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UNIT I. MANAGEMENT AND ECONOMICS

Part I

WHAT MAKES A GREAT MANAGER

PRE-TEXT EXERCISE

I. Memorize the meaning and the pronunciation of the following words:

1. option ['ɒpʃ(ə)n] вибір, право, опція
2. cape [keɪp] накидка, плащ із каптуром
3. underpants ['ʌndəpænts] кальсони; труси (чоловічі)
4. thrust [θrʌst] укол, колючий удар, різкий виступ
5. rigid ['rɪdʒɪd] твердий, негнучкий

The first steps to becoming a really great manager are simply common sense; but common sense is not very common. This article suggests some common-sense ideas on the subject of great management.

The major problem when you start to manage is that you do not actually think about management issues because you do not recognize them. Put simply, things normally go wrong not because you are stupid but only because you have never thought about it. Management is about pausing to ask yourself the right questions so that your common sense can provide the answers.

When you gain managerial responsibility, your first **option** is the easy option: do what is expected of you. You are new at the job, so people will understand. You can learn (slowly) by your mistakes and probably you will try to devote as much time as possible to the rest of your work (which is what you were good at anyway). Those extra little "management" problems are just common sense, so try to deal with them when they come up.

Your second option is far more exciting: find an empty telephone box, put on a **cape** and bright-red **underpants**, and become a SuperManager.

When you become a manager, you gain control over your own work; not all of it, but some of it. You can change things. You can do things differently. You actually have the authority to make a huge impact upon the way in which your staff work. You can shape your own work environment.

In a large company, your options may be limited by the existing corporate culture - and my advice to you is to act like a crab: face directly into the main thrust of corporate policy, and make changes sideways. You do not want to fight the system, but rather to work better within it. In a small company, your options are possibly much wider (since custom is often less rigid) and the impact that you and your team has upon the company's success is proportionately much greater. Thus once you start working well, this will be quickly recognized and nothing gains faster approval than success. But wherever you work, do not be put off by the surprise colleagues will show when you first get serious about managing well.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

common-sense ideas	піднімати
management issues	мати справу з
stupid	одержати правлінські обов'язки
to gain managerial responsibility	формувати робочу атмосферу
options	мати владу
to deal with	дурний
to come up	проблеми керування
to have the authority	здорові ідеї
to shape the work environment	вибір

II. Choose synonyms for the following words:

recognize	identify
responsibility	obligation
manage	control
impact	influence
shape	form

III. Make up your own sentences with the synonyms (ex.II).

identify
control
influence

IV. Answer the questions:

1. What kind of ideas does this article suggest?
2. What problem is major when you start to manage?
3. What your first option is when you gain managerial responsibility?
4. What kind of control you gain when you become a manager?
5. What is the difference between options of a manager in a large company and options of a manager in a small company?

V. Translate the following sentences:

1. У статті розглядаються проблеми роботи менеджера.
2. Автор статті пропонує здорові ідеї щодо проблеми менеджменту.
3. Ти новачок і колеги зрозуміють, що тобі потрібно час, щоб успішно справлятися з роботою менеджера.
4. Менеджер має повноваження змінити роботу штату.
5. У великій компанії менеджер повинен дотримуватися існуючої корпоративної культури.
6. У невеликій компанії менеджер має набагато більше можливості проявити себе й домогтися видимого успіху.

VI. Write down the summary of the text.**Part II****THREE FACES OF A MANAGER****PRE-TEXT EXERCISE****I. Memorize the meaning and the pronunciation of the following words:**

1. eventual [ɪ'ventʃuəl], [-tju-] 1) можливий, здатний трапитися; евентуальний, можливий при відповідних умовах 2) кінцевий, остаточний
2. consequence ['kɒn(t)sɪkwəns(t)s] наслідок, результат, умовивід, висновок.
3. implement ['ɪmplɪmənt] виконувати, здійснювати

4. tackle ['tækəl] енергійно, братися з ретельністю, прийматися (за що-н.)
5. acquire [ə'kwaiə] обзаводитися, здобувати, купувати, одержувати
6. vagary ['veɪg(ə)rɪ] каприз, примха; витівка
7. excitement [ɪk'saɪtmənt], [ek-] хвилювання
8. deflect [dɪ'flekt] (*from*) відволікати, відривати від(чого-н.)
9. emerge [ɪ'mɜːdʒ], [i-] вставати, виникати (*про запитання*)
10. cost [kɒst] розраховувати (вартість чого-н.); розцінювати (товар)
11. outcome ['aʊtkʌm] підсумок, наслідок, результат
12. fair [fɛə] повний, ясний

THREE FACES OF A MANAGER

The manager of a small team has three major roles to play:

Planner

A Manager has to take a long-term view; indeed, the higher you rise, the further you will have to look. While a team member will be working towards known and established goals, the manager must look further ahead so that these goals are selected wisely. By thinking about the **eventual consequences** of different plans, the manager selects the optimal plan for the team and **implements** it. By taking account of the needs not only of the next project but the project after that, the manager ensures that work is not repeated nor problems **tackled** too late, and that the necessary resources are allocated and arranged.

Provider

The Manager has access to information and materials which the team needs. Often he/she has the authority or influence to **acquire** things which no one else in the team could. This role for the manager is important simply because no one else can do the job; there is some authority which the manager holds uniquely within the team, and the manager must exercise this to help the team to work.

Protector

The team needs security from the vagaries of less enlightened managers. In any company, there are short-term excitements which can deflect the work-force

from the important issues. The manager should be there to guard against these and to protect the team. If a new project emerges which is to be given to your team, you are responsible for costing it (especially in terms of time) so that your team is not given an impossible deadline. If someone in your team brings forward a good plan, you must ensure that it receives a fair hearing and that your team knows and understands the outcome. If someone in your team has a problem at work, you have to deal with it.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

a long-term view	установлені цілі
established goals	бачення довгострокової перспективи
look further ahead	бачити перспективу
consequence	відхиляти
tackle	висновок
to acquire	освічений
security from the vagaries	захищати від чого-небудь
enlightened	здобувати
short-term excitements	нереальний строк закінчення роботи
deflect from the important issues	тимчасові хвилювання
to guard against smth	відволікати від важливих проблем
an impossible deadline	охорона від капризів

II. Choose synonyms for the following words:

to rise	power
eventual	to choose
consequence	to come up
to select	to perform
to implement	possible
to ensure	to accomplish
authority	safety
to exercise	result
security	to guarantee

III. Make up your own sentences with the synonyms (ex.II).

to accomplish
to guarantee
to come up

IV. Answer the questions:

1. What three major roles does the manager of a small team have to play?
2. What kind of plans does the manager have to form?
3. What have the manager to ensure?
4. What does the Manager have access to?
5. What should the manager guard the team against?
6. What are the main functions of the manager as a protector?
7. Why is the role of a manager so important?

V. Translate the following sentences:

1. Чим вище ти піднімаєшся, тим далі ти повинен бачити.
2. Менеджер повинен обмірковувати можливі наслідки проектів.
3. Менеджер володіє повною інформацією й матеріалами, які потрібні команді.
4. Команда має потребу в захисті від мало компетентних менеджерів.
5. Якщо хто-небудь із команди вносить ділову пропозицію, то менеджер повинен забезпечити умови, при яких ця пропозиція буде вислухана в повному обсязі.
6. Менеджер повинен забезпечити правильні строки виконання завдання.
7. Якщо хто-небудь із команди має проблеми у виконанні завдання, менеджер повинен допомогти йому в цьому.

