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Managing your SME more effectively Part II

John Kyriazoglou



John Kyriazoglou

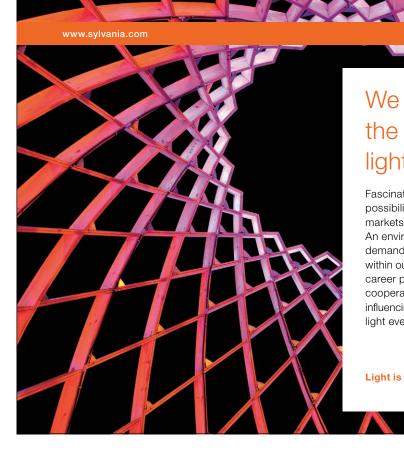
Managing your SME more effectively Part II

Provide operational support to production

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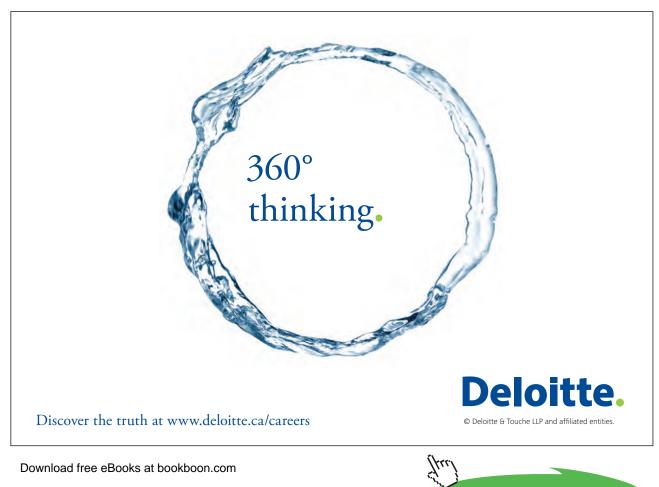


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To see Part I download How to better manage your SME Part I

Part B: Contents

This book is about 'How to manage your SME better'.

It shows you clearly and practically how to establish and run your small or medium-size enterprise (SME) by offering you:

- 1. A business formulation approach to establish your SME in simple steps: From envisioning, concept development, business planning, establishing your Company and your organizational structure and developing policies and procedures, to operating your SME and selling products, supporting customers, reviewing and improving the performance of your business operations.
- 2. A set of over 160 integrated management controls (methods, standards, strategies, plans, policies, procedures) to enable you to organize and run your production, make and sell products and serve your customers, and record and protect your business transactions,, activities, assets and data.
- 3. Various tools, performance measures and audit checklists to review and improve your business operations.

The book is made up of 2 parts: Part A and Part B.

The purpose of this Part (Part B) is to describe the management controls required to providing operational support to production and customer functions of your SME, while offering twelve practical recommendations for their best implementation. This part contains the following:

Chapter 5: Manage your finances.

Chapter 6: Develop and run IT systems.

Chapter 7: Support your business operations.

Chapter 8: Review and improve your SME.

Appendix: Various policies, procedures and checklists.

PART A, in a separate document (e-book), deals with aspects of establishing and enabling production and customer services of your SME. It contains the following:

Preface

Chapter 1: Establish your SME.

Chapter 2: Set up your production.

Chapter 3: Market and sell your products.

Chapter 4: Support your customers.

Appendix: Various policies, procedures and checklists.

5 Manage your finances

This part of the book 'How to manage your SME better' is a continuation of the first part and deals with aspects of operational support to production and customer functions of SMEs.

5.1 Introduction

You have established your SME, produced, marketed and sold products and provided services and supported your customers (as described in Part 1 of this book). Now you need integrated financial management controls to record all business activities and transactions, from a financial perspective, related to your SME and the products and services offered.

5.2 Purpose of integrated financial management controls

The purpose of integrated financial management controls is to:

- 1. Provide the checks and balances in the various financial and accounting systems and activities of your SME in an integrated way.
- 2. Evaluate your performance in financial management;
- 3. Implement controls to prevent errors before the various transactions of the organization (i.e., sales, purchases, cash receipts, payroll, etc.) are recorded; and
- 4. Detect and correct errors in the accounting records, and protect and safeguard the assets of the organization.

5.2.1 Financial Management Controls Framework

You need a framework to ensure that all your financial controls target the same goals of effectiveness and efficiency for your SME. The most common and minimum financial management controls which make up this framework that usually apply to both small and medium-sized enterprises are:

- 1. Financial Organization Controls
- 2. Financial Management Policies and Procedures
- 3. Basic Accounting Procedures
- 4. Computerized Financial Systems
- 5. Financial Performance Measures.

These are described next.

5.3 Financial Organizational Controls

These are your first set of financial management controls. Financial organization controls are controls that enable the existence and operation of the finance function of the organization. You need to establish the vision, mission and terms of reference for the finance function and hire management and line staff to do the finance and accounting work. You also need to reconfirm your performance targets and budget for finance. How the finance function is established is described in Part 1, chapter 1. Examples of organizational controls, like the department's vision, mission and terms of reference, are contained in Part 1, Appendix 1: Departmental Terms of Reference. Financial management positions for small to medium-sized enterprises may include: Accounting Manager, Controller (or CFO), and Budget Officer.

The duties of an accounting manager are outlined next.

The typical duties and responsibilities, in summary, of the other positions are included in *Appendix 1: Accounting Job Descriptions*.

1. Accounting Manager

The typical duties and responsibilities, in summary, of an Accounting Manager, include:

- 1. Manage the operational and fiscal activities of the department to include: staffing levels, budgets, and financial goals.
- 2. Plan and develop financial and accounting systems and procedures to improve the operating quality and efficiency of the department.
- 3. Direct staff in the development, analysis, and preparation of financial and other management reports in accordance with company policies and procedures.
- 4. Revise, complete and submit to senior management or owner the company's financial statements or other related financial and accounting reports.
- 5. Analyze and document financial and accounting processes and problems.
- 6. Conduct interviews, hire new staff, and provide employee orientation.
- 7. Communicate with other managers, board members and the owner of the company, as applicable, on Department operations.

It's up to you to decide if you one or all of these positions, depending on your business operating style and culture.

5.4 Financial Management Policies and Procedures

These are your second set of financial management controls. Financial policies, procedures and systems are controls that establish guidelines and specific instructions procedures related to keeping books and records that in reasonable detail accurately and fairly reflect the company's (small or medium-sized) transactions and dispositions of assets. It is up to you as a manager whether you use any or all of the following controls. For example you may not need a formal financial accounting controls policy but you will more than definitely need financial accounting procedures, etc.

These are detailed next.

1. Financial Management Controls Policy

An example of this policy is:

"The Company is committed to preparing statutory accounts in compliance with the regulatory requirements existing in the country of corporate domicile. Responsibility for this lies with the Directors of The Company. In addition to complying with any local requirements for a statutory audit, all principal operating companies are further subjected to both internal corporate audit and external audit procedures by an independent auditor, in order to review and prepare consolidated financial statements for The Company to reflect accurately the financial status, transactions and affairs of The Company.

2. Fire-Proof Locked Safe Procedure

It is very good practice, regardless of the size of your company (small, medium) to get a fire-proof locked safe. You can use this safe and keep cash, checks and other critical and valuable items, documents, reports, contracts, bonds, shares, etc. Also you must establish and assign responsibilities to specific staff for controlling this safe.

3. Budget

The **budget**, as a control tool, is used to evaluate financial performance for all managers and business functions in reaching their pre-determined business goals. Regardless of the size of your company (small to medium-sized) it is good practice to have a budget¹.

The **budget** is an itemized listing of the amount of all estimated revenues which your company anticipates receiving, along with a listing of the amounts of all estimated costs and expenses that will be incurred in obtaining the above mentioned income during a given period of time.

Manage your finances

There are several types of budgets, such as:

- 1. **Cash budget**. This depicts the cash you expect to receive and pay over the near term, for example a month.
- 2. **Operating budge**t. This states how managers intend to use organizational resources to achieve your organizational goals most efficiently.
- 3. **Capital budget**. This shows expenses to obtain or develop, and operate or maintain major systems or pieces of equipment, for example, information systems, buildings, automobiles, computer hardware systems, furniture, etc.
- 4. **Income and Expenses Budget**. This budget is a prediction of future cash receipts and expenditures for a particular time period. It usually covers a short term period (a month, 6 months, a year).

I have seen all these used in all types of companies (small, medium, large, etc.).

I consider this budget to be your favorite control tool as it helps your business determine when income will be sufficient to cover expenses and when your small or medium-sized company will need to seek outside financing. An example of an Income and Expenses Budget is contained in Figure 1.

| Description | July 2013 |
|-------------------------------|----------------|
| Income budget | Amount (Euro) |
| Sales income | 150,000 |
| Other income | <u>100,000</u> |
| Total income | 250,000 |
| Expenses budget | Amount (Euro) |
| Materials | 20,000 |
| Payroll & Commissions | 150,000 |
| Fixed sales costs | <u>30,000</u> |
| Total expenses | 200,000 |
| Profit or loss position | |
| (Total income-total expenses) | |
| Profit | Euro: 50,000 |

FIGURE 1: Income and Expenses Budget Example

5.5 Basic Accounting Procedures

These are your third set of financial management controls.

