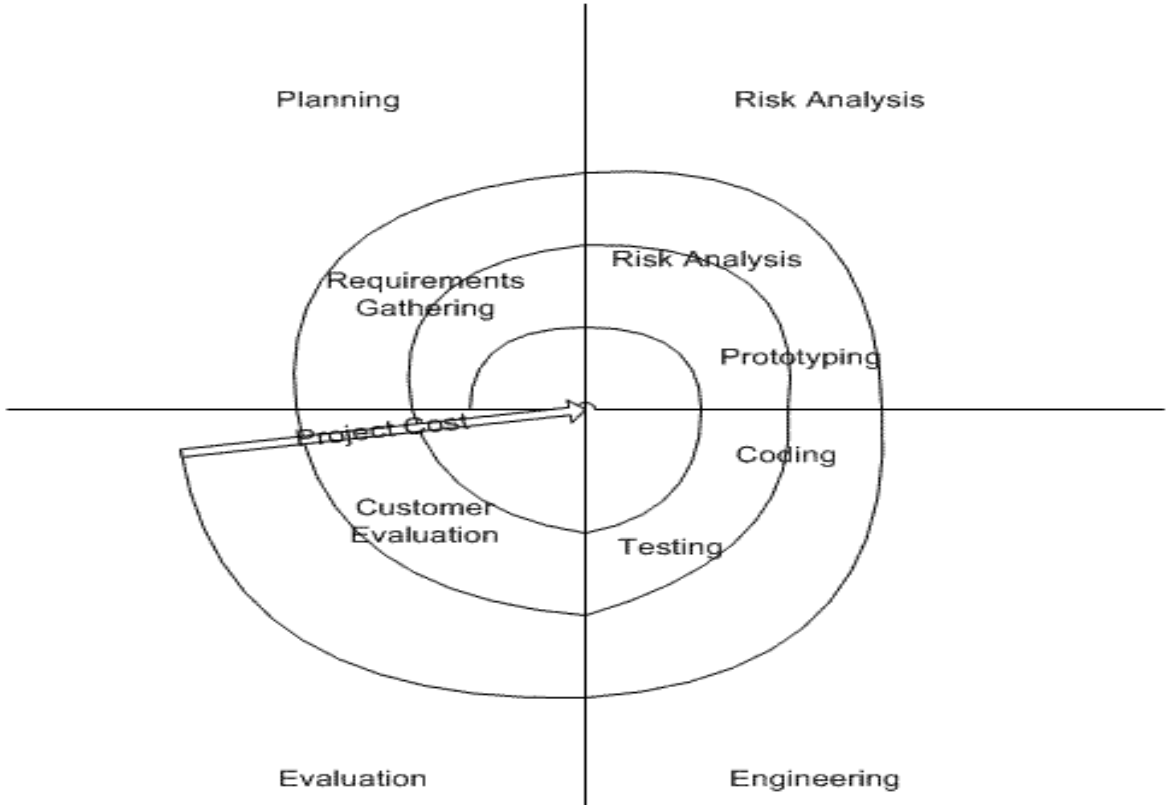
- **Structured analysis** builds an overall plan for the information system, just as a contractor might use a blueprint for constructing a building.
- **Agile methods,** in contrast, attempt to develop a system incrementally, by building a series of **prototypes** and constantly adjusting them to user requirements.
- **An agile approach** emphasizes continuous **feedback**, and each incremental step is affected by what was learned in the prior steps.

Agile Methods Cont.

- **Agile methods** typically use a **spiral model**, which represents a *series of iterations*, or *revisions*, based on *user feedback*.

- As the process continues, the final product gradually evolves. An agile approach requires intense interactivity between developers and individual users, and does not begin with an overall objective. Proponents of the spiral model believe that this approach reduces risks and speeds up software development

Spiral Model.



Agile Methods Cont.

- Stated that each **iteration**, or phase, of the model must have a specific goal that is *accepted*, *rejected*, or changed by the *user, or client.*
- Thus, each iteration produces feedback and enhancements, which enable the team to reach the overall project goal. Typically, each **iteration** in a spiral model includes planning, risk analysis, engineering, and evaluation, as shown in the table.

Agile Methods Cont.

- **Iteration of agile method**

PHASE	TASKS
Planning	Define objectives, constraints, and deliverables
Risk analysis	Identify risks and develop acceptable resolutions
Engineering	Develop a prototype that includes all deliverables
Evaluation	Perform assessment and testing to develop objectives for next iteration

Agile Methods Cont.