VI. Write down the summary of the text.

Part III

FACES OF A MANAGER. Version Two

PRE-TEXT EXERCISE

I. Memorize the meaning and the pronunciation of the following words:

1. enhance [ɪn'hɑ:n(t)s], [en-] збільшувати, підсилювати, поліпшувати
2. verve [vɜ:v] чинність, енергія
3. chutzpah ['hʊtspɑ:] нахабство, нахабність (амер.; розм.; = chutzpa; = hutzpah; = hutzpa)
4. audacity [ɔ:'dæsəti] відвага, сміливість, хоробрість
5. pride [praɪd] гордість; почуття гордості
6. cited – наведений, цитований

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7. clairvoyance [kleə'vɔɪən(t)s] проникливість, прозорливість; спроможність проникнення в суть
8. demise [di'maɪz] втрата займаного положення
9. validate ['vælɪdeɪt] оголошувати дійсним, надавати законну чинність; обґрунтовувати
10. hindsight ['haɪndsaɪt] погляд в минуле, ретроспективний погляд; оцінка минулих подій
11. sustain [sə'steɪn] підтримувати, захищати
12. stunt [stʌnt] зупинка росту, затримка росту
13. nebulous ['nebjələs], [-ju-] невизначений, невиразний, неясний, розпливчастий
14. pin down – точно визначити, установити, змусити
15. tough [tʌf] твердий, щільний, пружний
16. conviction [kən'vɪkʃ(ə)n] переконання, запевнення
17. disdain [dɪs'deɪn] презирство, зневага

Version Two

That was rather formal. If you like formal, then you are happy. If you do not like formal then here is an alternative answer, a manager should provide:

VISION - VALUES - VERVE

Vision in that the future must be seen and communicated to the team; Values in that the team needs a unifying code of practice which supports and **enhances** co-operation; **Verve** in that positive enthusiasm is the best way of making the work exciting and fun. If you do not think your work is exciting, then we have found a problem. A better word than Verve might be **Chutzpah** (except that it does not begin with a "V") which means "shameless **audacity**". Is that not refreshing? Inspiring even? A manager should dare to do what he/she has decided to do and to do it with confidence and pride.

VISION

One of the most **cited** characteristics of successful managers is that of vision. Of all the concepts in modern management, this is the one about which the most has been written. Of course different writers use it in different ways. One usage brings it to mean **clairvoyance** as in: "she had great vision in foreseeing the **demise** of that market". This meaning is of no use to you since crystal balls are only **validated** by **hindsight** and this article is concerned with your future.

The meaning of vision which concerns you as a manager is: a vivid idea of what the future should be. This has nothing to do with prediction but everything to do with hope. It is a focus for the team's activity, which provides **sustained** long-term motivation and which unites your team. A vision has to be something sufficiently exciting to bind your team with you in common purpose. This implies two things:

- you need to decide where your team is headed
- you have to communicate that vision to them

Communicating a vision is not simply a case of painting it in large red letters across your office wall (although, as a **stunt**, this actually might be quite effective), but rather bringing the whole team to perceive your vision and to begin to share it with you. A vision, to be worthy, must become a guiding principle for the decision and actions of your group.

Now, this vision thing, it is still a rather **nebulous** concept, hard to **pin down**, hard to define usefully; a vision may even be impractical (like "zero defects"). And so there is an extra stage which assists in its communication: once you have identified your vision, you can illustrate it with a concrete goal, a *mission*. Which leads to the creation of the famous "mission statement". Let us consider first what is a mission, and then return to a vision.

A mission has two important qualities:

- it should be **tough**, but achievable given sufficient effort
- it must be possible to tell when it has been achieved

Once you have established a few possible mission statements, you can try to communicate (or decide upon) your *vision*. This articulates your underlying philosophy in wanting the outcomes you desire. Not, please note, the ones you think you *should* desire but an honest statement of personal motivation; for it is only the latter which you will follow with **conviction** and so of which you will convince others. In general, your vision should be unfinishable, with no time limit, and inspirational; it is the driving force which continues even when the

mission statement has been achieved. Even so, it can be quite simple: Walt Disney's vision was "to make people happy". As a manager, yours might be something a little closer to your own team: mine is "to make working here exciting".

There is no real call to make a public announcement of your vision or to place it on the notice board. Such affairs are quite common now, and normally attract mirth and **disdain**. If your vision is not communicated to your team by what you say and do, then you are not applying it yourself. It is *your* driving motivation - once you have identified it, act on it in every decision you make.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

exciting	чинність
verve	пророкування
shameless	переконання
chutzpah	усвідомлювати
to dare to	переконаність
confidence	зухвалість
stunt	затримка
to perceive	насмілитися
prediction	нахабний
conviction	збудливий

II. Choose synonyms for the following words

verve	impudence
chutzpah	energy
audacity	foresight
clairvoyance	legalize
validate	perspicacity
hindsight	courage
sustain	uphold
nebulous	define
pin down	indeterminate
conviction	scorn
disdain	belief

III. Make up your own sentences with the synonyms (ex.II).

indeterminate

foresight

perspicacity

uphold

IV. Answer the questions:

1. What should a manager provide?
2. What is vision for a manager?
3. What is values for a manager?
4. What is verve for a manager?
5. What two important qualities does a mission have?
6. Why should the vision be unfinishable?

V. Translate the following sentences:

1. Менеджер повинен мати чітке бачення, цінності й енергію.
2. Бачення - це ясне уявлення про те, яким повинне бути майбутнє.
3. Менеджер повинен уміти донести до команди своє бачення.
4. Бачення не повинне мати кордонів, і тимчасових рамок, воно повинне надихати.
5. Бачення - це рушійна сила навіть тоді, коли поставлена ціль досягнута командою.
6. Цінності - це загальний код діяльності команди.
7. Чинність - це абсолютна сміливість робити те, що вирішив.

VI. Write down the summary of the text.

Part IV

ECONOMIC GOODS AND SERVICES

PRE-TEXT EXERCISE

I. Memorize the meaning and the pronunciation of the following words:

1. demand [dɪ'mænd] – попит, вимога
2. discover [dɪ'skʌvə(r)] - відкривати, виявляти
3. earn ['ɜ:n] – заробляти, отримувати прибуток
4. to earn one's living (by smth) ['tu: 'ɜ:n 'wʌnz 'lɪvɪŋ]
– заробляти (чим-небудь) собі на життя
5. goods ['gʊdz] – товар, вироби
6. consumer goods [kən'sju:mə(r) 'gʊdz] – споживчі товари
7. capital goods ['kæpɪt(ə)l 'gʊdz] – засоби виробництва, товари виробничого призначення, інвестиційні кошти

8. perishable goods ['perɪʃəb(ə)l 'gʊdz] – швидкопсувні товари
9. need ['ni:d] – потреба, нестаток, недостача
10. to meet needs ['tu: 'mi:t 'ni:dz] – задовольняти потреби
11. record ['rekɔ:d] – запис, реєстрація, облік

People begin to learn about economics when they are still very young. Even before they start school, they make two very important economic discoveries. They find that there are lots of things in the world they want. They also find that they cannot have them all. There is a big gap between what they want and what they can have.

Later, young people learn another lesson. When they watch television commercials, they **discover** that there are thousands of things they or their parents could buy. Gradually, they settle into two major economic roles: consumer and producer.

In the role of consumer, a person buys **goods** and services for personal use, not for resale. **Consumer goods** are products, such as food, clothing, and cars that satisfy people's economic **needs** or wants. Some consumer goods, such as food, do not last a long time. Other goods, such as cars or VCRs, last longer. Sooner or later, though, consumer goods are used up. Bananas are a typical example of **perishable goods**; by "perishable" we mean goods which cannot be stored for any length of time without going bad. Most foodstuffs are in the perishable category. Services are actions, such as haircutting, cleaning or teaching. Services are used up at the time they are provided.

A producer makes the goods or provides the services that consumers use. A person who makes lemonade and then sells it is producing goods. A person who shovels snow during the winter or clerks in a store is providing a service. Students working after school or during the summer **earn** money to buy some of the things they want - **records**, books, or a car. They are learning about the role of the producer.

In order to produce something, however, a person must first have right resources. Resources are the materials from which goods and services are made. There are three kinds of resources: human (people), natural (raw materials), and capital resources (capital, **capital goods**, or the money or property). If either of these resources is missing, production will stop.

The economy as a whole, like an individual, can produce only products for which it has the right kind of resources. No economy can produce the things people want if it doesn't have enough of the right kinds of resources. And no economy has an unlimited supply of resources. In other words, there is a scarcity of resources. Scarcity is the situation that exists when **demand** for a good, service, or resources is greater than supply.

