New Opportunities for the Development of Education at the Technical University of Liberec

<u>Specific objective A2: Development in the field of distance learning, online learning and blended learning</u>

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Learning materials

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3 Information Support of Controlling (Reporting as a Basic Tool)

Content

One of the most important tasks of controlling is to provide all levels of the company's management with information needed for effective decision making. This activity of the controlling department can be called **reporting.** Just like other scientific disciplines, reporting is evolving. Initially, reporting was considered only as the separate recording of information. With the rising need for detailed information in real time, controlling has evolved into a system that also processes data and presents it to recipients. In the broadest sense, this term can include designing an appropriate information base and designing a relevant evaluation and navigation system. (Mikovcová, 2007, p. 156)

In literature, it is possible to find a number of definitions for this term. The following ones have been chosen as examples.

Šoljaková and Fibírová (2010, p. 10) define reporting as a complex system of in-house statements and reports synthesizing information about a company both as a whole as well as its basic organizational units. This information should help to make the right decisions.

According to Mikovcová (2007, p. 156), reporting is one of the key features of the controlling process. It should prepare, process, summarize and transmit the data to concrete addresses.

According to Eschenbach (2004, p. 556), reporting contains all official, material and formal information that are available to the people who are responsible for fulfilling of tasks.

In German literature a similar term can be found, namely **Betriebliches Berichtswesen.** This term can be translated as a company's information system. According to Blohm (1982, p. 866), this term contains all devices, instruments and measures that are used in a company that should enable the collection, processing and transmitting of information about a company and its surroundings.

Due to the different requirements of individual stakeholders, Šoljaková a Fibírová (2010, p. 11) recommend that reporting should also include selecting, processing, formally laying out and distributing information designed for various user groups. Each manager should have access only to the piece of information that he or she really needs. Complex information is available only to a company's top management. A company's reporting should (Mikovcová, 2007, p. 159):

- contribute to the fulfilment of a company's strategic goals and ensure the decision making that is consistent with these goals,

- enable control, which means disclose and analyse deviations from set plans (reality x plan) and from future expectations (future x plan),

- help by making correct decisions,

- enable the assessment of the effects of measures that have been taken,

- enable management to delegate measures to specific people and set specific deadlines for their implementation.

3.1 Information sources

In a constantly changing world, it is necessary to ensure actual and high-quality information about the activities of a company and its surroundings. This is a key assumption for a company to be able to have an effective decision-making process. Controlling should ensure that managers obtain this information in a sufficient amount and quality as well as in time.

The data that reporting needs are usually obtained from **a copmany's accounting,** both financial and managerial. This internal information is not sufficient for the effective management of a company and, therefore, other sources of external information are needed. In practice, however, there is a considerable discrepancy between existing, required and useful information. Therefore, it is necessary to find a balance between the information that is available (especially accounting and other financial data), the information that is wanted (the subjective need of a company's management) and the information that is really needed (information objectively necessary for the completion of set tasks). The above mentioned problem can be summarized into following: (Mikovcová, 2007, p. 157)

- Information that is available is not what is wanted.
- Information that is wanted is not what is needed.
- Information that is needed is not what is available.

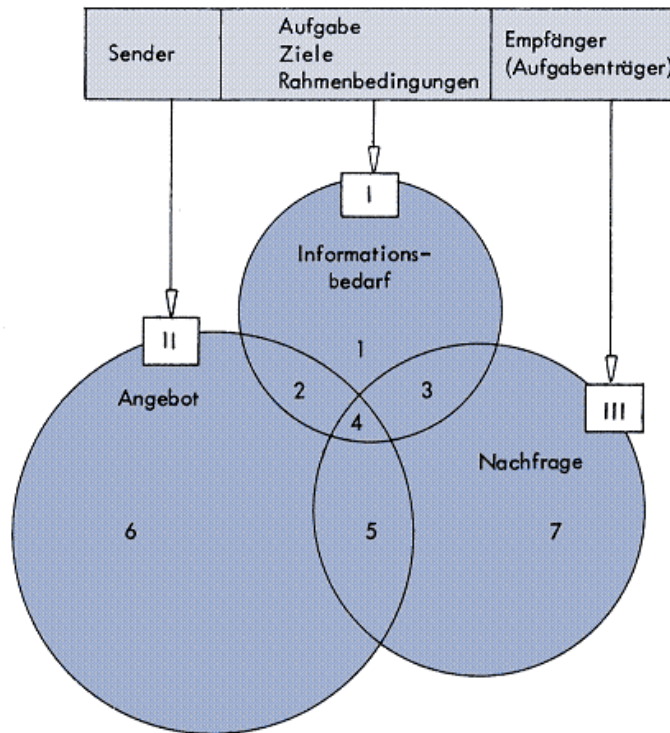The mutual connection between these statements is shown in figure 3.1.