The basic financial accounting procedures related to managing the financial accounts of your company (small to mid-size) are described next.

5.5.1 Chart of Accounts Procedure:

The Chart of accounts is a list of the accounts you can use to record all financial transactions of your company. These are numeric, alphabetic, or alpha-numeric. Each nominal ledger account is unique to allow its ledger to be located. The list is typically arranged in the order of the customary appearance of accounts in the financial statements, profit and loss accounts followed by balance sheet accounts.

5.5.2 General Ledger Procedure:

The general ledger, manual or computerized, is the main accounting record of your company which uses double-entry bookkeeping. It will usually include accounts for such items as assets, liabilities, owner's equity, revenues, expenses, gains, and losses. The general ledger is a collection of the group of accounts that supports the items shown in the major financial statements. It is built up by posting the transactions of the organization (sales, purchases, cash, etc.) and general journals.

5.5.3 Trial Balance Procedure:

The trial balance is a listing of the balance at a certain date, of each ledger account (such as assets, liabilities, owner's equity, revenues, expenses, etc.) of your accounting system, in two columns, namely debit and credit. Often credits will be represented as a negative, in which case the total of the trial balance should be 0.

5.5.4 Financial Statements Procedure:

Financial statements are formal records of the financial activities of your company.

There are four basic financial statements:

5.5.4.1 Balance sheet:

Statement of your company's assets, liabilities, and net equity as of a given point in time.

5.5.4.2 Income statement:

Also referred to as Profit and Loss statement (or a "P&L"), reports on your company's income, expenses, and profits over a period of time.

5.5.4.3 Statement of retained earnings:

Explains the changes in the retained earnings of your company over the reporting period.

5.5.4.4 Statement of cash flows:

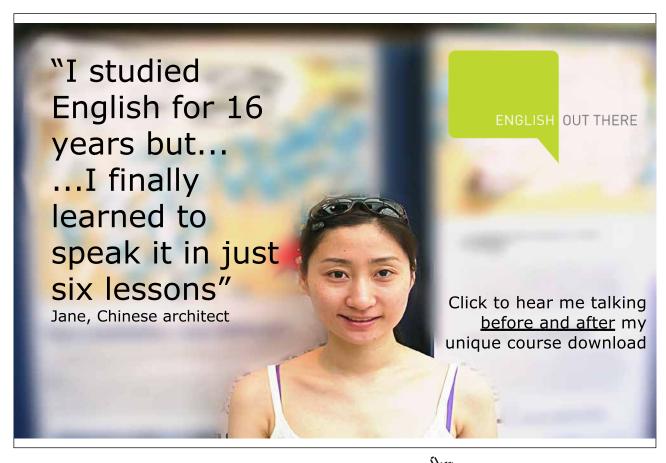
Reports your company's cash flow activities, particularly its operating, investing and financing activities.

5.5.4.5 Detail Accounting Procedures:

The usual detail accounting procedures that your accounting staff need to record all your daily financial transactions and activities, as an example, include:

- a) Post Transactions and Update Books,
- b) Manage Accounts Receivable,
- c) Manage Accounts Payable,
- d) Manage Petty Cash,
- e) Manage Checks, and
- f) Manage Payroll.

These are presented in Appendix 2.





5.5 Computerized Financial Systems

These are your fourth set of financial management controls.

The usual computerized financial systems are: General Ledger System, Customer Invoicing System, Accounts Payable System, Customer Orders/Sales Processing System, and Payroll System.

5.6 Financial Performance Measures

This is your fifth set of financial management controls.

How do you know if you are doing fine? You don't unless you monitor the financial performance of your company (small or medium-sized) on a continuous basis.

There are two tools available to you: The financial statements described above and financial performance measures outlined next.

One reason for the popularity of financial performance measures is that they are objective. The performance of one company can be compared with that of another in terms of its stock market price, return on investment, market share, or even cash flow.

As an example, failure to meet stock price or ROI targets also indicates that corrective action is necessary. It signals the need for corporate reorganization in order to meet corporate objectives, and such reorganization can involve a change in structure or liquidation and divestiture of businesses. It can also indicate the need for new strategic leadership. An example of financial performance measures are presented next.

- 1. Stock market price
- 2. Return on investment, assets, sales, capital employed
- 3. P/E (Price/Earnings ratio),
- 4. Results (Net, revenue, gross)

It is up to you to decide what performance measures you use for your SME.

In conclusion, you need financial management measures and controls to evaluate your financial performance and ensure your company's short and long-term survival and profitability.

When you think of the financial measures and controls identified in this chapter and what they may mean to you and your business, consider the following quotation by Socrates, the ancient Greek philosopher, in Xenophon's dialogue on economics:

'The science of financial management pertains to how one manages his property in the correct way, doing what has to be done, and creating surplus to increase it. All of these on the basis of the powers God has bestowed upon us, with the added praise of the law, and with prudence, methodology and focused thinking'.

6 Develop and run IT systems

6.1 Introduction

You have established your SME, produced, marketed, sold and supported your products and provided services (as described in Part 1 of this book). In the previous chapter of this part of the book you recorded, from a financial perspective, all business activities and transactions related to your SME and the products and services offered. Now you need integrated IT management controls to develop and deploy IT applications and web services to support and enable the production, selling and support of your products and services.

6.2 Purpose of integrated IT management controls

The purpose of these integrated IT management controls is to:

- 1. Ensure the safe and secure development and operation of your information systems in an integrated way;
- 2. Ensure the protection from harm or other potential damage of your SME's IT assets and data maintained by these systems; and
- 3. Evaluate your performance in IT management.

6.2.1 IT Management Controls Framework

You need a framework to ensure that all your IT controls target the same goals of effectiveness and efficiency for your SME. The most common and minimum IT management controls which make up this framework that usually apply to both small and medium-sized enterprises are:

- 1. IT Management Plan
- 2. IT Organization Controls
- 3. IT Action Plans, Policies and Procedures (IT Policy; IT Strategic Action Plan; IT Security Policy; IT Application Acceptance Procedure and IT Disaster Recovery Plan)
- 4. Computerized Application Controls
- 5. IT Performance Measures

These are presented next.

6.3 IT Management Plan

This is the first control of your IT Management Controls.

This plan and the steps and actions it contains comprise the most important things you need to do to establish your IT function and the business systems to serve your SME needs and expectations.

Step 1: Conduct Feasibility Study

This should identify:

- 1. How well your company's IT systems and services satisfy the business needs and demands of your company's critical functions and decision makers.
- 2. Whether your current company's IT systems and services are aligned with your company's business strategy, functions, processes and model.
- 3. Which new IT systems and services are required to satisfy the business needs and demands of your company in the foreseeable future.

Step 2: Set up IT Organization

This involves your establishing the vision, mission and terms of reference for your IT function and hiring management and line staff to do the IT work. More details later.

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Step 3: Select IT Service Framework.

- 1. Study the existing IT standards (ITIL, COBIT, etc.) and the business and industry environments in which your particular organization operates.
- 2. Evaluate and select an IT Framework to serve your SME purposes.

Step 4: Craft and Implement IT Strategy

- 1. Articulate your IT Mission and Vision,
- 2. Assess the existing organizational context and current IT systems and infrastructure,
- 3. Develop IT Strategies, Goals, and Objectives,
- 4. Define the future IT architecture and data to support the business environment of your SME and complete the written action plan,
- 5. Implement your IT Strategy, and
- 6. Evaluate the IT Strategy (at least annually).

Step 5: Develop and Implement IT Action Plans, Policies and Procedures

Establish and implement IT plans, policies and procedures to manage and control IT strategy, IT systems development, IT systems testing, security access, network, disaster recovery, backup and recovery, etc. See examples later.

Step 6: Develop and Implement IT Systems

- 1. Purchase and install standard IT systems (as identified in other chapters of both parts of this book). The purchasing procedure described in chapter 2 of Part 1 of this book may be followed to achieve this better.
- 2. Develop and test you own IT systems.
- 3. Prepare and execute a plan to migrate and incorporate each IT application system (whether bought or home-developed) into the integrated IT production environment.

Step 7: Run IT Systems

- 1. Ensure physical protection of your data center, computer and network rooms, storage areas, forms, storage media, equipment, cabling, reports, documentation, etc.
- 2. Ensure the health of the environment, electrical power, hardware equipment, personnel, lighting, solar energy, humidity, etc.
- 3. Run IT systems and produce results for all business functions.
- 4. Ensure the setup of an IT Disaster Recovery Plan to handle critical systems and infrastructure recovery.

6.4 IT Organization Controls

This is the second control of your IT Management Controls.