The basic economic questions individuals and nations face are: What goods and services will be produced? How will they be produced? Who will get them? How much will be produced for now and how much for the future? The answers to the questions depend on a country's human, natural, and capital resources, and also on its customs and values. Each country will answer three questions in a different way.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

- | | |
|--|------------------------------------|
| 1. to consume miscellaneous items | збільшити попит на |
| 2. to reduce expenses | вирішити, урегулювати |
| 3. capital goods | Проблему |
| 4. to record the expense of college supplies | відраховувати частину прибутку на |
| 5. to provide the produce | задовольняти потребу в товарах та |
| 6. to keep record of the supply | послугах |
| 7. to allocate part of the income for | нестача ресурсів |
| 8. to figure out the expense | псуватися |
| 9. perishable goods | розподіляти грошову допомогу |
| 10. an item on the chart | навчання |
| 11. to settle the problem | знизити еластичні витрати |
| 12. scarcity of resources | вести облік поставок |
| 13. consumer goods | заробляти (ч-н) собі на життя |
| 14. to meet needs for goods and services | споживати різні товари |
| 15. to reduce flexible expenses | бути зношеним |
| 16. to go bad | засоби виробництва, основні засоби |
| 17. to supply smth for resale | постачати продукцію |
| 18. to allocate allowance | підраховувати витрати |
| 19. to increase the demand for | збільшувати витрати |
| 20. optional expenses | коректувати бюджет |
| 21. to adjust the budget | споживчі товари |
| 22. tuition | виробляти що-небудь для особисто- |
| 23. to be used up | го споживання |
| 24. to produce smth for personal use | необов'язкові, додаткові витрати |
| 25. to earn one's living by smth | пункт, стаття таблиці |
| | поставляти щ-н для перепродажу |
| | записувати витрати на навчальні |
| | приналежності |
| | швидкопсувні товари |

II. Choose synonyms for the following words:

to begin
use

products
education

consumer goods	to decrease expenses
tuition	to start
to settle the problem	capital goods
to reduce expenses	consumption
to produce	to solve the problem
goods	to manufacture

III. Make up your own sentences with the synonyms (ex.II).

capital goods
to reduce expenses
tuition

IV. Answer the questions:

1. What do young people discover while watching television commercials? What economic roles do they settle into?
2. What can be said to prove that wants and needs are satisfied through the consumption (use) of goods and services?
3. How to distinguish between goods and services
4. What is the major difference between the roles of a consumer and a producer?
5. What are the categories in which consumer goods can be divided?
6. What are the basic economic questions facing both nations and individuals?
7. Is there a difference between how the government and how the customers answer basic economic questions?
8. What is the basic service your educational institution provides you and your community with? How does it answer each of the four basic economic questions?

V. Translate the following sentences:

1. Виробник виробляє товари або надає послуги, які використовують споживачі.
2. Люди отримують одну із двох головних економічних ролей: споживача або виробника.
3. Ресурси - це матеріали, завдяки яким з'являються товари й послуги.
4. Швидкопсувні товари не можна зберігати як завгодно довго, тому що вони псуються.
5. Послуги - це дії, такі як стрижка, прибирання або викладання.
6. Споживчі товари - це продукти, такі як їжа, одяг, і машини, які задовольняють людські вимоги й потреби.

7. Кожна країна відповідь на три питання по-різному.

V. Fill the blanks with the verbs. Translate the text.

Economics

to meet, called, will influence, use

Your grandparents probably never attended a class ... economics. Yet, they had to think about how ... their needs for goods and services Today's world is more complex. A knowledge of economics, the study of how people and countries ... their resources to produce, distribute, and consume goods and services is important to everyone now. Your understanding of economics ... how you earn a living and help you make better economic decisions.

VI. Write down the summary of the text.

Part V.

OPPORTUNITY COSTS

PRE-TEXT EXERCISE

I. Memorize the meaning and the pronunciation of the following words:

1. opportunity cost [ɒpə'tju:nɪti kɒst] – альтернативна вартість
2. costs – ['kɒsts] - витрати
3. real costs ['ri:l 'kɒsts] – витрати виробництва в натуральному вирахуванні
4. available [ə'veɪləb(ə)l] - наявний в продажу, доступний
5. fit ['fɪt] – відповідати, приводити у відповідність
6. give up ['gɪv'ʌp] – залишити, відмовитися, кинути
7. involve [ɪn'vɒlv] – містити, припускати, залучати
8. opportunity [ɒpə'tju:nɪti] – зручний випадок, сприятлива можливість
9. trade off [treɪd ɒf] – обмін
10. assumption [ə'sʌmpʃ(ə)n] –припущення, допущення

All production involves a **cost**. This cost is not counted simply in terms of money but also in terms of resources used. The various resources used in producing a good or a service are the **real costs** of that product. In building a bridge, for example, the real costs of the bridge are the human, capital, and natural resources it consumes. To build a bridge requires the labor of many people, including engineers and construction workers. The capital resources these peo-

ple use include a variety of tools and machines. Building a bridge also requires natural resources, such as iron ore and coal. These natural resources are used to make the steel that is used in constructing the bridge.

Since resources are limited and human wants are unlimited, people and societies must make choices about what they want most. Each choice **involves** costs. The value of time, money, goods and services given up in making a choice is called **opportunity cost**.

When steel is used to make a bridge instead of a hospital, the loss in hospitals is the opportunity cost of making the bridge. In fact, any resources used for the bridge are then no longer **available** for something else.

When people make a choice between two possible uses of their resources, they are making a **trade off** between them.

To make choices that best satisfy human wants, people must be aware of all the tradeoffs. Then, society will understand the true costs of making one decision rather than another, and can make the decision that best **fits** its values and goals.

How can the concepts of opportunity costs and tradeoffs be used to help explain how the economy works? One way is to construct a simple plan of the economy called an economic model. The simple plan helps economists to analyse economic problems, seek solutions, and make comparisons between the economic model and the real world. An economic model is a little bit like a model aeroplane. It helps to explain how the real thing works, even if it doesn't fly. When models are used to help solve economic problems, their usefulness depends on the **assumptions** made about the world.

One of the most important choices a society makes is between producing capital goods and producing consumer goods. If a nation increases its production of consumer goods, its people will live better lives today. However, if a nation increases its production of capital goods, its people may live better in the future.

Choosing between home computers and industrial robots is an example of a choice a society must make. Society must decide what it wants and what it is willing **to give up** to get it. The same applies to you individually. Since every economic decision requires a choice, economics is a study of tradeoffs. When you analyse each side of a trade off, you can make better decisions.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

- | | |
|------------------------------------|-------------------------------|
| 1. on the assumption | обчислюватися в ... |
| 2. to be available | переконати к-н позичити гроші |
| 3. to assume the real cost of smth | оцінювати альтернативи |
| 4. opportunity cost | відмовитися від ч-н |

5. the real cost of the product	робота повний робочий день
6. to be counted in terms of smth.	освітній рівень
7. to cover the cost	втрата прибутку
8. to convince smb. to lend money	виходячи з припущення
9. to evaluate tradeoffs	прибуток на інвестицію
10. to fit values and goals	можливий довічний прибуток
11. to obtain technical job training	витрати в натуральному
12. to give up smth.	вирахуванні на виробництво
13. to gain advantages	вимагати різних рішень
14. to improve the situation	альтернативна вартість
15. full-time job	шукати прийнятні рішення
16. level of education	неповна зайнятість
17. loss of income	цінувати досвід роботи за фахом
18. lifetime earning power	коштувати витрат на щ-н
19. economic reasoning	бути в наявності
20. investment return	поліпшити становище
21. to require various decisions	відповідати цінностям і цілям
22. to seek solutions	економічні доводи
23. to be worth the expense of smth.	одержати професійно-технічну підготовку
24. part-time job	покривати вартість
25. to value practical job experience	отримати переваги
	припустити вартість ч-н без врахування втрат

II. Choose synonyms for the following words:

1. full-time job	differ
2. costs	include
3. opportunity	decision
4. involve	part-time job
5. to seek solutions	gain
6. solution	expenses
7. vary	to search solutions
8. obtain	availability

III. Make up your own sentences with the synonyms (ex.II).

part-time job
costs
opportunity

IV. Answer the questions:

1. Why must people make choices about what they want most? What does each choice involve?
2. What is the link between economic choice and opportunity cost?
3. In what terms are the production costs counted?
4. What must people be aware of to make choices that best satisfy human wants?
5. Why are economic choices necessary?
6. What is the difference between real costs and opportunity costs?
7. Why is it important for the society to be aware of tradeoffs when making economic choices?
8. When can a society make the decision that best fits its values and goals?
9. Why is it necessary for a nation to make careful decisions about how to allocate its resources?
10. Why is it necessary for an individual to make careful decisions about how to allocate personal resources?
11. What does the usefulness of economic models depend on?

V. Translate the following sentences:

1. Все виробництво включає витрати.
2. Будівництво моста вимагає праці багатьох людей, включаючи інженерів і будівельників.
3. Вартість вираховується не тільки в грошовому еквіваленті, але й у витрачених ресурсах.
4. Вартість тимчасових витрат, коштів, товарів і послуг, від яких довелося відмовитися при виборі, називається альтернативною вартістю.
5. Щоб зробити вибір, що щонайкраще буде відповідати людським потребам, люди повинні знати всі альтернативи.
6. Одним з найбільш важливих виборів, що виконує суспільство, є вибір між засобами виробництва й виготовленням споживчих товарів.
7. Суспільство повинне вирішити, що йому потрібно й що воно готово залишити для одержання бажаного.