Figure 3.1 Supply, demand and need for information
Source: HORVÁTH, P. Controlling, 2011, p. 311.

where:

1. Information that is neither offered nor demanded
2. Information that is offered but not demanded
3. Information that is demanded but not offered
4. Information that is both offered and demanded
5. News that is both offered and demanded but not necessary
6. News that is offered but neither demanded nor necessary
7. News that is demanded but neither offered nor necessary

The supply of information (Angebot) is dependent on the amount of information released by individual sources of information (Sender). **The demand of information** (Nachfrage) is dependent on the subjective needs of the recipient of the information (Empfänger). The objective **information need** (Informationsbedarf) is that piece of information that are is necessary for fulfilling a company's set goals and tasks. Within this process, the framework conditions have to exist (Ziele, Aufgaben, Rahmenbedinngungen). The information that is relevant for making right decisions is that which offered, demanded and also really necessary (Nr. 4).

The ideal solution would be if a company's management always needed only that information that was available and the controlling department was able to process it. But in practise, the situation is different. The results of surveys conducted in the Czech Republic and Austria brought the following results: (Mikovcová, 2007, p. 158)

- the demand of information requires only 10% of the total amount of information that is objectively able to be covered,

- too much irrelevant information is demanded,

- inappropriate methods of information processing are used, which leads to a wider spectrum of output data (the data are not aggregated),

- there is an indirect correlation between the amount and the quality of information – the greater the information supply, the worse the decisions that are made – because information is not effectively used,

- reports are "the cemeteries of data",

- a quality information system that meets all requirements is available only in about 20% of the Austrian and in 18% of the Czech companies – although reporting is performed by nearly 90% of Austrian (70% of Czech) companies.

3.1.1 Management information systems

To obtain necessary information a functional management information system has to be introduced into a company. Eschenbach (2004, p. 556) defines the **management information system** as the preparation of information that is needed for efficient company's management. This information should have minimal content and it should be prepared according to a defined procedure. In addition, the information should be delivered to individual managers through special information channels. The management information system is, in other words, a summary of individual information tools within a controlling system (see figure 3.2).

Figure 3.2 Functional management system
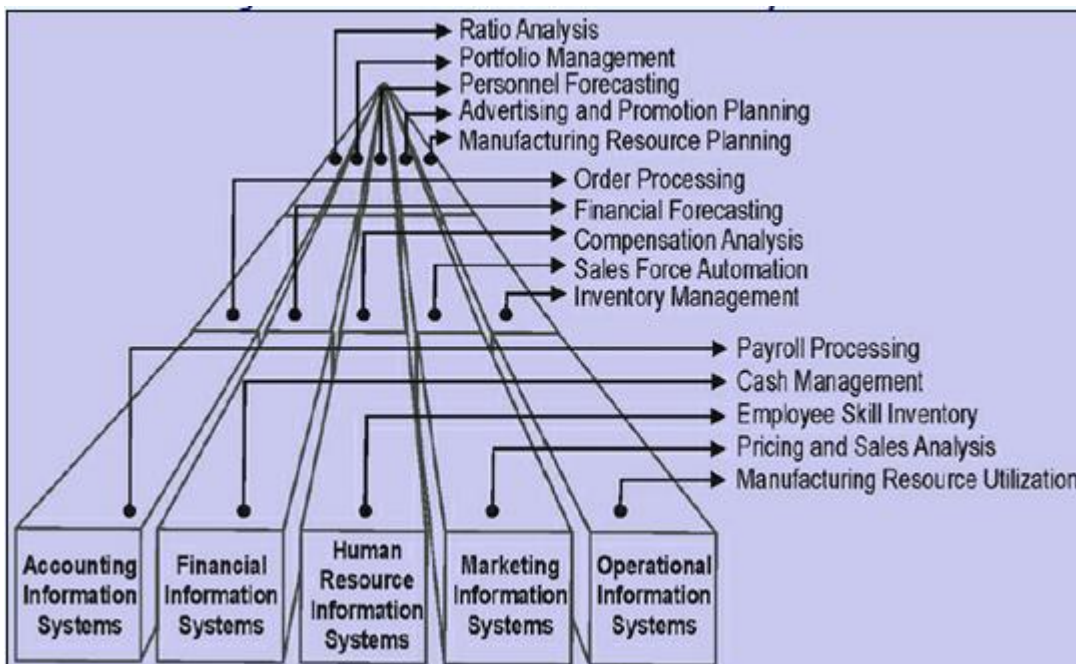Source: ExpertsMind IT Educational. Functional management system, p. 1.