You need to establish the vision, mission and terms of reference for your IT function and hire management and line staff to do the IT work. You also need to reconfirm your performance targets and budget for IT. How the IT function is established is described in Part 1, chapter 1. Examples of organizational controls, like the department's vision, mission and terms of reference, are contained in Part 1, Appendix 1: Departmental Terms of Reference.

The duties of a CIO/IT Manager are outlined next.

CIO/IT Manager Job Description

The duties of this position include:

- 1. Provide technology vision, strategy and leadership in the development and implementation of the IT systems of the company,
- 2. Facilitate communication between staff, management, vendors, and other technology resources within the organization,
- 3. Oversee the computer operations of all computerized systems, including local area networks and wide-area networks, and
- 4. Design, implement, and evaluate the systems that support end users in the productive use of computer hardware and software, etc.

Other IT management responsibility controls and IT job descriptions, such as: systems development manager, information systems analyst, computer programmer, system programmer, computer operations manager, web developer, computer operator, etc., are described in another book of the author².

6.5 IT Action Plans, Policies and Procedures

This is the third control of your IT Management Controls.

Why do you need these?

The main reasons for establishing these for your SME are:

- 1. To create a framework within which IT can be used effectively.
- 2. To protect your business in relation to IT laws and regulations.
- 3. To ensure acceptable use of IT by your staff.
- 4. To manage IT systems and assets more efficiently and effectively.

The most crucial plans, policies and procedures described next are:

IT Policy; IT Strategic Action Plan; IT Security Policy; IT Application Acceptance Procedure; and IT Disaster Recovery Plan.

6.5.1 IT Policy

A typical example of an IT policy is:

'AAXX (a fictitious entity, termed SME) is committed to safeguarding its IT assets and their strategic and operational use. To this end SME seeks to ensure the integrity of corporate data and information systems, the availability of service and the confidentiality of computerized data and business information maintained by these systems. When SME introduces new business information systems or major changes to existing business IT systems SME ensures these are developed and implemented in a controlled manner and that appropriate controls are built into the application software to ensure security, privacy and availability.'





6.5.2 IT Strategic Action Plan

An IT strategy is a plan to meet the organization's information needs over three to five years through the development of computer systems and related services such as automation and technology. You definitely need an IT strategic plan, formal or informal, even if you manage a small company.

A typical IT strategic plan contains:

- 1. An executive summary.
- 2. A full description of your existing IT systems, strategies, vision, mission, values and objectives.
- 3. The description of the strengths, weaknesses, opportunities, and threats of your current IT systems,
- 4. A description of your current enterprise architecture, IT systems and infrastructure, and all of these are linked to provide information services for your SME.
- 5. A projection of your IT environment into the future.
- 6. Acquisition and development schedules and budgets for hardware, software, and application systems to serve the current and future needs of your company.
- 7. Description of IT related regulations, standards and guidelines, to which your company organization will have to comply with.
- 8. Description of the process of identifying and managing the IT risks in the development and deployment of your new IT systems and infrastructure.
- 9. A general plan outlining the general architectural design (enterprise architecture) of the computer systems, telecommunication network, data bases, and application systems of your company.
- 10. A detailed budget for all new acquisitions and updates of all your IT assets.

6.5.3 IT Security Policy

You need an IT security policy to inform and guide everyone concerned regarding your SME's information security needs and controls. An example follows:

'The Information Security Policy of 'XXABC Corporation' (fictitious Company) contains high-level statements describing the general objectives of the Company as regards the management, administration, control, protection and security over its critical information assets, such as:

- 1. Business Information systems,
- 2. Information technology and application software,
- 3. Operating systems and data base management system software,
- 4. Buildings, computer rooms, cabling, network and computer facilities, and
- 5. Other related installations and technical infrastructures, data, backup media and archived files and information resources in general.

6.5.4 IT Application Acceptance Procedure

Testing of systems and applications is critical to the success of any IT development project. Testing should be performed through the system development process on the basis of an IT testing standard and methodology, an IT application test plan, an acceptance procedure, and a set of testing tools.

The usual steps of a typical application acceptance procedure, executed by both IT staff and end users, are the following:

- 1. Examination and review of all contractual arrangements, activities and deliverables in terms of has been done up to now.
- 2. Analysis and assessment of the risks to examine and establish what functions of the system should be tested more.
- 3. Establishment of a dedicated test environment.
- 4. Design of all tests.
- 5. Execution of specific tests (system design, code, integration when components, interfaces, etc.).
- 6. Review and examination of all results.
- 7. Documenting and filing the test process and results.
- 8. Logging and resolving all issues and errors.
- 9. Reporting all test results.
- 10. Filing all intermediate and final test data and results.

6.5.5 IT Disaster Recovery Plan

The IT Disaster Recovery Plan Document describes what must be done in order to recover from a predefined failure and resume operating an Information System. The contents of this plan should be:

- 1. Executive summary
- 2. Internal and external resources required
- 3. Security issues: A detailed statement of the security issues regarding IT disaster recovery and how these should be implemented to facilitate the recovery process.
- 4. Risks analysis and solutions: A detailed statement of the natural and other risks covered, such as rain, fire, storm, earth-quake, etc. Also a detailed statement of the recovery solutions covered by the document at the level of: recovery of data, recovery of the data center, recovery of the network, recovery of end-user operations, recovery of the business function(s).

- Recovery alternate solutions: A detailed statement of the recovery solution to be implemented, such as: Hot Site, Warm-Site, Parallel Data center, etc. For the solution (to be implemented) all the hardware and software requirements and specifications should be documented as well.
- 6. Applications list: A summary statement for each critical application to be recovered as per recovery solution.
- 7. Back up procedure: A summary statement for the procedures executed, as per backup procedure (see backup Procedure Plan), and the set of backup media required for the recovery of each critical application to be recovered.
- 8. Recovery process: A detailed statement of the conditions triggering the recovery process, such as: time period, impact of real or potential damage, production errors of the application system, etc.
- 9. Recovery testing: A detailed statement of the testing strategy for all elements of the recovery process and the resources required.
- 10. Return procedures: A detail description of the procedures that have to be carried out for the successful return to the main data center of the organization after the recovery has taken place at the recovery location.
- 11. Recovery team: A detailed statement on the key personnel required, their organization structure for recovery processes, their complete details (surnames, names, phone numbers, etc.) and the training that they have taken.





12. Insurance: Insurance coverage details should document what is covered (especially to cover any cost of moving data and operating in an alternative way) and what is not, as week as the necessary claims forms and procedures to be followed.

6.6 Computerized Application Controls

This is the fourth control of your IT Management Controls.

The purpose computerized application controls is to ensure that the computer programs of a particular computerized application, processes the business transactions, according to a set of predefined rules and store the processed data in computerized files, and data bases, in a safe and secure way.

The main Computerized Application Controls are: Input Controls, Processing Controls, and Output Controls. *These are detailed in Appendix 3: Computerized Application Controls. Also see Appendix 8 (Computerized Spreadsheet Application Controls).*

6.7 IT Performance Measures

This is the fifth control of your IT Management Controls.

It is best to check how you are performing against your budget and performance targets. Also the above IT Management Controls may be monitored by a set of various IT performance measures such as:

- 1. % Computer & Network Availability,
- 2. Number of Applications supporting critical business functions,
- 3. Average response time,
- 4. No. of lines printed and Volume of data maintained,
- 5. No. of on-line transactions processed,
- 6. Number of data privacy and security incidents, and
- 7. Number of Corporate Espionage attacks.

In conclusion, it is up to you to consider which of these are relevant to your business and decide to customize and implement in your SME accordingly.

7 Support your business operations

7.1 Introduction

You have established your SME, produced, marketed, sold and supported your products and provided services (as described in Part 1 of this book). In the previous two chapters of this part of the book you: recorded all business activities and transactions related to your SME and the products and services offered; and deployed IT applications and web services to support and enable the production, selling and support of your products and services.

Now you need integrated administration controls to facilitate, support and protect all your SME business functions, assets, data, transactions, products and services, and your people.

7.2 Administration Controls Framework

The purpose of these integrated administration controls is to:

- 1. Ensure the successful execution of the daily activities and operational transactions of your company in an integrated way.
- 2. Provide for detailed, procedural checks and balances to manage the files, documents, information and other assets of the organization.
- 3. Enable the standard management reporting process of the organization, and to monitor and evaluate the performance of the organization in this regard.

7.2.1 Administration Controls Framework

You need a framework to ensure that all your administration controls target the same goals of effectiveness and efficiency for your SME. The most common and minimum administration controls which make up this framework that usually apply to both small and medium-sized enterprises are:

- 1. Corporate Organizational Controls
- 2. Administrative Policies and Procedures Manual
- 3. Industrial Espionage and Sabotage Controls Action Plan
- 4. Human Resource Management Controls
- 5. General Administrative Procedures
- 6. Physical Security Controls
- 7. Administration Performance Measures

These are presented next.

7.3 Corporate Organizational Controls

This is the first control of your Administration Controls.