V. Fill the blanks with the verbs. Translate the text.**Opportunities**

involves, cannot spend, may cost

Opportunities are chances to improve your situation. Opportunities, however, ... you something. If you spend time watching television, you cannot spend the same time at the library. If you buy a car, you ... the same money for a stereo,

so you should be able to evaluate tradeoffs involved in your economic decisions. Every economic choice ... opportunity cost.

VI. Write down the summary of the text.

Part VI.

THE FUNCTIONS AND ROLE OF MONEY

PRE-TEXT EXERCISE

I. Memorize the meaning and the pronunciation of the following words:

1. borrow (of, from) ['bɒrəʊ] – позичати гроші, позичати, отримувати позику
2. bond ['bɒnd] – облігація, заставна, боргова розписка
3. currency ['kʌrənsɪ] – гроші, грошовий обіг
4. the supply of currency [sə'plaɪ] – грошове забезпечення
5. check ['tʃek] - чек
6. checking account [ə'kaʊnt] – чековий рахунок, поточний рахунок (в банці)
7. deposit [dɪ'pɒzɪt] – внесок, депозит, внесок
8. demand deposit [dɪ'mɑ:nd dɪ'pɒzɪt] – депозит до зажадання
9. to deposit money in a bank account [...'mʌni:... 'bæŋk] – внести гроші на банківський рахунок
10. a means of exchange [mi:nz ɪks'tʃeɪndʒ] – засіб обміну
11. near money ['niə(r) 'mʌni:] – субститут грошей
12. GNP (abbr. of Gross National Product) ВВП (валовий національний продукт)
13. purchase ['pʌ:tʃɪs] - покупка, придбання

Most people use money every day. It is so common that many people rarely think about why money is important and what gives it value. In general, money is any item that is widely accepted as payment for products. It is something people see and use almost every day. Though money is commonplace, its forms and functions are complex. The familiar paper bills and metal coins are only two of the forms money can take. In the past, many things served as money - beads, shells, dog's teeth, cattle, stones, tobacco, fishhooks, and even slaves. Precious metals, especially gold and silver, have been a favorite form of money. Some of the things used as money - fishhooks or cattle, for example - also have had value as consumer goods. Most of the items used as money, however, have had value only because people agreed that they could be exchanged

for goods and services. In other words, what is used as money often has little value of its own. Its value comes from the product for which it can be exchanged.

In most modern economies money serves several functions. As a **means of exchange** money is used to trade for goods and services. Less complex societies often do not use money at all. They simply barter, or trade, one product for another. Two farmers may trade a bushel of wheat for a jar of milk, for example. The more complex a country's economy, the harder it is to use a system of trading one good for another. Money is the answer to that problem.

As a store of value people use money to save their wealth for the future. Storing goods is not so easy as storing money. Many goods, such as food, spoil quickly. Others, such as cars, take up a lot of space. But money can be kept in a bank or a safe or a pocketbook until it is needed.

As a standard of value money is used to compare the worth of one product with that of another. Everyone knows about how much a dollar will buy. People can therefore compare the worth of one \$100 item with other items worth the same amount of money. The value of all goods and services the economy produces can be determined by adding up their prices. In this way, of course, economists determine, GNP.

In the United States, money comes in several forms. Money in the form of paper bills and metal coins is called **currency**. The supply of currency is only about \$700 per capita. Most money is in the form of **checking accounts**. Sometimes, time **deposits** also are considered a form of money. Several other things are used like money. Economists call things used for some, but not all, of the functions of money **near money**. Credit cards, for example, allow a purchaser to **borrow** money from the seller of the purchased goods. Insurance policies, stocks, and **bonds** are stores of value and can be exchanged for money. They are other examples of near money.

Money is very important in our society. As a store and a standard of value and as a means of exchange, money helps the economy run smoothly. We can judge the worth of such diverse things as pets, paintings, medical care, and car washes. Then we can compare their value using the amount they cost. The market system determines how much money everything is worth. People whose jobs are thought to be more important get higher salaries than those whose jobs are considered less important. Thus, people often are judged by how much money they earn.

You have your own beliefs about the value of goods, services, jobs, and people. Often the value you place on an item will differ from its monetary value. You may feel that some things are priceless and others are not worth as much as they cost. Your own values dictate what you are willing to do for pay.

TEXT-BASED ASSIGNMENTS

I. Find out Ukrainian equivalents:

- | | |
|--|---|
| 1. to accept as payment for smth | ощадний рахунок |
| 2. legal tender | знімати попереднього повідомлення |
| 3. to repay a loan | депозит до |
| 4. to be exchanged for goods and services | підсумовувати щ-н |
| 5. to compare the worth of smth with smth | здійснювати зняття грошей, використовуючи чек |
| 6. a means of exchange | поточний рахунок |
| 7. to determine GNP | приймати в якості платежу за щ-н |
| 8. the supply of currency | законний платіжний засіб |
| 9. a store of value | грошове забезпечення |
| 10. checking account | позичати гроші у кого-небудь |
| 11. a standard of value | субститут грошей |
| 12. near money | письмовий наказ банку |
| 13. to borrow money from smb | скасовувати процес розширення |
| 14. insurance policy | порівнювати вартість ч-н з ч-н |
| 15. to add up smth | обмінюватися на товари та послуги |
| 16. demand deposit | погашати позику |
| 17. to make a withdrawal using a check | визначити ВВП |
| 18. a written order to a bank | міра вартості |
| 19. to be withdrawn at a certain time in the future or on advance notice | |
| 20. savings account | страховий поліс засіб обміну |
| 21. to provide a legal record of financial transactions | надавати офіційний запис фінансових операцій |
| 22. to reverse the process of expansion | носій вартості |

II. Choose synonyms for the following words:

- | | |
|------------|--------|
| currency | wallet |
| value | wages |
| bond | money |
| salary | cost |
| pocketbook | fee |

change
barter
payment

check
exchange
trade

III. Make up your own sentences with the synonyms (ex.II).

currency
barter
value

IV. Answer the questions:

1. Why can't market economy get along without money though it is common-place?
2. What does the value of money come from?
3. What are the functions of money in modern economies?
4. Is money used in all economies?
5. In what way is GNP determined?
6. In what forms does money come?
7. What is near money?
8. Why will the value you place on an item often differ from its monetary value?
9. How can the importance of money in the economy be defined?

V. Translate the following sentences:

1. Люди використовують гроші як носій вартості, щоб зберігати своє багатство й майбутнє.
2. Як міра вартості гроші використовуються, щоб порівнювати цінність одного товару із цінністю іншого.
3. Часто цінність предмета відрізняється від його вартості в грошовому вираженні.
4. Як засіб обміну гроші використовуються для того, щоб обмінюватися на товари й послуги.
5. Гроші у формі паперових банкнот і металевих монет називаються грошима в обігу.
6. Більша частина грошей утримується на чекових рахунках у банку.
7. Коштовні метали, особливо золото або срібло вважалися за кращою формою грошей.

V. Fill the blanks with the verbs. Translate the text.

Money

help, is necessary, fulfills

Money ... in most economies. It serves as a means of exchange and a store and standard of value. Currency, used in modern societies, ... these functions. In addition to currency, people may use checks and credit cards to purchase goods and services. Savings accounts, stocks, and bonds are stores of value that can easily be exchanged for money. All of these forms of money and near money ... the economy run smoothly.

VI. Write down the summary of the text.

UNIT II. SUPPLEMENTARY TEXTS

Text I.

Markets and monopolies

Whenever people who are willing to sell a commodity contact people willing to buy it, a market for that commodity is created. Buyers and sellers meet in person, or they may communicate by letter, by phone or through their agents. In/a perfect market, communications are easy, buyers and sellers are numerous and competition is completely free. In a perfect market there can be only one price for a given commodity: the lowest price which sellers will accept and the highest which consumers will pay. There are, however, no really perfect markets, and each commodity market is subject to special conditions. Competition influences the prices prevailing in the market. Prices inevitably fluctuate, and such fluctuations are also affected by current supply and demand.