- The repeated iterations produce a series of prototypes, which evolve into the finished system. Notice that these phases resemble SDLC tasks, which also can be iterative.

- Ex : Scrum and Extreme Programming (XP).

DISADVANTAGES.

- **Agile methods** can allow developers to be *much more flexible* and *responsive* but can be *riskier than more traditional methods*.
- For example, without a detailed set of system requirements, certain features requested by some users might not be consistent with the company's larger game plan.
- a long series of iterations might actually add to project cost and development time.

✓ The *bottom line* is that systems analysts should understand the pros and cons of any approach before selecting a development method for a specific project.

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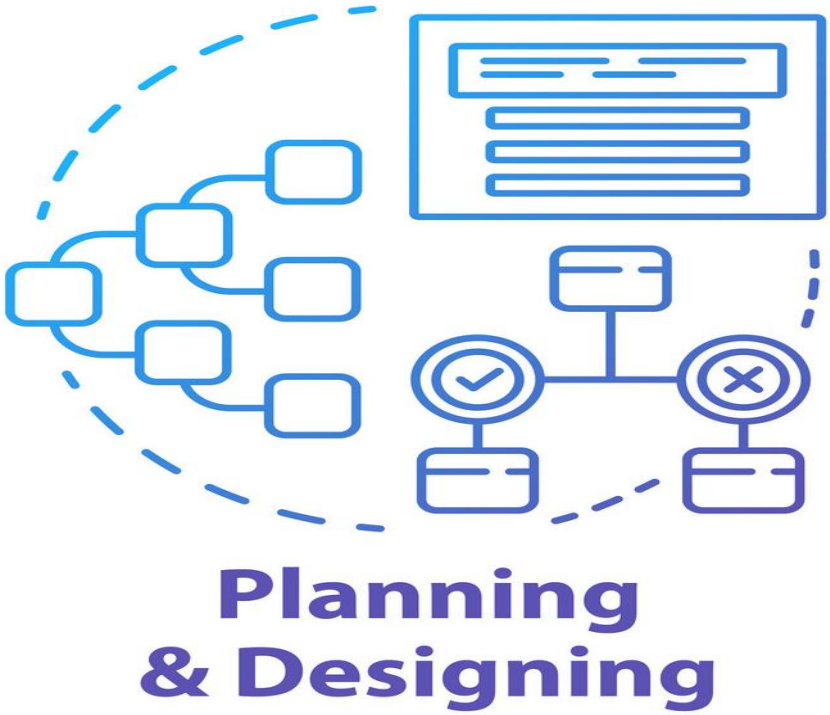
System Planning.



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Strategic planning.

- ***A mission statement*** is just the starting point.
- ***Strategic planning*** is the process of identifying long-term organizational goals, strategies, and resources.

- ***Strategic planning*** looks beyond day-to-day activities and focuses on a horizon that is 3, 5, 10, or more years in the future.
- Strategic planning starts with a management review called a ***SWOT analysis***. The letters stand for strengths, weaknesses, opportunities, and threats

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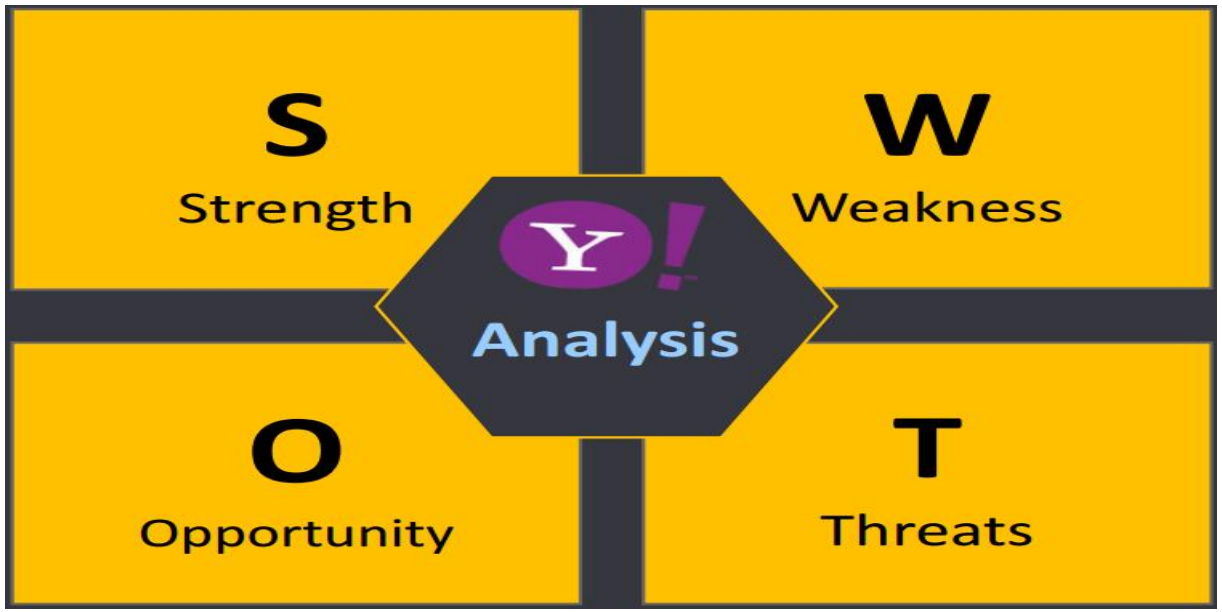
SWOT Analysis.