All corporate departments, such as: sales, marketing, finance, production, customer support, research and development, information technology, etc., should have approved organizational structures, management, staff, policies, procedures and terms of reference for their operation. You also need to reconfirm your performance targets and budget for all administration functions. Examples of policies and procedures may be found in all chapters of both parts of this book.

An example of the terms of reference of a production department is presented in Part 1-Appendix 1 of this book.

7.4 Administrative Policies and Procedures Manual

This is the second control of your Administration Controls.

The administrative procedures of your SME are usually contained in an Administrative Policies and Procedures Manual, containing procedures for the following issues of the organization:





- 1. Office administration: Travel and transportation, files, documents and records management, confidential information release, legal procedures, etc.
- 2. Security: Industrial espionage, asset protection, facilities and installations management, physical security, etc.
- 3. Risk management: Corporate Ethics and Social Responsibility Policies, Regulatory Compliance, Business Continuity, and Risk analysis and resolution.
- 4. Human resources: Payroll, Employee management.
- 5. External relations.
- 6. Management reporting.
- 7. Internal audit.

Several of these policies and procedures are described in more detail next.

7.5 Industrial Espionage and Sabotage Controls Action Plan

This is the third control of your Administration Controls.

Action 1: Describe your company's major management controls, and compare them with your industry standards and with the similar-type controls established by other similar companies, and identify any obvious gaps and required improvements.

Action 2: Quantify, in terms of money, the total investments (data, systems, patents, buildings, plants, other assets, etc.) owned and managed made by your company at this point in time.

Action 3: Describe your company's major physical (buildings, offices, plants, etc.), IT and web-enabled applications security controls, and identify any obvious gaps and required improvements.

Action 4: Improve your protection mechanisms of the business data, patents, trademarks and information systems and other assets of your company, according to the gaps identified above.

Action 5: Improve your internal audit system and ensure execution of both periodic and ad hoc audits of all your business operations and internal controls.

Action 6: Submit all the documentation required to register your patents, copyrights, intellectual property, inventions, and trademarks with the proper authorities³.

Action 7: Classify your business data according to sensitivity criteria, etc.

Action 8: Design, develop and implement adequate security controls on the basis of a company-wide risk assessment of the threats and risks facing your specific company.

Action 9: Train all your users, managers and IT staff in protecting and safeguarding your business data and information against social engineering techniques.

Action 10: Implement production processes that ensure your products are not defective, support these products after they are sold, fix them if they are found defective, and inform your customers if your products are found problematic.

7.6 Human Resource Management Controls

This is the fourth control of your Administration Controls.

You need human resource management controls to ensure that your staff produce and provide high quality products and services, evaluate your staff's performance in quality and innovation, and enhance the satisfaction to your company's customers.

The first step in establishing your company is to develop the right kind of organizational structure with the appropriate governance, risk and compliance policies and procedures to suit the needs of you as a manager, or CEO or owner and the needs of your stakeholders.

To make the structure work, however, managers and employees must learn the kinds of behaviors they are expected to perform in their day-to-day business activities.

Human behavioral control is control through the establishment of a comprehensive system of rules and procedures to direct the actions or behavior of business divisions, functions and individuals.

The usual types of human behavior controls are: Directive controls, Preventive controls, Detective controls, Corrective controls, Segregation of Duties controls, and Compensating controls, as described next.

7.6.1 Directive controls:

You need these controls to direct your people. These controls mainly relate to formulating guidelines, declarative statements for company vision, mission, values, etc., as well as corporate policies and procedures in all business functions (governance, risk, production, finance, IT, etc.).

7.6.2 Preventive controls.

You need these controls to deter or prevent undesirable events and acts from occurring. Examples of preventive controls are: tone at the top, ethical values, executing corporate procedures, job descriptions, personnel hiring controls, segregation of duties, authorization rules, documentation, security guards, etc.

7.6.3 Detective controls.

You need these controls to search for and identify errors and uncover problems after they have occurred and to detect undesirable acts. Examples of detective controls are: internal and external audits, checks of compliance, bank account reconciliations, review of payroll payments, etc.

7.6.4 Corrective controls.

You need these controls to correct errors and prevent the recurrence of errors. Examples of corrective controls are: providing training to staff, backing up and recovering data and computerized systems, correcting data in systems, etc.

7.6.5 Segregation of Duties controls.

You need these controls to mitigate the risk of fraud carried out by your people. In segregating duties, no employee should be responsible for two or more of the following four activities:

Activity 1. Record Keeping: Creating and maintaining your company's departmental records, files and systems.

Activity 2. Authorization: Reviewing and approving your company's transactions.

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Activity 3. Asset custody: Managing, accessing and controlling your company's physical and other assets.

Activity 4. Reconciliation: Executing processes to confirm that your business operations, transactions and activities are proper, or in balance, including bank reconciliation, financial and other corporate performance reporting.

7.6.6 Compensating controls:

You need these controls to reduce the risk of an existing or potential control weakness.

Examples of compensating controls are: investigating exceptions and errors, reviewing a random or critical sample of transactions, reviewing actions, reports, etc.

These human behavior controls (Directive, Preventive, Detective, Corrective, Segregation of Duties and Compensating) are usually contained in an Administration Policies and Procedures Manual as described above.

7.7 General Administrative Procedures

This is the fifth control of your Administration Controls.

7.7.1 Corporate Ethics and Social Responsibility Policies

A typical corporate ethics policy would be the following:

'The Ethics Policy of Company 'AAXXX' sets forth the values and ethics of service to guide and support all employees, board members, management and external contractors in all their professional activities. This policy prohibits the unauthorized disclosure or use of sensitive, confidential or proprietary data, trade secrets and information about the Company, its customers, suppliers or joint venture and joint project partners. All company personnel should not engage in any external activities which have not been authorized by the Company.'

7.7.2 A typical corporate social responsibility policy would be:

'Our Company (AAXXX) is focused on delivering essential and high quality products and services to people every day. By analysing and understanding the impact of our products and services on society, the economy and the wider environment, we can develop positive relationships with stakeholders to benefit both our Company business and the community. The Company will take specific actions and initiatives that illustrate our commitments to our employees, community and customers to ensure that we return benefits to both society and our employees by our business.'

7.7.3 Files, Documents and Records Management Procedures

These procedures are needed to manage the filing system of the organization, the safe storage of these records, documents, normal correspondence, electronic messages, and books for the predefined statutory time, and the legal destruction of old and not needed records, messages, documents and files.

These procedures are described in my other books (see references section).

7.7.4 Confidential Information Release Procedure

This procedure is needed to manage the requests for confidential data and information about the financial affairs and transactions, the employees, the products and services, the research, the systems, and the customers of your SME.

7.7.5 Management Reporting Procedure

This procedure is needed to manage the data collection, analysis, production and distribution of management reports of your SME, such as: Weekly financial reports; Cash flow reports, and Budget vs. actual reports; Departmental performance reports; Interim financial statements; Payroll and personnel issues; Safety and health issues, production issues; and Customer problems, etc.

7.7.6 Asset Protection Procedure

All assets (ledgers, records, files, media, films, DVDs, hardware, systems, data, manuals, procedures, contracts, patents, research work, etc.) of the organization should be protected by the appropriate policy and procedures. The responsibility for the protection of the assets should be separate from the function maintaining the documents and systems of the organization. When assets must be destroyed this should be done by an approved committee and reported to the highest level of management of your SME.

7.7.7 Legal Procedures

A set of procedures are required to manage the various legal organizational issues, such as: corporate minutes book administration, issuing stock, registering with the various authorities, setting up the organization, obtaining licenses to operate, obtaining tax and customs codes, reviewing agreements, representing the company in courts, etc.

7.7.8 Compliance Records management

This system is used to systematically keep all relevant business records related to all produced and manufactured products and their maintenance details. It is used to show to authorities, regulators, auditors and other professionals how the company complies with the relevant national and industry rules, regulations, codes and standards.

7.8 Physical Security Controls

This is the sixth control of your Administration Controls.

Physical Security Controls for all assets (ledgers, records, files, hardware, systems, data, manuals, procedures, contracts, patents, research work, etc.), personnel, and buildings should be exercised.

For an example of an Office, Plant and Inventory Security plan see: Appendix 4: Security Plan.

7.9 Administration Performance Measures

This is the seventh control of your Administration Controls.

First, it is best to check how you are performing against your budget and performance targets. Also all of the above-mentioned controls may be monitored as to their operation by a set of performance measures as listed next:

- 1. Security violations per time-period.
- 2. Number of security assessments carried out by management.
- 3. Percent of documents classified incorrectly.
- 4. Number of patents registered.
- 5. Number of procedures reviews per year.
- 6. Number of management report reviews per year.
- 7. Number of reviews of strategic plan.
- 8. Hours and staff trained on the business functions.
- 9. Number of risk assessments per time period.
- 10. Number of audits executed.

In conclusion, it is up to you to consider which of these are relevant to your business and decide to customize and implement in your SME accordingly.