Although in a perfect market competition is unrestricted and sellers are numerous, free competition and large numbers of sellers are not always available in the real world. In some markets there may only be one seller or a very limited number of sellers. Such a situation is called a "monopoly", and may arise from a variety of different causes. It is possible to distinguish in practice four kinds of monopoly.

State planning and central control of the economy often mean that a state government has the monopoly of important goods and services, e.g. most national authorities monopolise the postal services within their borders. A different kind of monopoly arises when a country, through geographical or geological circumstances, has control over major natural resources or important services, e.g. Canadian nickel and the Egyptian ownership of the Suez Canal. Such monopolies can be called natural monopolies. Legal monopolies occur when the law of a country permits certain producers, authors and inventors a full monop-

oly over the sale of their own products. These types of monopoly are distinct from the sole trading opportunities when certain companies obtain complete control over particular commodities. This action is often called "cornering the market" and is illegal in many countries. In the USA antitrust laws operate to restrict such activities, while in Britain the Monopolies Commission examines all special arrangements and mergers which might lead to undesirable monopolies.

In the market systems, competition answers the basic questions of what, how, for whom, and how much. Competition among producers is for the highest profits. Competition among consumers is for the best goods and services at the lowest prices. Obtaining the highest profits and the best goods at the lowest price are the only motives the market system considers.

In a market economy three basic resources - land, labor and capital - are bought and sold for the best price. Market for labor is constantly changing. Producers are in competition with one another to hire the best workers for the lower wages,. Workers compete with one another to get the best jobs at the highest wages. Producers' needs for workers change constantly. Young people train for a career, then, need to consider what types of workers will be needed in the future. Planning a career requires careful study of statistics showing which jobs are growing. Further, career planning must include the ability to change with the economy. Workers need to be able to learn new skills to remain competitive in the market.

TEXT II.

Supply and demand

In a market economy, the actions of buyers and sellers set the prices of goods and services. The prices, in turn, determine what is produced, how it is produced, who will buy it, and what will be the mix of consumer and capital goods. Supply, the quantity of a product that suppliers will provide, is the seller's side of a market transaction. Suppliers usually want the price that allows them to make the most money. Demand, the quantity of a product consumers want, is the buyer's side of a market transaction. Buyers want the price that gives them the most value for the least cost.

One place to see how demand works is an auction, a market where goods are sold to the highest bidders. Because the items are sold one at a time, buyers must quickly decide what prices they are willing to pay. If not, they risk seeing the item go to someone else who is willing to pay more. Imagine now that you are at the auction with about 100 other people. The auctioneer brings out a used

electric popcorn maker, and you decide you would like to own it. In order to get it you will have to outbid all the others who want it. How do you decide how high to bid? Since you know you will have to pay for the popcorn maker right away, you look into your wallet. Only a \$5 bill is there. You know that you have another \$15 bill in your desk at home, and that your companion will lend you that amount if you return it tomorrow. You know that a brand-new popcorn maker sells for \$14. A used one is not worth quite that much to you. You decide you are willing to go as high as \$10 but not higher. Besides, if you spend all your money, you will not have anything left to buy popcorn, oil, salt and butter. What factors so far have influenced you? Your decision is the result of your tastes (for popcorn), your available cash income (the \$5 you carry), your wealth (the \$15 at home), and your credit (the loan your friend will make). You have also had to think of the price of a substitute (a new popcorn maker) and the price of related items (e.g. popcorn and salt).

The bidding starts at \$1 and five people take part in the bidding. When the price goes up to \$6, one person drops out. That person wants to spend \$5 for the item. A second person drops out at \$8, and two more drop out when the bids reach \$9. That leaves only one - you. The popcorn maker is yours for \$9.

Price	Quantity Demanded	Explanation
\$11	0	The demand schedule shows how many popcorn makers could have been sold at each of the possible prices (if
\$10	1	
\$9	1	more than one had been for sale). Since all five bidders
\$8	3	stayed in the auction through \$5, five machines could
\$7	4	have been sold at that price or anything less than \$5.
\$6	4	When the price went up to \$6, though, only four could
\$5	5	have been sold. At \$9, only one buyer
\$4	5	And you would have dropped out if the price had gone
\$3	5	higher than \$10. At \$11, there would have been no de-
\$2	5	mand at all for a used popcorn maker.
\$1	5	

The popcorn maker demand schedule illustrates the law of demand, which indicates that as the price of an item increases, a smaller quantity will be bought.

Consumers are more sensitive to some price changes than to others. You may not want to buy a car if its price goes up 10 percent. But if the price of salt goes up 10%, chances are you will pay extra amount rather than go without salt. The degree to which changes in price cause changes in quantity demanded is called elasticity of demand. The number of cars demanded changes greatly as car prices change; so the demand for cars is highly elastic. The demand for salt is more inelastic: people buy nearly the same amount even though the price of salt changes.

There are two basic reasons for elasticity of demand. The first concerns the relationship between income and the cost of the product. A car, for example, may easily cost 50% of your annual income. Salt probably costs less than 50% of your annual income. The smaller the proportion of your income that a product costs, the more inelastic is its demand. The second reason why demand is elastic concerns whether or not substitute product is available.

TEXT III.

Costs of Economic Growth

NOTES

* **Capital goods** : goods used to produce other items. Tools, machines, and buildings are examples of capital goods.

- основні кошти/фонди ; інвестиційні (капітальні) товари; засоби виробництва, товари виробничого призначення ******(Gr.) ******Conditional sentence. "Was" is possible but less formal.

*****Capital resources** : the money or property, such as tools or buildings, used to produce consumer goods or services. To keep its operations up-to-date, a business must continually renew or replace its capital resources.

- основні фонди, банківські активи

****** a mixed blessing** : — "палка о двох кінцях"

If you spent all the money you have now, you might be able to buy many of the things you want. However, you probably would choose not to spend all of your money right now. You realize that by saving some now, you will save more for the future. Societies also must save some of what they produce today in order to have more for tomorrow. Every society must produce capital goods

as well as consumer goods to meet future economic needs. Long-range economic growth depends on the continued production of capital goods*.

Everyone who works contributes to the growth of capital resources. Suppose you earn \$72 a week, working evenings in an auto repair shop. How do you contribute to the growth of capital resources? If your manager paid you exactly what the customer paid the company, what would happen to the company? What would happen to the business if no money were** saved to replace old tools and equipment? Your labor must be valuable enough to earn more than just the money to cover your wages.

When your manager bills customers for the work you did, the amount will be large enough not only to cover the company's costs but also to invest in capital resources***. Your labor may earn your company \$100 a week. Since you are paid \$72, you are helping the company to collect \$28 a week. Some, or all, of this money can be used for capital resources. When your company uses this money to buy new equipment, it expects future returns from the equipment to justify the purchases. The manager may decide to replace the old tools, hire more help, or expand the shop, for example. The manager makes decisions based on how the company will earn the most profits.

In recent years, many people have argued that economic growth is a mixed blessing****. The advantages of growth are fairly clear. As people produce more goods and services, the average standard of living goes up. Growth also keeps people employed and earning income. It provides people with more leisure time, since they can decrease their working hours without decreasing their income. Growth provides the government with additional tax revenues, which enable it to spend more on programs for education, water and air purification, medical care, highway construction, and national defense.

What are the disadvantages, then? Four of them are: (1) use of natural resources that cannot be replaced, (2) generation of waste products, (3) destruction of natural environments, (4) uneven growth among different groups in society.

In the past, growth has allowed poor people to improve their economic conditions. During periods of growth, people have felt optimistic about their future. Nevertheless, continuing economic growth at the pace of today may permanently damage our world, polluting air, land, and waters, and using up natural resources. In considering the benefits and problems of growth, it is necessary to recall that to survive, every economy needs people, capital and natural resources, that depend on one another. If these resources are overused to promote economic growth now, future growth may be much slower. Growth, however, sometimes provides solution to the problems.

TEXT IV.

A general approach in management

In management there is always a distant tune playing in the background. Once you hear this tune, you will start humming it to yourself: in the shower, in the boardroom, on the way to work, when watching the sunrise. It is a simple tune which repeats again and again in every aspect of your managerial life; it goes:

PLAN - MONITOR - REVIEW

Before you start any activity you must STOP and THINK about it: what is the objective, how can it be achieved, what are the alternatives, who needs to be involved, what will it cost, is it worth doing? When you have a plan you should STOP and THINK about how to ensure that your plan is working. You must find ways of monitoring your progress, even if it is just setting deadlines for intermediate stages, or counting customer replies, or tracking the number of soggy biscuits which have to be thrown away, whatever: choose something which displays progress and establish a procedure to ensure that happens. But before you start, set a date on which you will STOP again and reTHINK your plan in the light of the evidence gathered from the monitoring.

