Developing Systematic Reporting Structures

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Reports breed faster than the company using them unless strict "birth control" is maintained. Here's a pattern for such control—and for improving each survivor, too—

DEVELOPING SYSTEMATIC REPORTING STRUCTURES

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SUCCESSFUL organizations evolve over a period of years. When they begin, the operations are usually relatively simple. There is a low volume of output (or production) of one or a few products or services. The small number of employees and products can be managed readily by one or perhaps a few individuals without losing control. However, success in serving the concern's customers usually brings with it the need to provide more products and services, thereby increasing the number of employees, the number of internal organizational units, and the complexity of operations.

At the beginning of operations, management has little need for extensive internal reporting because the management group is small and most executives have first-hand knowledge of the most significant aspects of the business. Usually, monthly or quarterly financial statements and limited reports relating to employees and productivity are all that are required.

However, as the organization be-comes more complex and management grows more distant from day-to-day operations, the lower levels of management must be relied upon for additional information. In many instances, management's requests for specific information result in regular preparation of more and more reports which are initiated by the organizational unit responding to these questions. In addition to those reports resulting from top management requests, additional reports are generated by the various organizational units to meet their own specific needs for data. Thus, the reporting structures of most organizations are evolutionary. Often this may result in the development of a haphazard reporting structure at several stages in the life of these organizations.

The purpose of this article is (1) to present an approach for organizing a review and evaluation of current reports by management, and (2) to set forth necessary steps in the development of a reporting system which encourages a structured approach to report preparation. Moreover, it leads to continual evaluation of report content and

distribution. The effort required to accomplish this review will vary with the size of the organization; however, in almost every case, the savings resulting from the elimination of redundant or misleading information and the achievement of efficient reporting will more than offset this effort.

During growth periods, management eventually begins to question the data which are provided to it. Normally a review and evaluation of the reporting structure and the reported information will reveal many of the following problems:

1. Little or no formal reporting concerning some important activities of the organization.

2. Too much reporting concerning some relatively unimportant activities.

3. Redundant data, resulting from the same information (a) being provided from several sources or (b) appearing unnecessarily in several reports from the same source.

4. Failure to provide structured reporting, in which the highest levels of management receive top-

EXHIBIT I

COMPANY X Y Z
DIVISION X

Report #	Title		
Frequency	# of Pages	# of Copies	Preparer

Sources of Data:	Preparation: Manual Mechanized Content: Key Items Exception Action Analytical Level: Summary Intermediate Detail

Page	Basic Information Sequenced by:	# of Elements

Similar Information on Report(s) #

Recipients	Required	Useful

Remarks:

level summaries, middle management receives more detail, and employees at the operating level receive detailed information concerning day-to-day activities.

5. Poor report formats, i.e., report formats which do not highlight what is important, report formats which do not present comparisons and lack of visual presentations such as graphs.

6. Little or no coding of reports, making it difficult to determine how one report relates to all other reports, how many reports are prepared on the same general subject, who is responsible for the preparation of the report, and how many reports are issued in total.

7. Continued publication of obsolete reports, which no longer meet a management need.

8. Lack of key item, exception, action, or analytical reports which direct management's attention to the key activities of the organization.

In order to determine whether any of these problems exist in an organization, a thorough study and analysis of each report is required. Although some problems are readily recognizable, others will not become apparent until a systematic evaluation is conducted.

Experience suggests that the following program provides a useful framework for such an evaluation.

Task 1—*Prepare An Inventory of Current Reports.* Usually no one person or unit in the organization has a complete inventory of all reports which are prepared. The collection of samples of all reports is usually a rather telling experience in itself. Many organizations underestimate the number of reports which are prepared. At the time the inventory of reports is being developed, it is also useful to number the reports and to collect certain data relating to each report, such as the following:

- Title
- Name of Initiating Unit
- Frequency of Issuance
- Method of Preparation
- Distribution of the Report
- Date of First Issuance and Basic Purpose of the Report
- Other Reports Relating to the Same Subject
- Sources of Data for the Report
- Suggested Changes

A standardized form for accumulating this information is often very helpful. A sample of such a form is included as Exhibit I, above.