8 Review and improve your SME

8.1 Introduction

You have established your SME, produced, marketed, sold and supported your products and provided services (as described in Part 1 of this book). In the previous three chapters of this part of the book you: recorded all business activities and transactions related to your SME and the products and services offered; deployed IT applications and web services to support and enable the production, selling and support of your products and services; and established administration controls to facilitate, support and protect all your SME business functions, assets, data, transactions, products and services, and your people. Now you must manage, review, audit, evaluate and improve your whole company's performance and revise your strategy accordingly.

8.2 Importance of Management Controls

Let me conclude both parts of this book. While financial goals and controls are usually an important part of the management controls approach for SMEs, it is also necessary to develop goals and controls that tell you how well your business strategy is creating a competitive advantage and building distinctive competences and capabilities that will lead to the future success of your SME.



When you implement your management controls system, besides your financial goals and controls, you must establish goals and measures to evaluate efficiency, quality, innovation, and responsiveness to customers, for the products and services you offer. You do this by production, marketing, sales and customer management controls, including specific performance goals and business objectives.

Often your company's rewards system is linked to performance on these goals, so that all these management controls also provide an incentive structure for motivating managers and employees at all levels in your organization.

Finally, your business functional managers establish goals that individual employees are expected to achieve to allow the function to achieve its goals.

Business functions and individuals are then evaluated on the basis of achieving or not achieving their goals, and therefore compensation is commonly pegged to achievement.

The achievement of these goals is a sign that your company's strategy is working and meeting your organizational objectives.

8.2.1 Characteristics of Management Controls

According to my management experience, an effective management control system should have four characteristics.

- 1. It should be flexible enough to allow your managers to respond as necessary to unexpected events.
- 2. It should provide accurate information, giving a true picture of your company's performance.
- 3. It should use a standardized approach to measure performance.
- 4. It should supply your managers with the information in a timely manner because making decisions on the basis of outdated information is a recipe for failure.

On the basis of my consulting experience and communications with other consultants, academic researchers and industry experts, I am offering the following **Twelve Step Approach** in reviewing and improving the design and implementation of an effective management controls system for your SME.

8.2.2 Review and Improvement Approach

Step 1: Set up management control framework

Managing your business, small or medium, is quite a difficult and strenuous job. You as the owner and your senior executive management must:

- 1. Understand corporate management, compliance, risk, strategic and operational controls and their manifestations and impact; and
- 2. Employ the right management control framework and its components (policies, procedures and methods) to suit the specific aspects of the organization they manage, i.e. your company.

Recommendation 1: Design and implement a management controls framework to satisfy your company needs.

Step 2: Ensure implementation of management controls

Ensure that all management controls identified in the chapters of both parts of this book, are amended to your purposes and implemented effectively. These controls relate to:

- 1. Establishing your SME as an entity (Part 1-Chapter 1).
- 2. Production: Organization, strategy, policies and procedures, computerize systems, etc. (Part 1-Chapter 2).
- 3. Marketing and Sales: Organization, strategy, promotion plan, procedures, etc. (Part 1-Chapter 3).
- 4. Customer Management: Approach, service standards, policies and procedures, CRM system, etc. (Part 1-Chapter 4).
- 5. Financial Management: Organization, policies, procedures, computerized systems, etc. (Part 2-Chapter 5).
- 6. IT Management: Organization, policies, procedures, application controls, etc. (Part 2-Chapter 6).
- 7. Administration: Policies and procedures, industrial espionage and sabotage controls action plan, etc. (Part 2-Chapter 7).

Please note that extraordinary many policies and procedures may make your company too bureaucratic and inflexible, especially if these are not accessible online, and not reviewed and improved periodically.

Recommendation 2: Implement adequate corporate policies and procedures to satisfy your business needs.

Step 3: Establish performance standards and targets

Establish the standards and targets against which your SME performance is to be evaluated. This is done by a performance management policy (see Appendix 5: Performance Management Policy) and corporate performance goals setting described next.

Action 1: Divisional Performance Goals. Divisional goals state corporate managers' expectations for each division concerning performance on such dimensions as efficiency, quality, innovation, and responsiveness to customers. For example the business goals for a medium-sized manufacturing enterprise with one plant and two products could be:

- 1. Increase market share in each of our markets
- 2. Increase company sales in products 'x', and 'y'
- 3. Comply with Health and Safety procedures at all times.

Action 2: Departmental Goals. Corporate performance goals control, at the functional and individual levels, is a continuation of control at the divisional level. The same four building blocks of competitive advantage (efficiency, quality, innovation, and responsiveness to customers) act as the goals against which functional performance is evaluated. For example the business targets for a production unit producing one or more products could be:

- 1. Increase customer base by 3% in each year for the next 4 years.
- 2. Decrease of production costs by 5% in each of the next 4 years.

Action 3: Individual Goals. Finally, departmental (functional) managers establish performance goals that individual employees are expected to achieve to allow the function to achieve its goals. For example the individual performance measures for each person in the production function could be set on the basis of:

- 1. Number of new products developed.
- 2. Time spent on customer problem resolution.

Also all of the above are usually complemented by Performance Measures in each business function, as noted in each chapter of this book. For example the following are the performance measures for inventory management:

- 1. Inventory holding costs.
- 2. Inventory on hand.

Recommendation 3: Monitor and revise your performance standards and targets.

Step 4: Prepare and document your strategy

The strategic process and its outcome (strategy, strategic plan execution) are absolutely necessary for the effective management and direction of any organization. A strategy, whether formal or informal, is required for all companies, small, medium and large. You cannot survive without it. For more details, see 'Business Formulation Approach for SMEs' in Chapter 1 of Part 1 of this book.

Recommendation 4: Craft a strategy for your company and involve all your staff in implementing it.

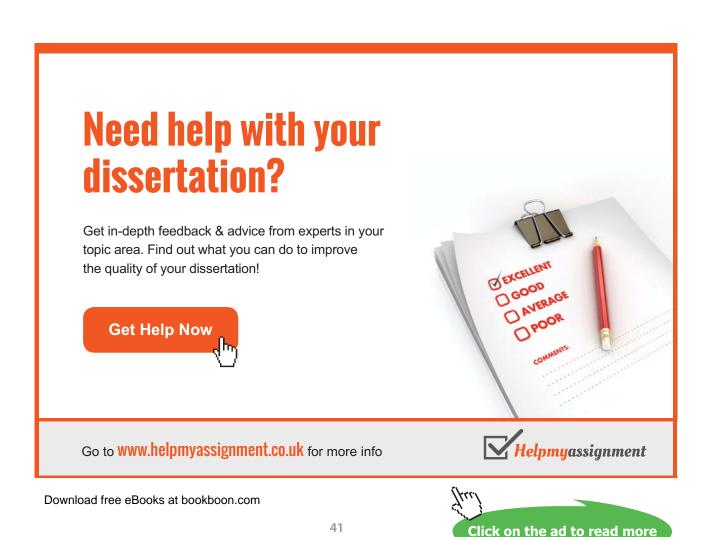
Step 5: Establish strong and effective performance, audit, risk and compliance controls

Establish a management system to:

- 1. Audit, assess and manage your risks;
- 2. Monitor your performance, compliance, risk and regulatory environment⁴;
- 3. Ensure full support of your senior executives for risk, compliance and ethics; and
- 4. Perform due diligence and risk assessment on your partners on a continuous basis, and as required.

You may also use Appendix 6 (Business performance questionnaire) and Appendix 7 (Corporate Governance Policies and Procedures Questionnaire) in this effort.

Recommendation 5: Ensure that your performance, audit, risk and compliance controls bring you results.



Step 6: Protect your SME assets

You must protect your data, systems, cash, fixed and other assets, payments, records, bank accounts, and anything related to your property.

- 1. Your production, financial, sales, customer and administration controls (see both parts of this book) provide the frameworks that support and enable your process and actions to achieve this protection.
- 2. Ensure that the intellectual rights of algorithms, brand names, product names, design specifications, recipes, methods, processes and products, and anything else of value regarding your company's research, production, manufacturing, and software, etc., are properly registered and patented, as required, at all levels (local and international).

Also for more details, see 'Industrial Espionage and Sabotage Controls Action Plan', in Chapter 7 of this part of the book.

Recommendation 6: Monitor the protection of all your assets, business activities and customer transactions with the utmost care.

Step 7: Manage your customers effectively

You need to look after all your customers like they are a unique customer, and as such treat them like they are the only one that matter to you at that point in time. The rest will fall in place. Couple this with production policies and procedures, including training your sales staff, and you will have a financial success in your hands (as regards revenue, cost, profit, share price and growth). For more details, see: Part 1-Chapter 4: Customer Management Controls.

Recommendation 7: Make customers your number one priority.

Step 8: Manage your purchases effectively

Implement effective purchasing procedures and implement segregation of duties in the purchasing function of your company. For more details, see: Part 1-Chapter 2: Production Management Controls

Recommendation 8: Mitigate fraud by effective purchasing procedures.