Whenever you have something to do, consider not only the task but first the method. Thus if there is a meeting to decide the marketing slogan for the new product you should initially ignore anything to do with marketing slogans and decide: 1) how should the meeting be held, 2) who can usefully contribute, 3) how will ideas be best generated, 4) what criteria are involved in the decision, 5) is there a better way of achieving the same end, 6) etc. If you resolve these points first, all will be achieved far more smoothly. Many of these decisions do not have a single "right" answer, the point is that they need to have "an" answer so that the task is accomplished efficiently. It is the posing of the questions in the first place which will mark you out as a really *great* manager - the solutions are available to you through common sense.

Once the questions are posed, you can be creative. For instance, "is there a better way of producing a new slogan?" could be answered by a quick internal competition within the company (answers on a postcard by tomorrow at noon) asking everybody in the company to contribute an idea first. This takes three minutes and a secretary to organise, it provides a quick buzz of excitement throughout the whole company, it refocuses everyone's mind on the new product and so celebrates its success, all staff feel some ownership of the project,

and you start the meeting with several ideas either from which to select a winner or to use as triggers for further brainstorming. Thus with a simple -- pause -- from the helter-skelter of getting the next job done, and a *moment's reflection*, you can expedite the task and build team spirit throughout the entire company.

It is worth stressing the relative importance of the REVIEW. In an ideal world where managers are wise, information is unambiguous and always available, and the changes in life are never abrupt or large; it would be possible for you to sit down and to *plan* the strategy for your group. Unfortunately, managers are mortals, information is seldom complete and always inaccurate (or too much to assimilate), and the unexpected always arrives inconveniently. The situation is never seen in black and white but merely in a fog of various shades of grey. Your planning thus represents no more than the best guess you can make in the current situation; the review is when you interpret the results to deduce the emerging, successful strategy (which might not be the one you had expected). The review is not merely to fine-tune your plan, it is to evaluate the experiment and to incorporate the new, practical information which you have gathered into the creation of the next step forward; you should be prepared for radical changes.

Text V.

Leadership

There is a basic problem with the style of leadership advocated in this article in that nearly every historic "Leader" one can name has had a completely different approach; Machiavelli did not advocate being a caring Protector as a means of becoming a great leader but rather that a Prince ought to be happy with "a reputation for being cruel in order to keep his subjects unified and loyal". Your situation, however, is a little different. You do not have the power to execute, nor even to banish. The workforce is rapidly gaining in sophistication as the world grows more complex. You cannot effectively control through fear, so you must try another route. You could possibly gain compliance and rule your team through edict; but you would lose their input and experience, and gain only the burdens of greater decision making. You do not have the right environment to be a despot; you gain advantage by being a team leader.

A common mistake about the image of a manager is that they must be loud, flamboyant, and a great drinker or golfer or racket player or a great something social to draw people to them. This is wrong. In any company, if you look hard enough, you will find quiet modest people who manager teams with great per-

sonal success. If you are quiet and modest, fear not; all you need is to talk clearly to the people who matter (your team) and they will hear you.

The great managers are the ones who challenge the existing complacency and who are prepared to lead their teams forward towards a personal vision. They are the ones who recognise problems, seize opportunities, and create their own future. Ultimately, they are the ones who stop to think where they want to go and then have the shameless audacity to set out.

TEXT VI.

How to Build Quality into your Team

by Gerard M Blair

Quality is primarily viewed in terms of corporate culture, multi-departmental ad-hoc task forces and the salvation of entire companies. This article, instead, will view these ideas as they might be applied by a Team Leader with a small permanent staff.

Quality has become the philosophers' stone of management practice with consultants and gurus vying to charm lead-laden corporations into gold-winning champions. Stories abound of base companies with morose workers and mounting debts being transformed into happy teams and healthy profits; never a day goes by without a significant improvement, a pounds-saving suggestion or a quantum leap in efficiency. With this professed success of "Quality" programmes, there has evolved a proscriptive mythology of correct practise which has several draw backs:

- the edicts call for nothing less than a company wide, senior-management led programme
- the adherence to a single formula has a limited effect, precludes innovation outside these boundaries, and reduces the differentiation which such programmes profess to engender
- the emphasis on single-task, specially formed groups shifts the focus away from the ordinary, daily bread-and-butter

Of course, these criticisms do not invalidate the ideas of Quality but are simply to suggest that the principles might well be viewed from a new angle - and applied at a different level. This article attempts to provide a new perspective by

re-examining some of the tenets of Quality in the context of a small, established team: simply, what could a Team Leader do with his/her staff.

What is "Quality"?

In current management writings "Quality" has come to refer to a whole gambit of practices which themselves have resulted in beneficial side-effects; as a Team Leader, you will want to take advantage of these benefits also.

The Customer

In simple terms, attaining Quality has something to do with satisfying the expectations of *the customer*. Concern for the wishes and needs of customers becomes the focus for every decision. What the customer wants, the company provides. This is not philanthropy, this is basic survival. Through careful education by competitors, the customer has begun to exercise spending power in favour of quality goods and services; and while quality is not the sole criterion in selecting a particular supplier, it has become an important differentiator.

If one ten-pence ball-point runs dry in one month and another ten-pence ball-point lasts for three then the second ball-point is the make which the customer will buy again and which he/she recommends to others - even if it costs a little more. The makers of the first ball-point may have higher profit margins, but eventually no sales; without quality in the product, a company sacrifices customers, revenue and ultimately its own existence. In practical terms, Quality is that something extra which will be perceived by the customer as a valid reason for either paying more or for buying again.

In the case where the product is a service, Quality is equated with how well the job is done and especially with whether the customer is made to *feel good* about the whole operation. In this respect Quality often does cost more, but the loss is recouped in the price customers are prepared to pay and in the increase of business.

Reliability

The clearest manifestation of Quality is in a product's *reliability*: that the product simply works. To prevent problems from arising after the product is shipped, the quality must be checked before-hand - and the best time to check quality is throughout the *whole* design and manufacturing cycle. The old method of quality control was to test the completed product and then to rework to remove the problems. Thus while the original production time was short, the

rework time was long. The new approach to quality simply asserts that if testing becomes an integral part of each stage of production, the production time may increase but the rework time will disappear. Further, you will catch and solve many problems which the final "big-bang" quality-check would miss but which the customer will find on the first day.

To achieve this requires an environment where the identification of errors is considered to be "a good thing", where the only bad bugs are the ones which got away. One of the most hallowed doctrines of Quality is that of *zero defects*. "Zero defects" is a focus, it a glorious objective, it is the assertion that nothing less will suffice and that no matter how high the quality of a product, it can still be improved. It is a paradox in that it is an aim which is contrary to reason, and like the paradoxes of many other religions it holds an inner truth. This is why the advocates of Quality often seem a little crazy: they are zealots.

People as Resource

While Quality has its own reward in terms of increased long-term sales, the methods used to achieve this Quality also have other benefits. In seeking to improve the quality of the product, manufacturers have found that the people best placed to make substantial contributions are the workforce: *people are the most valuable resource*. It is this shift in perspective from the management to the workforce which is the most significant consequence of the search for quality. From it has arisen a new managerial philosophy aimed at the empowerment of the workforce, decision-making by the front line, active worker involvement in the company's advancement; and from this new perspective, new organizational structures have evolved, exemplified in "Quality Circles".

Without digressing too much, it is important to examine the benefits of this approach. For such delegation to be safely and effectively undertaken, the management has to train the workforce; not necessarily directly, and not all at once, but often within the Quality Circles themselves using a single "facilitator" or simply peer-coaching. The workforce had to learn how to hold meetings, how to analyse problems, how to take decisions, how to present solutions, how to implement and evaluate change. These traditionally high-level managerial prerogatives are devolved to the whole staff. Not only does this develop talent, it also stimulates interest. Staff begin to look not only for problems but also for solutions. Simple ideas become simply implemented: the secretary finally gets the filing cabinet moved closer to the desk, the sales meetings follow an agenda, the software division creates a new bulletin board for the sports club. The environment is created where people see problems and fix 'em.