EXHIBIT 2

COMPANY X Y Z
DIVISION X

REPORTS ANALYSIS

	Category / Content	Cash Flow	Income	Expenses	Inventory	Fixed Assets	Totals*
Structure	Summary	Report # 5	#5, 11	#5,6	#2, 5	#5, 6, 9	5
	Intermediate		#3, 19	#3	#4	#16	4
	Detail	#1, 7, 8, 12	#7	#1, 8, 12, 14, 17, 18	#7, 15	#7, 10, 13	10
Characteristics	Key Item				#4		1
	Exception						0
	Action			#17			1
	Analytical	#5			#2, 4, 15		4

*Totals include only the quantity of individual reports. Due to the same report appearing in more than one category, the "totals" column will often be less than the sum of the number of reports shown in the individual categories.

Task 2—*Categorize the Reports.* The next task is to categorize the reports in a manner useful to the organization. While the appropriate categories should be developed for each particular organization, some useful categories might include:

A. Financial Statements
B. Investments
C. General Budgetary Reports

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D. Cost Accounting Reports
E. Personnel Reports
F. Fixed Asset Reports
G. Inventory Reports
H. Accounts Receivable Reports
I. Sales Reports
J. Accounts Payable Reports
K. Miscellaneous Reports

Obviously, if the organization is large, each of these categories will probably have to be further subdivided in order to make a useful analysis. For instance, Personnel Reports might be subdivided according to subject matters such as recruiting, turnover, and training. Cost accounting reports might be further divided into reports concerning various cost centers or cost elements.

Task 3—*Analyze the Initial Data.* The third task in the development of a coherent reporting structure is an analysis of the data collected by category in Task 2. Note that this is not an analysis of the report contents, but of the data concerning frequency of issuance, distribution, sources, etc. The results of this analysis should reveal such information as the number and type of reports issued by each organizational unit, the number and type of reports relating to each subject, and how reports are used in the organization. It is at this point that the lack of certain reports, as well as excessive and ob-

solete reporting, becomes clear. Also, the failure to provide structured, or summary, reporting and key item, exception, action, and analytical reports is highlighted. Exhibit 2, above, summarizes the results of such an analysis.

At this point it may appear that several organizational units are reporting identical information concerning the same subject. However, the additional analyses discussed in Tasks 4 and 5 are necessary in order to determine whether these redundancies are superfluous or are necessary for an adequate presentation of the information.

Task 4—*Analyze the Data Elements Presented in Each Report.* The fourth task consists of an analysis aimed at revealing redundant reporting. One method of performing this analysis consists of developing a matrix, with data elements on one axis and report titles on the other. An example of this approach is shown in Exhibit 3, page 23. The matrix allows the identification of completely redundant reports. However, generally only portions of reports, rather than entire reports, will be duplicative. In some instances this redundancy may be necessary for the adequate presentation of data; however, the matrix analysis aids in determining where redundancies occur so that the analyst and the

EXHIBIT 3

COMPANY X Y Z
DIVISION X

DATA ELEMENT ANALYSIS

Report No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Frequency	M	W	D	Q	M	W	M	M	Q	S	W	M	R	Q	M	R	Q	D
Distrib. List	A	A	Z	C	Z	B	B	C	A	A	A	C	C	A	B	A	B	F
Sales —Widgets	X		X								X							
— Hulas	X		X				X				X							
— Wadgets	X		X								X							
— Total	X	X			X										X			
Inventory — Widgets	X	X													X			
— Hulas	X	X					X											
— Wadgets	X	X								.					X			
— Total	X	X		X	X													
Receivables — Reg. B	X																	
— Reg. C	X																	
— Reg. D	X																	
— Reg. E	X																	
— Total	X				X													
Machine #1 — Production							X	X										
#2							X	X	X									
#3							X	X	X									
#4							X	X	X									
#5								X					X					
#6							X	X										
#7								X					X					
#8							X	X										

recipients can decide whether they should be eliminated.

Task 5—*Interview the Report Recipients.* Once an inventory is prepared and the basic data concerning the reports and their contents are analyzed, it is then necessary to interview selected recipients of the reports in order to secure their comments concerning the data which should be reported, the uses of each report, the adequacy of presentation of data in the reports, and similar information. In order to assist the recipient, the interviewer should review the information collected in Task 1 concerning report distribution and should provide the recipient with samples of the reports being discussed, so that the interview proceeds in an organized manner. A generalized outline for interview of recipients of the reports is presented as Exhibit 4, right.