Step 9: Establish strong Management Controls

Have effective IT management controls and complement them with performance measures to support and enable your information processing capability and results in the modern network-driven enterprise. Ensure that your IT systems are linked with and aligned to your business objectives. Prepare for disasters as they can be most devastating by having adequate business continuity and IT disaster recovery plans. For more details, see:

- 1. Free IT-Business Alignment Book <u>http://bookboon.com/en/business-ebooks/it/it-business-alignment-part-i</u> <u>http://bookboon.com/en/business-ebooks/it/it-business-alignment-part-ii</u>
- 2. Part 2-Chapter 6: IT Management Controls.

Recommendation 9: Be vigilant and proactive with all your IT resources, data, systems and networks.

Step 10: Manage your personnel properly and fairly

This can be achieved by the following actions:

- 1. Screening of personnel during the hiring process,
- 2. Maintaining valid employment documentation,
- 3. Establishing authorization controls (for purchases, expenses, invoices, payments, contracts, etc.), and implementing segregation of duties (where possible) or compensating controls,
- 4. Communicating constantly your company's ethics and values to all parties, and practicing what you preach,
- 5. Rewarding all your employees on performance,
- 6. Responding, resolving and punishing, if needed, all violators to your standards of practice, and
- 7. Making decisions on accurate facts and data and by understanding of all your business functions and actions of individuals.

Recommendation 10: Coach, train, educate and look after your personnel.

Step 11: Manage your SME's performance

Action 1: Compare actual performance against the established targets.

If performance is higher, the management of your SME may decide that it has set the standards too low and may raise them for the next time of period. On the other hand, if performance is too low, managers must decide whether to take remedial action.

Action 2: Initiate corrective action when it is decided that the standards and targets are not being achieved. Such corrective and improvement action may mean changing any aspect of your company's strategy, structure, policies, procedures, practices, management systems, etc.

Action 3: Review, amend, customize to your needs and expectations, and implement any or all of the specific management controls identified within both parts of this book.

Action 4: Examine all production related policies, procedures, plans and actions contained in the previous chapters to ensure that they were executed fully. Revise them if needed.

Action 5: Evaluate and revise, if needed, the compliance system of your company at two levels:

- 1. Your company level as a whole entity;
- 2. Your production and manufacturing functions, as units.

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Action 6: Evaluate the results of all procedures and actions carried out and their results in terms of products produced and services provided by your company.

- 1. Monitor the whole implementation of your production function and its related components;
- 2. Ensure that your company is protected against product liability cases by having proper insurance coverage against these risks;
- 3. Ensure that all your critical staff (production, manufacturing, research, purchasing, IT, etc.) have signed a confidentiality statement to mitigate the potential risks of disclosing your sensitive information to unlawful parties and competitors; and
- 4. Evaluate all aspects of your production function and its related components, as well as the production performance on the basis of the specific performance data collected.

Action 7: Audit all your operations by your internal audit and external experts to improve all functions of your business.

Focus initiatives and execute specific actions to improve on all the findings of the examinations, audits and evaluations described above.

Recommendation 11: Monitor, evaluate and correct the performance of your company.

Step 12: Establish management control duties

The primary responsibility for the development and implementation of management controls rests with your company's management. Focus on policies and procedures as well as the philosophy and operating style of your SME.

- 1. Make management controls the first priority of your senior management.
- 2. Ensure that your Board of Directors monitors the good operation of your management controls.
- 3. Train your operating staff to play a role in effecting control and to be responsible for reporting problems of operations, non-compliance with the corporate policies and various professional codes, or violations of policies, standards, practices and procedures.
- 4. Ensure that both Internal and External Auditors examine, through their auditing activities, and contribute to the ongoing efficiency and effectiveness of the management control system, and thus play a very important role in the process of internal control.

Recommendation 12: Involve and engage all participants in implementing your management controls.

Appendix 1: Accounting Job Descriptions

2. Controller or Chief Financial Officer (CFO)

Small companies do not usually have a Controller or CFO. You may find that you need a Controller (or CFO) if you own or manage a medium-sized enterprise. The typical duties and responsibilities, in summary, of this position, include:

- 1. Design and operate the financial control systems of the company.
- 2. Supervise the accounting function.
- 3. Prepare, analyze and issue financial statements and reports for internal and external stakeholders.
- 4. Review and analyze investment and budget proposals.
- 5. Supervise financial control procedures to ensure validity of financial information.
- 6. Establish adequate safeguards against theft, fraud, misuse of assets and abuse of corporate information and business activities.
- 7. Cooperate with the functions of compliance, internal and external audit, as applicable.

3. Budget Officer

Small companies do not usually have a Controller or CFO. You may find that you need a Controller (or CFO) if you own or manage a medium-sized enterprise. The typical duties and responsibilities, in summary, of this position, include:

- 1. Publish procedures and forms for the preparation of the budget.
- 2. Provide assistance to all staff on budget preparation.
- 3. Publish and distribute budget guidelines.
- 4. Administer the budgetary process.
- 5. Analyze budget proposals and makes recommendations.
- 6. Analyze performance data and reports, and provide summaries and analyses to the board (budget vs. actuals, etc.).

Appendix 2: Detail Accounting Procedures

The usual detail accounting procedures that your accounting staff need to record all your daily financial transactions and activities, as an example, include the following:

Procedure AP1: Post Transactions and Update Books Controls Procedure

You use this procedure to post transactions and update your accounting books by carrying out the following:

- 1. Post transactions to books on a daily basis, at least.
- 2. Resolve all errors as quickly as possible.
- 3. Balance inputs to processed items.
- 4. Balance accounts on a pre-determined period (daily, monthly, etc.).
- 5. Produce interim financial reports (at least monthly) and audit specific transactions, as needed.
- 6. Produce and distributed, as authorized, the final company financial reports.





Procedure AP2: Manage Accounts Receivable Controls Procedure

You use this procedure to manage your accounts receivables by carrying out the following:

- 1. Confirm accounts receivable balances.
- 2. Require approval of credits for all customers on the basis of a formal process.
- 3. Compare checks received to money posted against accounts receivable.

Procedure AP3: Manage Accounts Payable Controls Procedure

You use this procedure to manage your accounts payables by carrying out the following:

- 1. Audit credit card statements.
- 2. Apply limitations on the amount that can be charged to keep an employee within spending limits.
- 3. Verify authorizations with a three-way match of the purchase order, invoice, and receiving report.
- 4. Review additions to the vendor file. Have someone not associated with accounts payable review all additions to the master vendor file to avoid payments to fictitious vendors.
- 5. Require approval on all invoices that do not have a purchase order.
- 6. Approve all expense statements before payments are made.

Procedure AP4: Manage Petty Cash Controls Procedure

You use this procedure to manage your petty cash by carrying out the following:

- 1. Control petty cash via a petty cash register for all incoming and outgoing payments.
- 2. Assign responsibility of managing petty cash to only one individual and rotate him (her) on an ad hoc basis.
- 3. Limit petty cash reserves.
- 4. Conduct spot audits of petty cash, keeping in mind that it's possible to falsify petty cash records through the use of miscellaneous receipts and other documents.
- 5. Balance petty cash, at least, monthly.

Procedure AP5: Manage Checks Controls Procedure

You use this procedure to manage your checks by carrying out the following:

- 1. Control checks via a check register for all incoming and outgoing payments.
- 2. Assign responsibility of managing checks to only one individual and rotate him (her) on an ad hoc basis.
- 3. Conduct spot audits of checks, keeping in mind that it's possible to falsify petty cash records through the use of miscellaneous receipts and other documents.

- 4. Compare the check register to the actual check number sequence.
- 5. Control the check stock, making sure that checks are kept under lock and key.
- 6. Deposit checks daily.
- 7. Fill in empty spaces on checks. If the amount line of a check is left partially blank, an additional amount may be inserted.
- 8. Mutilate voided checks. Be sure to stamp voided checks "Void," or tear off the signature line to avoid cashing of the check.
- 9. Review un-cashed checks. It is possible that an un-cashed check is created through a flaw in the system, which could send a check to a nonexistent supplier.
- 10. Stamp incoming checks "For Deposit Only."
- 11. Conduct spot audits of checks, keeping in mind that it's possible to falsify petty cash records through the use of miscellaneous receipts and other documents.
- 12. Perform bank reconciliations monthly. This should be done by someone who has no association with accounts payable, accounts receivable or cash receipts.

Procedure AP6: Manage Payroll Controls Procedure

You use this procedure to manage your payroll by carrying out the following:

- Ensure that all payments related to payroll are approved by the Human Resources or Administration Department and the CEO of the company before any payments are made to the employees.
- 2. Check the total amount paid by finance to equal the total shown on the payroll report.
- 3. Ensure that Internal Audit performs payroll audits on an ad hoc basis and as required by their annual audit process.