Larger problems have more complex solutions. One outcome of the search for Quality in Japan is the system of Just-In-Time flow control. In this system, goods arrive at each stage of the manufacturing process just before they are needed and are not made until they are needed by the next stage. This reduces storage requirements and inventory costs of surplus stock. Another outcome has been the increased flexibility of the production line. Time to change from one product run to the next was identified as a major obstacle in providing the customer with the desired range of products and quantities, and so the whole workforce became engaged in changing existant practices and even in redesigning the machinery.

The Long Term

However, I believe that the most significant shift in perspective which accompanies the introduction of Quality is that long term success is given precedence over short term gains. The repeat-sale and recommendation are more important than this month's sales figures; staff training and development remain in place despite immediate schedule problems; the product's reliability is paramount even over time-to-market. Time is devoted today to saving time in the future and in making products which work first and every time.

Team Quality

While the salvation of an entire corporation may rest primarily with Senior Management, the fate of a team rests with the Team Leader. The Team Leader has the authority, the power to define the micro-culture of the work team. It is by the deliberate application of the principles of Quality that the Team Leader can gain for the team the same benefits which Quality can provide for a corporation.

The best ideas for any particular team are likely to come from them - the aim of the Team Leader must be to act as a catalyst through prompts and by example; the following are possible suggestions.

Getting Started

There will be no overnight success. To be lasting, Quality must become a habit and a habit is accustomed practise. This takes time and training - although not necessarily formal training but possibly the sort of reinforcement you might give to any aspect of good practise. To habituate your staff to Quality, you must first make it an issue. Here are two suggestions.

The first idea is to become enthusiastic about one aspect at a time, and initially look for a quick kill. Find a problem and start to talk about it with the whole team; do not delegate it to an individual but make it an issue for everybody. Choose some work-related problem like "how to get the right information in time" and solicit everybody's views and suggestions - and get the problem solved. Demand urgency against a clear target. There is no need to allocate large amounts of resource or time to this, simply raise the problem and make a fuss. When a solution comes, praise it by rewarding the whole team, and ensure that the aspects of increased efficiency/productivity/calm are highlighted since this will establish the criteria for "success". Next, find another problem and repeat.

The second idea is the regular weekly meeting to discuss Quality. Of course meetings can be complete time wasters, so this strategy requires care. The benefits are that regularity will lead to habit, the formality will provide a simple opportunity for the expression of ideas, and the inclusion of the whole group at the meeting will emphasize the collective responsibility. By using the regular meeting, you can establish the "ground rules" of accepted behaviour and at the same time train the team in effective techniques.

One problem is that the focus on any one particular issue may quickly lose its efficacy. A solution is to have frequent shifts in focus so that you maintain the freshness and enthusiasm (and the scope for innovative solutions). Further benefits are that continual shifts in emphasis will train your team to be flexible, and provide the opportunity for them to raise new issues. The sooner the team takes over the definition of the "next problem", the better.

Initial Phases

The initial phases are delicate. The team will be feeling greater responsibility without extra confidence. Thus you must concentrate on supporting their development. Essentially you will be their trainer in management skills. You could get outside help with this but by undertaking the job yourself, you retain control: you mould the team so that they will reflect your own approach and use your own criteria. Later they will develop themselves, but even then they will understand your thinking and so your decisions.

One trap to avoid is that the team may focus upon the wrong type of problem. You must make it clear any problem which they tackle should be:

- related to their own work or environment
- something which they can change

This precludes gripe sessions about wages and holidays.

As with all group work, the main problem is clarity. You should provide the team with a notice board and flip-charts specifically for Quality problems. These can then be left on display as a permanent record of what was agreed.

If you can, steer the group first to some problem which has a simple solution and with obvious (measurable) benefits. A quick, sharp success will motivate.

Team Building

To succeed, a Quality push must engage the enthusiasm of the entire team; as Team Leader, you must create the right atmosphere for this to happen. Many aspects of team building can be addressed while Quality remains the focus.

You must create the environment where each team member feels totally free to express an idea or concern and this can only be done if there is no stigma attached to being incorrect. No idea is wrong - merely non-optimal. In each suggestion there is at least a thread of gold and someone should point it out and, if possible, build upon it. Any behaviour which seeks laughter at the expense of others must be swiftly reprimanded.

One crude but effective method is to write down agreed ground rules and to display them as a constant reminder for everyone, something like:

- all criticism must be kind and constructive
- all our-problems are all-our problems
- BUGS WANTED: DEAD OR ALIVE (but not for long)
- if it saves time later, do it now

Another method is to constantly talk about the group as the plural pronoun: "we decided", "we can do this", "we'll get back to you". This is especially effective if it is used in conversation with outsiders (especially management) within ear-shot of the team. Praise and reward the whole team; get the team wider fame by a success story in an internal newspaper.

Most importantly, you must enable failure. If the team is unable to try out ideas without rebuke for errors, then the scope of their solutions will be severely limited. Instead, a failure should be an opportunity to gain knowledge and to praise any safe-guards which were included in the plan.

Mutual Coaching

An important aspect of team interaction is the idea of mutual support. If you can instill the idea that all problems are owned by the entire team then each member will be able to seek help and advice when needed from every other team member. One promoter of this is to encourage mutual coaching. If one team member knows techniques or information which would be useful to the rest, then encourage him/her to share it. Specifically this will raise the profile, confidence and self-esteem of the instructor at the same time as benefiting the entire group. And if there is one member who might never have anything useful to impart - send him/her to a conference or training session to find something.

Statistics

One of the central tenets of Quality programmes is the idea of monitoring the problem being addressed: *Statistical Quality Control*. Quite simply, if you can't measure an improvement, it probably isn't there. Gathering statistics has several benefits in applying Quality:

- it identifies (the extent of) the problem
- it allows progress to be monitored
- it provides an objective criterion for the abandonment of an idea
- it can justify perceived expense in terms of observed savings/improvements
- it motivates staff by providing a display of achievement

and, of course, some problems simply disappear when you try to watch them.

The statistics must be gathered in an objective and empirical manner, the outcome should be a simple table or graph regularly updated to indicate progress, and these results *must be displayed* where all the team can watch. For example, if your team provides product support, then you might monitor and graph the number of repeat enquiries or the average response time. Or if you are in product development, you might want to monitor the number of bugs discovered (i.e. improvement opportunities).

In the long term, it may be suitable to implement the automatic gathering of statistics on a wide range of issues such as complaints, bug reports, machine down-time, etc. Eventually these may either provide early warning of unexpected problems, or comparative data for new quality improvement projects. It is vital, however, that they focus upon an agreed problem and not upon an individual's performance or else all the positive motivation of staff involvement will be lost.

Projects

Clarity of purpose - this is the key to success. You need a simple, stated objective which everybody understands and which everybody can see achieved.

Any plan to improve the quality or effectiveness of the group must contain:

- the objective
- the method
- the statistical display for monitoring the outcome
- the agreed criteria for completion or curtailment

By insisting on this format, you provide the plan-owners with a simple mechanism for peer recognition (through the displayed notice board) and yet enable them to manage their own failure with grace.

For a small established team, the "customer" includes any other part of the company with which the team interacts. Thus any themes regarding customer satisfaction can be developed with respect to these so called *internal customers*. In the end, the effectiveness of your team will be judged by the reports of how well they provide products for others.

A simple innovation might be for a member of your team to actually talk to someone from each of these internal customer groups and to ask about problems. The interfaces are usually the best place to look for simply solved problems. The immediate benefit may be to the customer, but in the long run better communications will lead to fewer misunderstandings and so less rework.

Building Quality

Quality costs less than its lack; look after the pennies and the profits will take care of themselves. To build a quality product, you must do two things:

- worry the design and the procedures
- include features to aid quality checking

It is a question of attitude. If one of the team spots a modification in the design or the procedures which will have a long term benefit, then that must be given priority over the immediate schedule. The design is never quite right; you should allocate time specifically to discussing improvement. In this you should not aim at actual enhancements in the sense of added features or faster performance, but towards simplicity or predicting problem areas. This is an adjunct to the normal design or production operations - the extra mile which lesser teams would not go.

Many products and services do not lend themselves to quality monitoring. These should be enhanced so that the quality becomes easily tracked. This may be a simple invitation for the "customer" to comment, or it could be a full design modification to provide self-checking or an easy testing routine. Any product whose quality can not be tracked should naturally become a source of deep anxiety to the whole team - until a mechanism is devised.

One of the least-used sources of quality in design and production in the engineering world is documentation. This is frequently seen as the final inconvenience at product release, sometimes even delegated to another (non-technical) group - yet the writing of such documentation can be used as an important vehicle for the clarification of ideas. It also protects the group from the loss of any single individual; the No.7 bus, or the head-hunter, could strike at any time.