In order to successfully fulfil its tasks, the management information system has to meet the following requirements. (Eschenbach, 2004, p. 561)

- **objectivity** – the managers have to obtain unbiased information; the controller has to strike a balance between the contradictory goals of individual stakeholders;

- **verifiability** – the opportunity to check the results obtained from the management information system is an essential assumption of objectivity; controller's reports have to be prepared so that it is possible to analyse them separately; all methods, procedures and assumptions used for creating the reports have to be recorded in written form (e.g. in a handbook of controlling);

- **meeting deadlines** – the controller has to balance the requested deadline for submitting reports and the amount of detail given in the reports; some types of reports (e.g. monthly reports) are submitted just a few days after the end of the relevant period and, therefore, they contain estimated amounts of monitored parameters; the actual amount of the parameters has not been recorded;

- **focus on activities** – the information prepared for managers has to cause a reaction and lead to intended results; therefore, the information has to be oriented towards action;

- **be user-friendly** – the reports for company's management have to be prepared according to generally applicable standards or the individual requirements of their recipients; it enables a fast understanding of their content; an inappropriate report form or structure usually causes the report to not be read at all; in addition, it is recommended to use a unified design for all reports within a company;

- **consistency** – with the growing size and complexity of company's activities, managers need a greater degree of information; the controller has to secure a consistent management information system; **control numbers** help to avoid possible inconsistencies within the reporting process;

- **efficiency** – the growing size and complexity of company's activities usually lead to increased costs spent on obtaining needed information; therefore, the management information system has to be efficient; such a system has to meet the following requirements:

  - ➢ the information for company's management is prepared only by controlling; reporting is, therefore, a classical function of controlling – **who;**

  - ➢ stop the preparation of routine reports and minimize the preparation of special reports – **what;**

  - ➢ avoid multiple preparation of information with the help of regulation and "education" of contracting authorities– **how often;**

  - ➢ ensure actual data from central accounting by using appropriate hardware and software by creating reports – **how;**

  - ➢ information for company's management has to be the actual basis for the decision making process – **for what.**

With the help of the information system, the controlling department prepares reports that are oriented towards factors leading to the success of a company. These factors should be analysed and presented in a suitable form to a company's management. This information has the character of "perishable goods" and, therefore, it has to be used within a limited amount of time. Information for company's management has to be prepared with the necessary amount of accuracy in an aggregated form, at the right place and time. The information should have a minimal structure that has to be oriented towards: (Eschenbach, 2004, p. 558)

- goals,
- bottlenecks,
- activities.