- The first step is for top management to respond to

  questions like these:
  - What are our strengths, and how can we use them to achieve our business goals?
  - What are our weaknesses, and how can we reduce or eliminate them?
  - What are our opportunities, and how do we plan to take advantage of them?
  - What are our threats, and how can we assess, manage, and respond to the possible risks?

SWOT Analysis Cont.

- A SWOT analysis is a solid foundation for the strategic planning process, because it examines a firm's technical, human, and financial resources.



- See the next example on [Yahoo_SWOT]

S - Strength

- Yahoo! has over 350 million users of its services and solutions. This makes it a very powerful marketing company, with a very well known brand.
- Yahoo has more supplementary products compared to Competitors
- Yahoo has strong brand name
- Yahoo is a simple and easy to use interface
- Fast and very relevant search, **free for customers**
- Yahoo has over 12,200 employees globally in the organization

W - Weakness

- Yahoo **financial** information is not so strong so investors have no interest to invest
- Most advertisement market led by Google
- Yahoo market share in search engine is only 6%
- Google will having 83 % , Bing had 4%
- Yahoo mail user will decreasing due to **security** purposes & lack of backward in technology
- **Gmail** will be using more than Yahoo
- Most of the services provided by Yahoo are **unknown** in the internet space

O - Opportunity

- The international market is a huge opportunity for Yahoo!. Yahoo!, Microsoft and Google are busy carving niches and taking over businesses in are around the Greater China Region. China has over 1,200,000,000 citizens. Other economies, such as India, also offer tremendous growth potential.
- The number of mobile users is constantly increasing in developing nations. Development of Yahoo! Mobile web services will improve the market share.
- Advertising in social media and internet has become essential element for Yahoo.

T - Threats

- The number of competitors is increasing of new innovations in the internet space by young entrepreneurs
- The advertising market which was once dominated by yahoo is being slowly grabbed by the social networking sites like Facebook, Myspace etc.

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MODELING

- ***Modeling*** produces a ***graphical representation*** of a concept or process that systems developers can analyze, test, and modify. A systems analyst can describe and simplify an information system by using a set of ***business***, ***data***, ***object***, ***network***, and ***process models***.

- A ***business model Canvas*** describes the information that a system must provide and the value that provided to the customers in ***9*** blocks to show a brief information and viable to know the organization.

- See the next examples in the next slides…

Example 1

Key Partners

Google (strategic partner)

Facebook

Prestashop

Key Activities

Creation

Promotion

Reporting

Optimization

Key Resources

Employees

Digital marketing tools

Automatic reporting algorithm.

Value Propositions

360 digital marketing agency:
Search Engine Marketing
Social Media Marketing
Email Marketing
Search Engine Optimization
User Experience / User Desing (UX / UI)
E-Business & Digital Marketing Consulting
TrekMetrics
E-shop / Website Development

Customer Relationships

Customer's "Department"

The goal is " get the concept of e-business away from the client"

The account manager is high in the hierarchy

Channels

Word of Mouth
Applying in Awards

Customer Segments

Companies from various industries (e.g. banks, telecommunications companies)

Big advertising companies representing a set of companies

They are distinguished in "performance" and "branding"