Procedure AP7: Manage Performance Controls Procedure

In addition to all these financial accounting procedures described above, you will need a procedure to review, improve and manage the performance of your finance function by carrying out the following:

- 1. Ensure that your finance executives (CFO, financial manager, etc.) review all budget items and report the budget status to higher levels of management on a weekly or monthly basis.
- 2. Ensure that your senior managers review periodic activity reports to evaluate whether objectives are being achieved.
- 3. Ensure that financial systems, policies and procedures provide timely, accurate, and sufficient information for all levels of your management.
- 4. Ensure that the finance department uses ethics, benchmarking and other measures to evaluate effectiveness and satisfaction by all their internal and external customers.

Appendix 3: Computerized Application Controls

The main Computerized Application Controls are: Input Controls, Processing Controls and Output Controls.

Input Controls:

These controls must ensure: accuracy of data, completeness of input and validation of input.

Accuracy of data:

In order to ensure accuracy of data, information systems developers should:

- a) Design both the documents and the screens so as to minimize the number of errors which could be made by the data entry operators.
- b) Include check digits in the codes that identify transactions and other entities which enable the computer application software to check whether a code has been entered correctly.
- c) Display a message on the screen (for online systems) to remind data entry operators that all input transactions should be authorized.





Completeness of input:

In order to ensure completeness of input, information systems developers should provide instructions and software code in the system developed so that:

- a) For batch systems, all transactions entered into the system, should be compared against the count for the batch produced by the computer program of the information system. Also financial totals for the batch, when financial data are involved, should be compared between what has been inputted and what exists on the input documents.
- b) For online systems, "logical" batches may be created by each data entry clerk on some timeperiod basis (e.g. hourly or daily, etc.). Again the manual count of what has been entered can be compared to the count kept by the computerized application system. Also financial totals can be compared (as explained above for the batch systems).
- c) For both batch and online systems, the approach of "Dual read" may be applied. This means that the data are inputted twice, once by person A, the second by person B, and the input is accepted only when both actions (input by person A and input by person B) are the same.

Validation of input:

In order to ensure validation of input, information systems developers should write software code in the system developed to perform a variety of checks, such as:

- a) Format checks: character validation tests should check input data fields to see if the contain alpha numerics when they are supposed to have only numerics, and so on.
- b) Reasonableness checks: These checks compare input data to expected values by testing logical relationships, or checking whether an upper limit has not been exceeded.
- c) Code checks: The system can compare the code entered, beyond its digit code (as explained beforehand), with valid codes exiting in the corporate or other database.

The result of all validations is an error file, a valid transactions file and an error report for subsequent human inspection and correction.

Processing Controls. Processing controls include:

Crossfooting tests:

Crossfooting tests mean the execution of logical tests for information consistency. This presupposes that two independent computations of a total figure can be made and compared.

Reasonableness checks:

Reasonableness checks compare processed data to a set of pre-defined values or against an upper or lower limit before updating the corporate data base.

Functional checks:

Functional checks ensure that invoices for zero or negative amounts are not printed. Also funds are not transferred or paid beyond some upper of pre-set limit per customer account.

Rounding off checks:

Correct rounding off of financial data can avoid a possible "salami" attack where very tiny sums (e.g., 1 cent) are deposited into an account of the defrauder for every financial transaction processed.

Parity checks:

The addition of a parity bit (i.e., make all "1" bits even or odd) in a set of data to be processed, assures that bits are not lost during computer processing and prevents data corruption.

Sequence checks:

Sequence checks are used to check for missing items either within the given transaction or in a predefined set of transactions.

Output Controls. Output controls include:

Schedule checks:

Schedule checks ensure that reports, media and documents are produced and printed according to schedule.

Distribution checks:

Distribution checks ensure that all printed output is distributed according to the rules of security (e.g. for checks or payroll reports), and that electronic output (media, etc.) is also sent to the authorized recipients.

Balancing checks:

Balancing checks confirm that output figures balance back to inputs from which they are derived.

Report quality checks:

Report quality checks ensure that all printed output is of the highest quality.

Output log:

The output log is used to record manually all the outputs produced, printed and distributed. This may serve as evidence for historical purposes, especially when disputes have to be settled and for auditing purposes.





Appendix 4: Security Plan

An example of an Office, Plant and Inventory Security plan consists of the following actions:

Action 1: Evaluation of security. Evaluate the safety and security of your offices, production plant and inventory storage facility and consider improving your systems to reduce loss. Your evaluation should examine what mechanisms exist in your company protect against a variety of threats: physical, electronic, cyber, and integration, in terms of:

- 1. Monitoring and protecting the physical perimeter
- 2. Identifying and controlling visitors
- 3. Tracking movements of company personnel and assets
- 4. Controlling access to company data and sensitive areas
- 5. Quickly locating equipment, products, and other assets
- 6. Improving crisis and emergency response time
- 7. Preventing theft of assets and data
- 8. Integrating systems for greater speed and efficiency
- 9. Protecting networks and systems from cyber threats
- 10. Policies, procedures, and education.

Action 2: Implementation of procedures. Ensure effective implementation of your corporate administrative procedures, such as: corporate governance policies and procedures like ethics program, risk management approach and procedure, personnel review and due diligence, segregation of duties, business data management files and data procedures, etc.

Action 3: Improvement of physical security. Enhance your corporate physical security: Hire and train guards, use dogs for external perimeter security, and install locks, cameras, video surveillance, and other security devices along with signs that announce their existence.

Action 4: Inventory access. Limit the number of people who have access to your more expensive inventory items by storing them in a separate locked area.

Action 5: Theft policy. Create an employee theft policy that must be signed by each employee explaining the consequences of legal action for offenders.

Action 6: IT protection. Implement IT policies and procedures to enhance your IT systems and infrastructure security, with practical and cost-effective mechanisms, such as: passwords, access controls, hardware security, data validation rules within application software, back up procedures, offsite data retention capabilities, security trapping mechanisms (honey net and other trapping facilities, special security trapping and diversion tools and techniques), etc.

Action 7: Corporate recovery. Assure your corporate recovery mechanisms include: business continuity policy, IT recovery process, backup procedures, offsite storage and testing procedures, etc.

Action 8: Security testing. Test your security plan often by your own team and external experts, as your case requires.

Action 9: Business intelligence. Establish a business intelligence function to become more competitive in an ethical way.

Action 10: Anti-espionage. Use corporate anti-espionage techniques to protect your valuable assets: designs, specifications, IT systems, data, patents, research findings, plants, etc.





Appendix 5: Performance Management Policy

The performance management policy describes what elements the performance process of the organization should handle. A typical example of such a policy is:

'It is the policy of the "The Company" that individual and organizational goals will be communicated to all employees. Individual responsibility for accomplishing team and organizational goals will be identified, employees will be provided feed back regarding performance, performance will be evaluated and improved, and performance results will be used as a basis for appropriate personnel actions. All participants in this process should expect to be held accountable for accomplishment of their performance management responsibilities as identified in this directive. Management and employees should work together to jointly clarify how competencies apply within the work environment so that there is a common understanding about the expectations for performance. The manager of each business unit is ultimately responsible for setting performance targets. The Board of "The Company" is responsible for setting performance standards.Ongoing evaluation of the performance management program will be conducted by the Board in order to identify continuous improvement opportunities and to make adjustments to the overall policy. The evaluation of overall organizational results, employee satisfaction, and consistency with mission objectives will promote the continued enhancement of a performance management program supportive of critical organizational results.

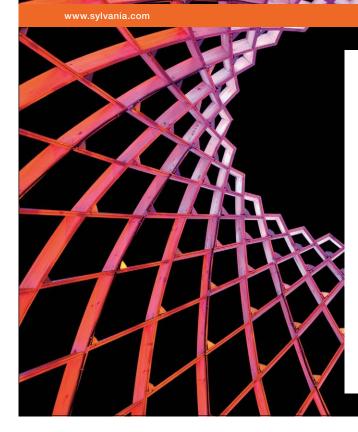
Appendix 6: Business Performance Questionnaire

- 1. Scope of performance measurements: Do business performance measurements cover only financial performance or are also extended to other business corporate areas (production, customers, sales, production, human resources, IT, etc.)?
- 2. Linking: Are business performance measurements linked to your strategic targets or are they utilised only for audit and management issues?
- 3. Decision-making level: Are decisions made at the organisational level on which business performance problems occur or all performance issues are forwarded to senior management levels?
- 4. Rewards: Are business performance measurements linked to existing reward systems in all organisational levels of your company?
- 5. Adaptation: Is there a corporate culture in your company allowing adaptation to innovative ideas, technologies, methods and practices?
- 6. Vision, mission and strategy effectiveness: Is there a strong business vision, an effective mission and an overall detail business strategy concerning all business performance aspects and up to which hierarchy/management level of your company?
- 7. Completeness of business planning: Are there complete business plans and specific targets at an operational, service, unit/department level of your company?
- 8. Resources: Are budgets, priorities and other resources assigned to business performance issues and up to which hierarchy/ management level of your company?
- 9. Clarity of strategy: Are business vision, mission and strategy clear to all and supported by all organizational levels of your company (Staff, Suppliers, Subcontractors, Customers, Management, Board of Directors)?
- 10. Quality management system alignment: Is there a well-functioning quality management system in place for your company and is this linked and aligned to your vision, mission and strategy?