Task 6—*Recommend Changes in Current Reports.* The information accumulated in the five previous tasks is now utilized to develop recommended changes in

EXHIBIT 4

**GENERALIZED
INTERVIEW OUTLINE**

Questions to ask the recipient of reports:

(1) Is the report received on schedule?
(2) What action do you take as a result of receiving the report?
(3) How many other persons use it? For what purposes?
(4) How essential is it to the work of your unit?
(5) How often do you use your copy of this report?
(6) How much of the information on this report do you **not** use?
(7) Is the data on this report necessary for:
    a. making decisions to take action?
    b. keeping you informed on current conditions?
    c. checking accuracy of other matters?
    d. establishing control over operations?
(8) What would be the effect on your work if you:
    a. did not receive the report at all?
    b. received it less frequently?
    c. received less information than at present?
    d. received more information than at present?
(9) The cost of preparing this report has been estimated at x dollars.
    Do you consider that your use of the data justifies this expense?
(10) What other reports, records, or forms are prepared from data on this report?
(11) Can the data on this report be obtained from any other source?
(12) Is this report easy to read and use?
(13) How long do you keep your copy of this report?
(14) How and where do you file it?
(15) How often do you refer to it after its original use?
(16) Would a graph or chart be more useful?
(17) What additional changes would you make in the report or frequency of issuance?

EXHIBIT 5A

Report No.: **FTF-I01-M1E**

Report Title: Summary of Inventory Levels   **Level:** Summary

Discussion:

This report summarizes inventory according to type and plant location. Other general information useful to management is also provided. In this sense, it supplants parts of two current detailed reports and presents the data in a summary form convenient for management review. Combined with the graph Historical Average Inventory Levels (IO2), management receives a "bird's-eye" summary view of the stock position and carrying costs being incurred. Currently, management must search through the thirteen pages of the two current reports and then mentally compare the results.

Replaces and/or Supplements:

Statement of Inventory
Inventory and Financial Data

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report contents and report formats. Generally these recommended changes will include:

• Discontinuing certain reports
• Combining overlapping or complementary reports
• Adding management summary reports
• Adding new reports for previously neglected areas
• Changing formats of existing reports to make them more useful.

To secure approval of these new reports and revisions, it is usually necessary to provide a sample of the new or changed reports to management. If many reports are being changed or added, this can become a significant typing job. One method which has been used to alleviate this problem is to design the report formats on coding sheets suitable for keypunching, keypunch all the report formats, and utilize a computer printer to prepare the same report formats. This allows changes to be incorporated in new sample report formats quite easily, simply by keypunching new cards with the necessary changes. In addition to the sample report formats, it will also be necessary to provide a brief explanation of the necessity for the new report to the user groups. An example of a report and the explanation of the change are presented in Exhibits 5A and 5B,

at the top and bottom of this page.

Prior to discussions with management concerning changes in the reporting structure, it is also useful to provide the reviewers with a summary which lists all current reports and the proposed action relating to each report. If a report is to be replaced, the summary should also list the new report or reports which present similar information. A sample of such a summary is shown in Exhibit 6, page 25. Another document which should be provided would summarize the new reports by the subject categories developed in Task 2, and by level of detail of report. While the number of levels of detail required will vary according to the type of organization, generally at least three levels of detail (summary, intermediate, and detail) are necessary. A sample of the type of summary which might be presented to management to show the number of reports by subject and level of detail is shown in Exhibit 7, page 25.