To enable the appropriate delivery of the information to its recipients the processes of preparing and transmitting information have to be defined. The right procedure for creating reports can be described in four phases (see figure 3.3).
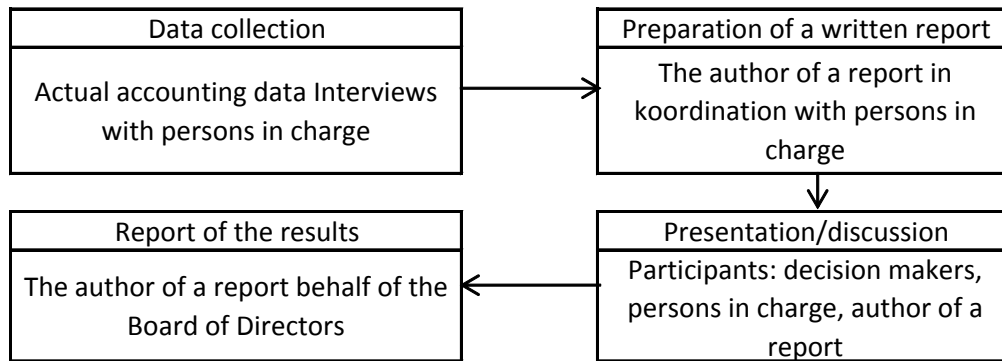
Data collection Actual accounting data Interviews with persons in charge	→	Preparation of a written report The author of a report in koordination with persons in charge
Report of the results The author of a report behalf of the Board of Directors	←	Presentation/discussion Participants: decision makers, persons in charge, author of a report

Figure 3.3 The preparation of reports
Source: ESCHENBACH, R. Controlling, p. 559.

The controller should secure, by providing of information to a company's management: (Eschenbach, 2004, p. 573)

- **regulation and coordination** of the information flow within a company (in the vertical, horizontal and diagonal directions),
- **creation** of a company's management information system.

By regulating and coordinating the information flow, the controller has to strike a balance between the supply of information from internal and external sources of information. He or she should also determine the "objective" need for information that has to be brought into the management information system. In other words, the minimal amount of information that is essential for making decisions has to be provided. Metaphorically speaking, the controller should change the management information system from a "cemetery of numbers" to a "supermarket of numbers". The management information system can be created in the following phases (Eschenbach, 2004, p. 573):

- **phase 1** – setting strategic goals (products, markets and customers),
- **phase 2 –** setting the requirements of controlling (e. g. calculations of profit centres, the method of calculating profit, the structure of costing model),
- **phase 3 –** system selection,
- **phase 4** – implementation.

3.2 The linkage between controlling and information technology

Currently, an effective controlling system cannot function without the support of information technology. Information technology enables managers to obtain the information quickly, oriented towards recipients and in a way that corresponds to

concrete situations. The management information system has to be optimally supported the information technology. Especially, operative controlling cannot function effectively without the support of information technology.

To obtain the information quickly, oriented towards recipients and in a way that corresponds to concrete situations, an appropriate controlling software has to be selected. Its specific features are dependent on the level of technological advancement of computer technology and the individual requirements of its users. Eschenbach (2004, p. 660) uses the phrase **controlling supported by information technology** in this context in which a computer is a tool that is necessary to fulfil controlling tasks.

For the effective functioning of a controlling system, the optimal software solution has to be implemented. Eschenbach (2004, p. 673) recommends that the software meets the following requirements:

- **connection of operational and strategic controlling** – both areas have to be closely linked; this is enabled with the help of controlling tools supported by information technology; the collection of information oriented towards the recipient has to be supported by a network linking operational and strategic regulation circles;

- **display of ratios relevant for a company's management** – controlling software has to display the most relevant ratios needed for a company's management; these ratios must display when specified tolerance limits have been exceeded;

- **possible planning in all areas** – the selected software has to secure comfort planning and support the controller in the coordination of partial plans to ensure their integration into the company's total plans; this approach should enable a company's management to realistically plan the company's future;

- **comparison (recalculated) plan – reality in all areas** – the support of information technology enables a timely checking of individual plans; any deviations from set plans are analyzed and commented on; the controller has the opportunity to assess the influence of detected deviations on important indicators of the company's performance in real time; this enables a faster reaction by management to change the bad situation;

- **including all interdependencies** – the selected software has to display individual dependencies and their influence on the company; the use of information technology enables simulations that are able to test results of possible alternatives; this is essential for adopting optimal measures;

- **display and transmission of important data (reporting)** – due to increasingly more complex information, the controlling software has to provide a company's management with aggregated information that is relevant for making decisions.

The optimal software solution should meet the following secondary conditions:

- a growth of efficiency,
- an increase in competitiveness,
- the rationalization and modernization of processes,
- improving the quality of workers,

- improving the quality of information,
- the removal of bottlenecks.