Appendix 7: Corporate Governance Policies and Procedures Questionnaire

- 1. Formal establishment of governance policies: Have corporate governance rules, guidelines, policies and procedures been formally established and communicated to all levels and functions of your company?
- 2. Approved performance process: Is there an approved business performance policy, system and evaluation process in place for your company?
- 3. Approved human resources process: Is there an approved human resources management policy, set of procedures, a system and an evaluation process in place for your company?
- 4. Approved financial process: Is there an approved financial and cost management policy, and a set of related procedures in place for your company?
- 5. Approved asset management process: Is there an approved asset management, disposition and protection system in place for your company?
- 6. Approved IT management process: Is there an approved IT policy and a set of related procedures covering all areas, such as strategy, security, contingency planning and disaster recovery, information systems development and operation, database and data privacy protection, web services, etc. for your company?
- 7. Approved Research and Development process: Is there an approved research and innovation system and process (policies, procedures, performance metrics) in place for your company?
- 8. Business Reporting System: Is there a Business Management Reporting System, process, policies and procedures in place for your company?
- 9. Quality Management Process: Is there a quality management process (system, policies, procedures, methodology, practices, organization, standards, certification, dedicated staff, etc.) in place for your company?
- 10. Risk Management Process: Is there a risk management process (system, policies, procedures, methodology, practices, organization, standards, certification, dedicated staff, etc.) in place for your company?
- 11. Ethics Process: Is there an approved and well-communicated ethics process (code, policy, staff, etc.) in place for your company?
- 12. Compliance Process: Is there a compliance process (policy, program and action plan, dedicated staff, etc.) in place for your company?
- 13. Corporate Social Responsibility: Is there a corporate social responsibility policy in place for your company and is this discharged effectively?

- 14. Fraud Process: Is there an effective and well-functioning anti-fraud process (policy, procedures, staff, etc.) in place for your company?
- 15. IT steering committee: Is there an IT steering committee in place for your company and is it functioning effectively?
- 16. Business Continuity Committee: Is there a Business Continuity committee in place for your company and is it functioning effectively?
- 17. Audit Committee: Is there an Audit Committee in place for your company and is it functioning effectively?
- 18. Business Records: Have operational guidelines regarding business records been formally established, communicated to all levels and functions of for your company, and used in every-day work by all personnel?
- 19. Recordkeeping System: Does the recordkeeping system (for both manual and computerized files, media and data) of your company produce complete and accurate results?
- 20. Audit Trail: Is there an adequate documentation and effective audit trail for all transactions and activities?



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Appendix 8: Computerized Spreadsheet Application Controls

As computerized spreadsheet applications proliferate, you must be very careful to implement controls that will preclude potential wrong decisions and fraud from using data produced by undocumented and untested spreadsheet applications. As these are usually outside the realm and control of IT and as they are mostly not properly documented, tested, etc., they present a major risk in any company, even yours. Audits of real-world spreadsheets found that: 94% of audited spreadsheets contained errors; and 91% of audited spreadsheets contained at least a 5% error in a bottom-line value (see: <u>http://www.detroitiia.org/PDF/Key_Aspects_of_Spreadsheet_Controls_IIA.pdf</u>, reported on April 25, 2012).

Recently (in 2012), JPMorgan published a 129-page internal report detailing the issues that led to a major (over 5 billion U.S. Dollars) trading loss, due to various management failures including complex and error-prone spreadsheets on which JPMorgan relied to manage its finance functions.

(Posted: 01/30/2013 12:45 pm http://www.huffingtonpost.com/michael-kerman/heres-what-everybusiness_b_2582032.html).

The usual controls that may be applied to mitigate these risks are:

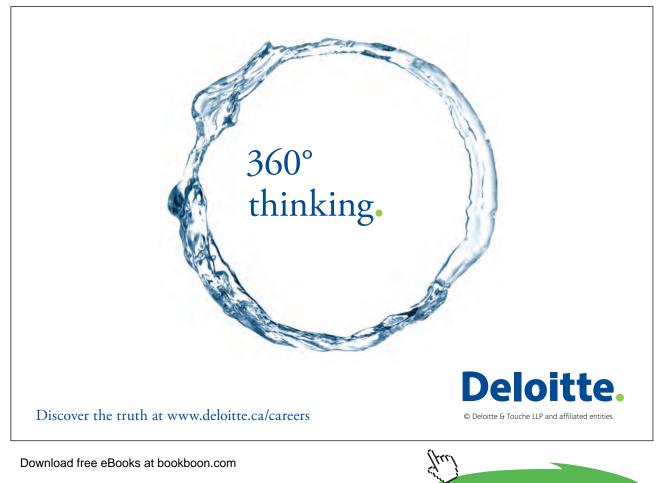
- Spreadsheet Inventory Register: Record all the spreadsheets used in all departments of your SME and how they function, what decisions are made in the basis of their data, etc. This spreadsheet inventory should be assigned to a manager (e.g., IT systems development manager) and should be updated continuously as users add or delete spreadsheets in their departments.
- 2. **Design Standards**: Ensure that a standard spreadsheet design template is developed and employed for all computerized spreadsheet applications of your company.
- 3. **Spreadsheet Development and Testing**: Ensure that all computerized spreadsheet applications are developed according to a company standard and best practices, tested effectively and that testing documentation is kept.
- 4. Accuracy. Ensure that all your computerized spreadsheet applications are checked for accuracy both for incoming and outgoing information.

- 5. **Spreadsheet Documentation**: Ensure that the data input sources, rules, calculations, formulas, and other instructions are recorded in the documentation of all spreadsheet applications. This documentation to also have a printed copy of the spreadsheet and it should always be kept current.
- 6. **Spreadsheet Backups**: Instruct all users to back up their spreadsheet work. Also copies of all spreadsheet applications should be kept at a central location (IT, Administration, etc.) as well as at an external safe location.
- 7. Spreadsheet Management Control. Apply segregation of duties, as required, for development, usage, changes, testing and approving of spreadsheets. Controlling the access, development and use of computerized spreadsheet applications should be the task of all managers of your SME (For more on controlling spreadsheets, see: (1) Sarbanes-Oxley: What About all the Spreadsheets? Controlling for Errors and Fraud in Financial Reporting, by Raymond R. Panko & Nicholas Ordway <u>http://arxiv.org/ftp/arxiv/papers/0804/0804.0797.pdf</u>, and (2) Kee, Robert C. and John O. Mason Jr. (1988): 'Preventing Errors in Spreadsheets', Internal Auditor Magazine, Feb. 1988, pg. 42–47.)

Endnotes

- 1. There are, however, examples of several conglomerates using a new approach called 'Beyond Budgeting', where they operate without budgets. Their example, although successful for them, is not the normal business case you find across the world.
- For more on IT positions and detail job descriptions, see: Kyriazoglou, John (2010): IT Strategic & Operational Controls. Publisher: IT Governance, U.K.: <u>www.itgovernance.</u> <u>co.uk</u>.).
- 3. For U.S. patents, at: <u>http://www.uspto.gov/</u>, for Canada, at: <u>http://www.patentregister.ca/</u>, for European patents, at: <u>http://www.epo.org</u>, for U.K, at: <u>http://www.ipo.gov.uk</u> and for Australia, at: <u>http://www.ipaustralia.gov.au/</u>.
- 4. For an example of a corporate compliance action plan, see my blog post of 30 Nov. 2011, at: http://businessmanagementcontrols.blogspot.com/

For other controls, see also my book 'Business Management Controls: A Guide', at:<u>www.</u> <u>itgovernance.co.uk</u>.



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References

Books on controls by John Kyriazoglou:

- Free IT-Business Alignment Book
 <u>http://bookboon.com/en/business-ebooks/it/it-business-alignment-part-ii</u>
- 2. Business Management Controls: A Guide, <u>www.itgovernance.co.uk</u>.
- 3. Business Management Controls: Toolkit, <u>www.itgovernance.co.uk</u>.
- 4. Corporate Strategic and Operational Controls With Dr. F. Nasuti and Dr. C. Kyriazoglou, <u>www.theiic.org</u>
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About the Author

John Kyriazoglou obtained a B.A. (Honours) from the University of Toronto, Canada, also earning a Scholastic award for Academic Excellence in Computer Science. John has worked in Canada, several European countries (England, Switzerland, Luxembourg, Greece, etc.) and other countries for over 35 years, in various management and technical roles (e.g.: Chairman of various corporate committees, Senior IT manager, Managing Director of IT Services company, Senior Group Internal Audit Manager, IT auditor and business management consultant), in a variety of clients and projects, in both the private and the public sectors. He has published several books and articles in professional publications, has served in numerous scientific committees and is a member of several professional and cultural associations.

He is currently the Editor-in-Chief for the Internal Controls Magazine (U.S.A.).

John can be contacted at: <u>jkyriazoglou@hotmail.com</u>. **Blog**: <u>http://businessmanagementcontrols.blogspot.com/</u>

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