Cost Structure

Staff costs
Operating expenses
Other expenses
Partners
Marketing/HR costs

Revenue Streams

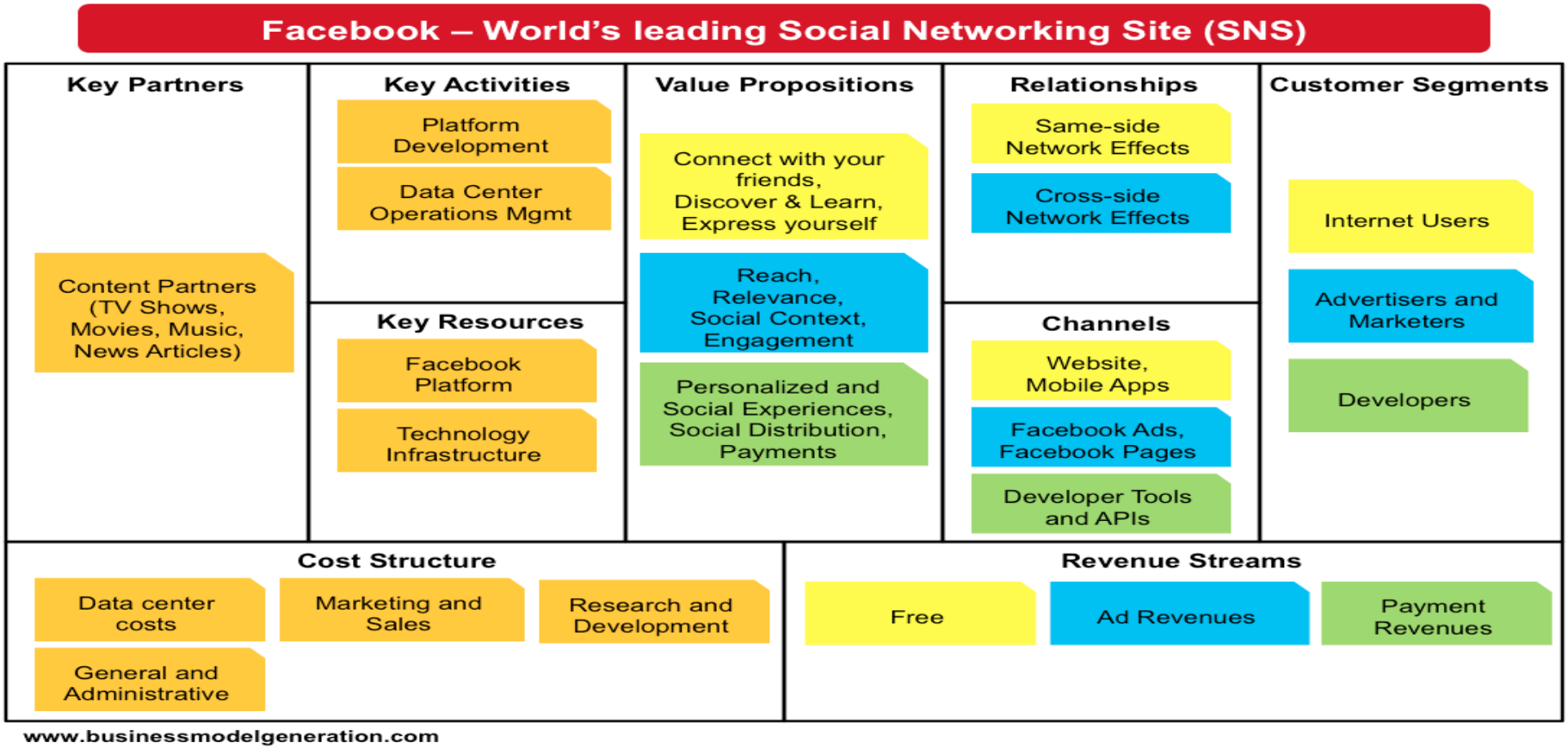
Fixed monthly charge per customer

Example 2

Key Partners	Key Activities	Value Proposition	Customer Relationship	Customer Segment
Programmers Health ministry Hospitals Management	Create E-system Train employees Awareness campaigns Explanation Leaflets	Cost reduction Organization Citizen satisfaction Improve QOS Prevent medical theft Less crowding	(self/Automated) service	Citizens Government
	Key Resources		**Channels**	
	Programming Tools Computers with high qualifications		Internet (website) Reality	

Cost Structure	Revenue Stream
Marketing Security Payment of developers Maintenance	Payment from private institution Increase our health classification Opportunities to participate in "WHO" activities

Example 3 - Facebook the social media website



Thank You