

Designing Effective Outputs

[Chapter 11]

System Analysis and Design

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- Information can be categorized as:
 - strategic information
 - managerial information
 - operational information.





Strategic information

- Strategic information is the information needed by top most management for decision making.
- This information is not required by the lower levels in the organization.
- The information systems that provide these kinds of information are known as Decision Support Systems (DSS).
- For example the trends in revenues earned by the organization are required by the top management for setting the policies of the organization.



Managerial information

- required by the middle management
- used for making short term decisions and plans for the organization
- Management information system (**MIS**) caters to such information needs of the organization.
- Information like sales analysis for the past quarter or yearly production details etc. fall under this category.





Operational information

- relating to the daily or short term information needs of the organization such as attendance records of the employees.
- This kind of information is required at the operational level for carrying out the day-to-day operational activities.
- The information system is known as Transaction Processing System (**TPS**) or Data Processing System (**DPS**).
- Some examples of information provided by such systems are processing of orders, posting of entries in bank, evaluating overdue purchaser orders etc.





Reports are the primary means of communication in organization. In large-scale organizations, there is no alternative to use reports. Reports also play an important role in small-scale organizations. Some points highlighting the purposes or objectives or important of business report are presented below-

1. **Transmitting Information:** Business report is very important for transmitting information from one person to another or form one level to another.
2. **Interpretation and Explanation of event:** Report provides interpretation and explanation of information. As a result, readers can easily understand it.
3. **Making decisions:** A report is the basic management tool for making decisions. The job of a manager is nothing but making decisions. Reports supply necessary information to managers to solve problems.



4. Communication with external stakeholders: In addition to internal use, reports also communicate information to the external stakeholders like shareholders, creditors, customers, suppliers, government officials and various regulatory agencies. In the absence of formal business report, such stakeholders would remain at dark about the organizations.

5. Development of information base: Reports also contribute to the development of information base in organization. It develops information base in two ways. Firstly, day to day information is recorded permanently for writing reports. Secondly, the written reports are preserved for future reference. In these ways, reports help in developing a strong and sound information base.

6. Developing labor-management relationship: Reports also help to improve labor-management relationship particularly, in large organizations. In a large organization, there is little opportunity of direct communication between top-level management and employees. In this case, report is used as mechanism of keeping both sides informed about each other and improving their relationships.



7. Controlling: Controlling is the final function of management. It ensures whether the actual performance meets the standard. In order to perform the managerial function of controlling, report serves as a yardstick. It supplies necessary information to impose controlling mechanism.

8. Recommending actions: Reports not only supply information but also recommend natural actions or solutions to the problem. When someone is given the charge of investigating a complex problem and suggesting an appropriate remedy, the investigator usually submits a report to the concerned manager.



- Information delivered to users
- Output forms
 - Hard-copy—printed reports
 - Soft-copy—computer screens, microforms, and audio
- To create output, the analyst works interactively with the user until the output is satisfactory
- Output can be delivered via:
 - intranets
 - extranets
 - the Web



- Output is essential to ensuring the use and acceptance of the information system.
- Serve a specific user or organizational purpose—if the output is not functional, it should not be created, there are costs of time and materials with all output from the system.
- Meaningful to the user—on the basis of interviews, observations, cost considerations, and prototypes, it is possible to design output that addresses what users need and prefer.
- Deliver the appropriate quantity of output—the system must provide what each person needs to complete his or her work.





- Make sure the output is where it is needed—to be used and useful, output must be presented to the right user.
- Provide output on time—accurate timing of output can be critical to business operations.
- Choosing the right output method—there are tradeoffs in output methods; costs differ, accessibility, flexibility, durability, distribution, storage, retrieval, transportability, overall impact.





- Content of output must be considered as interrelated to the output method
 - External—going outside the business
 - Internal—staying within the business





- Examples:
 - Utility bills
 - Advertisements
 - Paychecks
- Differs from internal output in:
 - Distribution
 - Design
 - Appearance

Because, Many external documents must include instructions to the recipient if they are to be used correctly.



- Examples:
 - Summary reports
 - Detailed reports
 - Historical reports
 - Exception reports
- Might consist of material available on an intranet

A Comparison of Output Methods

15

(Figure 11.2)



Output Method	Advantages	Disadvantages
Printer	<ul style="list-style-type: none">• Affordable for most organizations• Flexible in types of output, location, and capabilities• Handles large volumes of output• Highly reliable with little down time	<ul style="list-style-type: none">• Still requires some operator intervention• Compatibility problems with computer software• May require special, expensive supplies• Depending on model, may be slow• Environmentally unfriendly
Display screen	<ul style="list-style-type: none">• Interactive• Online, real-time transmission• Quiet• Takes advantage of computer capabilities for movement within databases and files• Good for frequently accessed, ephemeral messages	<ul style="list-style-type: none">• May require cabling and setup space• Requires system for taking "snapshots" of screen and storing them for future use

A Comparison of Output Methods

(Figure 11.2)



Audio output and podcasts

- Good for individual user
- Good for transient messages
- Good where worker needs hands free
- Good if output needs to be widely distributed
- Needs earbuds where output will interfere with other tasks
- Has limited application

Mobile devices

- Highly portable
- Very interactive using gestures
- Zoom is possible
- Screen may be too small for text
- Icons and buttons may be confusing
- May be lost more easily

Electronic output (email, Web sites, blogs, and RSS feeds)

- Reduces paper
- Can be updated very easily
- Can be “broadcast”
- Can be made interactive
- Is not conducive to formatting (email)
- Is difficult to convey context of messages (email)
- Web sites need diligent maintenance