Experience indicates that, during the development of an appropriate reporting structure, the number of summary reports to management will be expanded significantly, while the number of detailed reports will be curtailed. Structured

EXHIBIT 5B

COMPANY X Y Z
DIVISION X

SUMMARY OF INVENTORY LEVELS
(IN THOUSANDS OF DOLLARS)
MONTH ENDED JANUARY 31, 1971

FTF-I01-M1E   DATE

	BALANCE THIS MONTH	BALANCE LAST MONTH	NET CHANGE	PER CENT THIS MONTH	CHANGE LAST YEAR	CARRYING COSTS MONTH	YTD
Plant 1							
Raw Materials	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Work-In-Progress	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Finished Goods	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Plant 2							
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Plant 3							
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
—	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Grand Total							
Raw Materials	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Work-In-Progress	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX
Finished Goods	XXXXXX	XXXXXX	XXXXXX	XX.X%	XX.X%	XXXX	XXXXXX

EXHIBIT 6

COMPANY X Y Z
DIVISION X

IMPACT OF RECOMMENDED CHANGES ON CURRENT REPORTS

REPORT NO.	CURRENT TITLE	PROPOSED ACTION	PROPOSED REPORT
1	Statement of Income and Expense	Replaced by	Revised Statement of Income and Expense (FTA-L26)
4	Statement of Inventory		
	Page 1	Replaced by	Summary of Inventory Levels (FTF-101)
	Pages 2-5	Replaced by	Status of Inventory-Work-In-Progress (FTF-122)
	Page 6	Cancelled	
	Page 7	Replaced by	Status of Inventory-Raw Material (FTF-121)
	Page 8	Replaced by	Status of Inventory-Finished Goods (FTF-123)
	Page 9	Replaced by	Historical Average Inventory Levels (FTF-102)
5	Inventory and Financial Data		
	Page 1	Replaced by	Status of Inventory-Raw Material (FTF-121)
	Page 2	Replaced by	Status of Inventory-Work-In-Progress (FTF-122)
11	Summary Monthly Report of Activities	Replaced by	Summary Monthly Report of Activities (FTA-L01)

reporting of this type is necessary because management must digest information on many subjects in a limited amount of time. Extensively detailed reports either will not be read, or will consume so much time and effort that reading and analyzing will replace managing as the chief activity of the recipient. The use of formats such as graphs and charts is extremely useful for management, since a graphic portrayal is easy to comprehend and readily highlights trends and changes.

Reports should have very precise headings which describe at a glance the information which is included in the report. Each report heading should show clearly and consistently the period covered by the report and should also indicate the preparation date. While headings should be descriptive, they should also be concise.

Task 7—*Code the Approved Reports.* After the new reporting structure is approved, it is necessary to code the reports. The necessity for this coding—to delineate the initiating unit, frequency of

EXHIBIT 6 (cont'd)

ADDED REPORTS

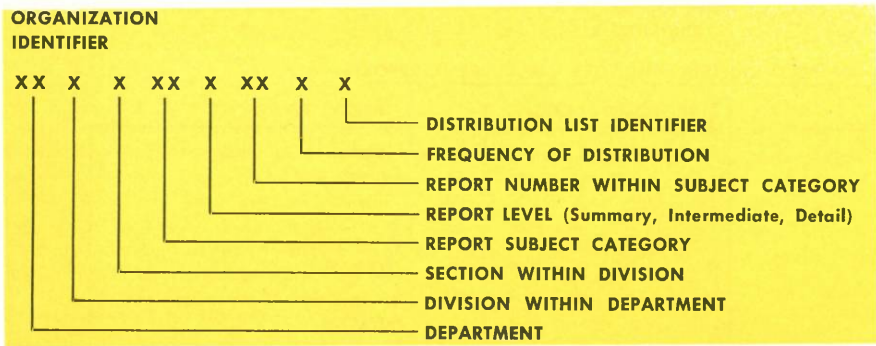| NAME	NUMBER
Statement of Inventory Levels by Product	FTF-I11-M1E
Cash Balances by Bank	FTF-P04-M1E
Summary Monthly Report of Activities	FTA-L01-M1E
Cash Flow Statement	FTA-G01-M1E

EXHIBIT 7

IMPACT OF RECOMMENDED CHANGES

	NUMBER OF REPORTS		
	Current	Proposed*	Change
1. Investments—Summary	1	3	+2
Intermediate	1	1	—
Detail	2	4	+2
Net	4	8	+4
2. Funded Debt—Summary	1	3	+2
Intermediate	2	1	—1
Detail	2	2	—
Net	5	6	+1
3. Loans—Summary	2	2	—
Intermediate	7	3	—4
Detail	3	5	+2
Net	12	10	—2

*It should be noted that a number of the proposed reports represent a reformatting of certain pages included in current reports. For example, current report #4, Statement of Inventory, has 9 pages. In the proposed system, this information is now broken into 5 reports.