3.3   The methodology of data processing

Every company has certain procedures for processing of information. In principle, the process should ensure a limited amount of information that is relevant for taking appropriate measures and making further decisions. In practice, the output provides paradoxically broader information than it did for the input. Therefore this information cannot be used for decision making without further processing.

In literature, a lot of theoretical recommendations related to the methodology of reporting can be found. These recommendations should ensure the required structure of reports. When designing and implementing a company's reporting, the following procedure should be respected: (Šoljaková and Fibírová, 2010, p. 11)

- identify the users of reports and analyse their needs and requirements with regard to the content, form and timing of the presented information,

- differentiate the content of the reports according to the needs of internal and external users,

- select an appropriate form of the reports, both in printed and electronic form, or their combination,

- create and use a unified design of the reports and do not change it very often,

- select an appropriate way of reporting distribution; separate confidential information from others and ensure its protection,

- use the feedback from recipients, analyze their use of the reports and pay attention to their comments and suggestions for improving the reporting system.

Reporting constructed according to these principles should lead to qualitative company's management and create a good relationship with individual external and internal users of its information. Reporting can be also understood as a part of public relations that is created by modern companies to strengthen their competitiveness. An important role is also played by the extent and form of the information presented in financial statements and the relationship between external and internal reporting. (Šoljaková a Fibírová, 2010, p. 11)

Currently, companies have entire systems of automatic information processing that are directly interconnected to their core business. (see chapter 3.1.1). These products often do not meet the company's real requirements, thus their controlling system is inefficient. Therefore, the controller and management should find such a methodology that is "tailored" to the specific company.

Mikovcová (2007, p. 159) lists various stakeholders that have different requirements for the creation and use of an information system in a company. The most important one is a company's top management, i. e. the Board of Directors. This group want to:

- obtain aggregated information about the whole company,

- based on this information assess the performance of individual divisions, departments or product groups.

Managers on lower hierarchical levels of the company expect:

- a user-friendly and easy system,
- a system that provides them with detailed and actual information about individual departments,
- a system that enables an analysis of deviations and a simulation of future development.

Ordinary workers request that the information system be:

- as simple as possible and in terms of the operators as less time consuming as possible,
- if possible, have a central processing of information.

3.4 The structure of outputs

The output of reporting is a **report.** The content and form of a company's reports is usually determined by guidelines and methodological instructions. To obtain a high information value from a report, it is necessary to define the following: (Mikovcová, 2007, p. 156)

- the necessary data,
- the methodology of processing,
- the outputs with regard to data,
- the final outputs as recommendations.

The individual types of reports can be classified according to the following criteria: (Horváth, 2011, p. 590)

- material scope (e. g. production),
- time specification (e. g. real data),
- type of media (e. g. screen),
- frequency (e. g. regularly),
- level of aggregation (e. g. ratios),
- function (e. g. documentation).

There are certain basic criteria that transform a common report into a controlling report: (Horváth, 1998, p. 597)

- three numerical categories have to be defined (plan, reality, future expectations) so that an appropriate comparison can be made between the planned and actual value;

- all numbers have to be checked by a manager or controller; it is also necessary to mention the intended corrective measures;

- the impact of individual deviations on profit has to be clearly presented.

The presentation of individual reports is an important aspect of reporting. Therefore, it is necessary to respect the following general principles: (Mikovcová, 2007, p. 162)

- **conciseness** – reports should have an appropriate length; the top management should obtain the most aggregated information, whereas lower levels of management should get more detailed information; in addition, the report should have both appropriate content and form; appropriate visual and arranged graphics that enable easy orientation is preferred;

- **targeting** – in an oral presentation every recipient should obtain a report that contains the name of the recipient;

- **appropriate form** – the reports should have a unified form that is consistent with the company's standard; they should also take into account the individual requirements of recipients; compliance with these principles ensures an easier orientation in submitted reports; the form of the reports should not be changed very often which should enhance comparison over time;

- **oral presentation** – each written report should be accompanied by a sufficiently long oral presentation;

- **regularity** – both the preparation and presentation of reports should take place on a regular basis; otherwise, the whole reporting process will be only formal and will not be effective.