EXHIBIT 8

```
ORGANIZATION
IDENTIFIER

XX  X   X   XX   X   XX   X   X
 |  |   |    |   |    |   |   |
 |  |   |    |   |    |   |   |___ DISTRIBUTION LIST IDENTIFIER
 |  |   |    |   |    |   |_____ FREQUENCY OF DISTRIBUTION
 |  |   |    |   |    |_____ REPORT NUMBER WITHIN SUBJECT CATEGORY
 |  |   |    |   |_____ REPORT LEVEL (Summary, Intermediate, Detail)
 |  |   |    |_____ REPORT SUBJECT CATEGORY
 |  |   |_____ SECTION WITHIN DIVISION
 |  |_____ DIVISION WITHIN DEPARTMENT
 |_____ DEPARTMENT
```

issuance, category of report, relationship to other reports, and similar information—was previously discussed. A sample coding structure is presented in Exhibit 8, above. Each element is assigned a numeric code. For instance, if there are 12 departments and 15 report subject categories, they might be assigned number 1-12 and 1-15 respectively. These numbers will be used as identifiers in the coding structure.

Obviously, each coding structure must be tailored to the needs of the individual organization under review. However, reports should be coded in a manner which makes it easy to identify the number of reports relating to any one specific subject.

Task 8—*Establish Responsibility for Initiation and Control of Reports.* To assure the continued orderly development and control of the reporting structure which has been developed, the organization should assign the responsibility for approval of all new reports and the periodic review of all old reports to one individual or organizational unit (depending upon the size and complexity of the organization). In many organizations this may not be a full-time task, but rather a part-time effort for one person in the systems group or in some similar organizational unit. When no one group or individual is assigned the responsibility, the organization again loses control of the reporting structure through the uncontrolled addition or changing of reports.

Any new report that a unit wants to produce should be presented to the individual or the report control unit in draft form, with a statement provided explaining the necessity of this new or additional report or report change. The individual or unit controlling reports would then determine whether the information is already in existence in a current report issued by another unit of the organization, and whether the format for the report is appropriate to present the information needed. If the suggested reports pass these two checkpoints, they would be assigned code numbers, production would be arranged, and they would be added to the inventory of current reports (which should now be kept up-to-date at all times to avoid the problems faced at the start of the initial study—see Task 1).

Another report control responsibility would be to maintain updated distribution lists for all reports disseminated to various units of the organization. From time to time the recipients of the various reports would be checked to (1) determine whether they are still interested in receiving copies of those reports and (2) solicit comments concerning any changes in reports that the recipients consider necessary.

Reporting structures usually evolve erratically with the growth of most organizations. At some point most organizations should attempt to introduce an overall coherence to their internal reporting.

Usually, the reports must be structured in such a manner that the various levels of management receive differing levels of detail concerning similar subjects. This often does not occur until management establishes a specific project for the development of structured reporting. This article sets forth eight steps found useful in completing such a project. These eight steps are:

1. Prepare an Inventory of Current Reports.
2. Categorize the Reports.
3. Analyze the Initial Data.
4. Analyze the Data Elements Presented in Each Report.
5. Interview the Report Recipients.
6. Recommend Changes in Current Reports.
7. Code the Approved Reports.
8. Establish Responsibility for Initiation and Control of Reports.

Also included are examples of data collection forms and other material which have been helpful in the successful completion of projects of this type.

The eight steps set forth above are often actually performed by the organization's systems and procedures group or by an outside consultant. This approach promotes independence and objectivity in the performance of the analyses, since outside parties should have no vested interests or "pride of authorship" in specific reports, and should impart a fresh view of information needs and methods to respond to these needs.

Obviously, all organizations will not have to complete all of the aforementioned steps. Moreover, some organizations may be so large and complex that they may have to approach the development of structured reporting on the basis of individual reporting units or divisions. The guidelines set forth in this article will be useful in such a unit-by-unit or division-by-division project just as they are in the development of a coherent reporting structure for an entire organization.