Reporting can generally be divided into external and internal, which corresponds to the classification of reporting users. **External users** mainly include employees, cooperating companies, state authorities and the general public. If the ownership of a company is separated from its management, the company's owners and investors are considered external users. **Internal users** are usually a company's managers of. (Šoljaková and Fibírová, 2010, p. 11)

3.4.1 Internal reporting

Internal reporting provides individual levels of management with necessary information. Mikovcová (2007, p. 164) demonstrates a model example of a public limited company whose internal reporting has the three following elements:

- **reporting for the Board of Directors** – the reports are regularly prepared on a monthly basis; they present the results of the company in comparison with the previous period and with the set plan; the information is presented in the form of tables and charts; significant deviations are briefly commented on; the information is prepared in accordance with the appropriate set of national or international accounting standards; the obtained data are exported into table calculators to carry out a trend analysis; the results are presented to the entire company and are divided into the following areas:
  - ➢ business data (the number of customers, the amount of goods sold by individual categories, the amount of goods purchased; the amount of own production etc.);
  - ➢ distribution data (the number of kilometres of new networks);

- ➢ personnel data (the development of personnel expenses, the number of staff, average wages, training expenses etc.);

- ➢ financial statements for a shortened period;

- **reporting for the Supervisory Board** – the reports are prepared on a quarterly basis; they present the actual results of the company in comparison with the anticipated future development; information related to the annual or medium-term plan is prepared on a yearly basis; if the company is a part of a multinational, the parent company sends unified templates of documents to all its subsidiaries;

- **reporting for individual divisions/departments of a company** – the reports are presented in the form of statements that include the plan and actual revenues and expenses for the period; the individual divisions/departments comment on any existing deviations.

The content, form and frequency in which the reports are prepared are dependent on the needs of the particular company. According to the regularity of the preparation of reports reporting can be divided into: (Šoljaková and Fibírová, 2010, p. 11)

- **standard reporting** – the reports are prepared on a regular basis in a given structure; these reports contain, for example, information about the actual amounts, deviations, deviation analysis and forecast amounts at the end of the period; the reports are usually prepared on a monthly, quarterly or yearly basis; if needed, this interval can be shortened at the weekly or bi-weekly period; in such a case, cost efficiency has to be taken into account;

- **extraordinary reporting** – the reports are prepared on request that is extraordinary in term or type of requested information; in this case, even very special reports and analyses can be demanded, such as a risk analysis or an analysis of production groups

3.4.2 External reporting

External reporting primarily provides information to users outside the company. According to the relationship of these users to the company, external reporting can be divided into the two following groups: (Mikovcová, 2007, p. 165)

- **reporting for a parent company** – the data are filled in on-line forms every quarter; these data are compared with the same period of the previous year and with the set plan; in the same way, annual and medium-term plans and forecasts are prepared; a standard balance sheet, profit and loss statement and other requested financial statements are prepared; the parent company usually sets terms for submitting the requested documents;

- **reporting to third parties** – these reports are usually sent to state authorities, banks or the stock exchange; they contain information aggregated for the entire company and are prepared according to appropriate accounting standards; the content and form of these statements has to meet the requirements of the particular institutions.

Summary

Reporting is an essential assumption for making effective management decisions. Its main tasks include selecting, processing and distributing information designed for various users. A company's management should obtain the information in a right amount, quality and time.

To prepare quality reports, reporting should have a sufficient amount of relevant information. For this purpose, a company has to implement an effective management information system. In principle, a minimal amount of information that is essential for decision making has to be provided. Metaphorically speaking, the controller should change the management information system from a "cemetery of numbers" to a "supermarket of numbers".

Currently, effective controlling cannot function without the support of information technology. In this context, we mean controlling supported by information technology where a computer is a tool that is necessary to fulfil controlling tasks. A prerequisite for the functioning of this system is the selection of an appropriate controlling software.

An effective controlling should provide a company's management with a limited amount of data that should lead to the adoption of appropriate measures. For this purpose, companies should have a methodology preparing reports with an appropriate structure.

The output of reporting is a report. The content and form of a company's reports is usually determined by the guidelines and methodological instructions. According to its users' needs, reporting can be divided into external and internal. According to the regularity of preparation of individual reports standard and extraordinary reports can be distinguished. In order to have the necessary impact and effect on management, each report should be presented orally to the appropriate recipients.

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