In devising a mechanism for monitoring quality, many teams will produce a set of test procedures. As bugs emerge, new procedures should be added which specifically identify this problem and so check the solution. Even when the problem is solved the new procedures should *remain* in the test set; the problem may return (perhaps as a side effect of a subsequent modification) or the procedure may catch another. Essentially the test set should grow to cover all *known possibilities* of error and its application should, where possible, be automated.

Role Change

As your team develops, your role as leader changes subtly. You become a cross between a priest and a rugby captain, providing the vision and the values while shouting like crazy from the centre of the field. Although you retain the final say (that is your responsibility), the team begins to make decisions. The hardest part, as with all delegation, is in accepting the group decision even though you disagree. You must never countermand a marginal decision. If you have to over-rule the team, it is imperative that you explain your reasons very clearly so that they understand the criteria; this will both justify your intervention and coach the team in (hopefully) good decision-making practices.

Another role which you assume is that of both buffer and interface between the team and the rest of the company: a buffer in that you protect the team from the vagaries of less enlightened managers; an interface in that you keep the team informed about factors relevant to their decisions. Ultimately, the team will be delegating to you (!) tasks which only you, acting as manager, can perform on its behalf.

Quality for Profit

By applying the principles of Quality to an established team, the Team Leader can enjoy the benefits so actively sought by large corporations. The key is the attitude - and the insistence on the primacy of Quality. As a Team Leader, you have the power to define the ethos of your staff; by using Quality as the focus, you also can accrue its riches.

How To Write Right

by Gerard M Blair

Writing is an essential skill upon which all engineers and managers rely. This article outlines simple design principles for engineering's predominate product: paper.

"Sex, romance, thrills, burlesque, satire, bass ... most enjoyable".

"Here is everything one expects from this author but thricefold and three times as entertaining as anything he has written before".

"A wonderful tissue of outrageous coincidences and correspondences, teasing elevations of suspense and delayed climaxes".

(reviews of *Small World* by David Lodge)

This has nothing to do with engineering writing. No engineering report will ever get such reviews. The most significant point about engineering writing is that it is totally different from the writing most people were taught - and if you do not recognize and understand this difference, then your engineering writing will always miss the mark. However, this article outlines a methodical approach to writing which will enable anyone to produce great works of engineering literature.

Why Worry?

Writing is the major means of communication within an organisation; paper is thought to be the major product of professional engineers; some estimate that up to 30% of work-time is engaged in written communication. Thus it is abso-

lutely vital for you as a Professional Engineer to actively develop the skill of writing; not only because of the time involved in writing, but also because your project's success may depend upon it. Indeed, since so much of the communication between you and more senior management occurs in writing, your whole career may depend upon its quality.

Two Roles

In an industrial context, writing has two major roles:

- it clarifies - for both writer and reader
- it conveys information

It is this deliberate, dual aim which should form the focus for all your writing activity.

There are many uses for paper within an organization; some are inefficient - but the power of paper must not be ignored because of that. In relation to a project, documentation provides a means to clarify and explain on-going development, and to plan the next stages. Memoranda are a simple mechanism for suggestions, instructions, and general organisation. The minutes of a meeting form a permanent and definitive record.

Writing is a central part of any design activity. Quality is improved since writing an explanation of the design, forces the designer to consider and explore it fully. For instance, the simple procedure of insisting upon written test-plans forces the designer to address the issue. Designs which work just "because they do" will fail later; designs whose operation is explained in writing may also fail, but the repair will be far quicker since the (documented) design is understood.

If you are having trouble expressing an idea, write it down; you (and possibly others) will then understand it. It may take you a long time to explain something "off the cuff", but if you have explained it first to yourself by writing it down - the reader can study your logic not just once but repeatedly, and the information is efficiently conveyed.

Forget the Past

Professional writing has very little to do with the composition and literature learnt at school: the objectives are different, the audience has different needs, and the rewards in engineering can be far greater. As engineers, we write for

very distinct and restricted purposes, which are best achieved through simplicity.

English at school has two distinct foci: the analysis and appreciation of the great works of literature, and the display of knowledge. It is all a question of aim. A novel entertains. It forces the reader to want to know: what happens next. On the other hand, an engineering report is primarily designed to convey information. The engineer's job is helped if the report is interesting; but time is short and the sooner the meat of the document is reached, the better. The novel would start: "The dog grew ill from howling so ..."; the engineer's report would start (and probably end): "The butler killed Sir John with a twelve inch carving knife".

In school we are taught to display knowledge. The more information and argument, the more marks. In industry, it is totally different. Here the wise engineer must extract only the significant information and support it with only the minimum-necessary argument. The expertise is used to filter the information and so to remove inessential noise. The engineer as expert provides the answers to problems, not an exposition of past and present knowledge: we use our knowledge to focus upon the important points.

For the Future

When you approach any document, follow this simple procedure:

1. Establish the AIM
2. Consider the READER
3. Devise the STRUCTURE
4. DRAFT the text
5. EDIT and REVISE

That is it. For the rest of this article, we will expand upon these points and explain some techniques to make the document effective and efficient - but these five stages (all of them) are what you need to remember.

Aim

You start with your *aim*. Every document must have a single aim - a specific, *specified* reason for being written. If you can not think of one, do something useful instead; if you can not decide what the document should achieve, it will not achieve it.

Once you have established your aim, you must then decide what information is necessary in achieving that aim. The reader wants to find the outcome of your thoughts: apply your expertise to the available information, pick out the very-few facts which are relevant, and state them precisely and concisely.

The Reader

A document tells somebody something. As the writer, you have to decide what to tell and how best to tell it to the particular audience; you must consider the reader.

There are three considerations:

- What they already know affects what you can leave out.
- What they need to know determines what you include.
- What

what they want to know suggests the order and emphasis of your writing.

For instance, in a products proposal, marketing will want to see the products differentiation and niche in the market place; finance will be interested in projected development costs, profit margins and risk analysis; and R&D will want the technical details of the design. To be most effective, you may need to produce three different reports for the three different audiences.

The key point, however, is that writing is about conveying information - *conveying*; that means it has to get there. Your writing must be right for the reader, or it will be lost on its journey; you must focus upon enabling the reader's access to the information.

Structure

Writing is very powerful - and for this reason, it can be exploited in engineering. The power comes from its potential as an efficient and effective means of communication; the power is derived from order and clarity. Structure is used to present the information so that it is more accessible to the reader.

In all comes down to the problem of the short attention span. You have to provide the information in small manageable chunks, and to use the structure of the document to maintain the context. As engineers, this is easy since we are used

to performing hierarchical decomposition of designs - and the same procedure can be applied to writing a document.

While still considering the aim and the reader, the document is broken down into distinct sections which can be written (and *read*) separately. These sections are then each further decomposed into subsections (and sub-subsections) until you arrive at simple, small units of information - which are expressed as a paragraph, or a diagram.

Every paragraph in your document should justify itself; it should serve a purpose, or be removed. A paragraph should convey a single idea. There should be a statement of that key idea and (possibly) some of the following:

- a development of the idea
- an explanation or analogy
- an illustration
- support with evidence
- contextual links to reinforce the structure

As engineers, though, you are allowed to avoid words entirely in places; diagrams are often much better than written text. Whole reports can be written with them almost exclusively and you should always consider using one in preference to a paragraph. Not only do diagrams convey some information more effectively, but often they assist in the analysis and interpretation of the data. For instance, a pie chart gives a quicker comparison than a list of numbers; a simple bar chart is far more intelligible than the numbers it represents. The only problem with diagrams is the writer often places less effort in their design than their information-content merits - and so some is lost or obscure. They must be given due care: add *informative* labels and titles, highlight any key entries, remove unnecessary information.

Draft, Revise and Edit

When you have decided what to say, to whom you are saying it, and how to structure it; say it - and then check it for clarity and effectiveness. The time spent doing this will be far less than the time wasted by other people struggling with the document otherwise.

The following are a few points to consider as you wield the red pen over your newly created opus.

Layout

The main difference between written and verbal communication is that the reader can choose and re-read the various sections, whereas the listener receives information in the sequence determined by the speaker. Layout should be used to make the structure plain, and so more effective: it acts as a guide to the reader.

Suppose you have three main points to make; do not hide them within simple text - make them obvious. Make it so that the reader's eye jumps straight to them on the page. For instance, the key to effective layout is to use:

- informative titles
- white space
- variety

Another way to make a point obvious is to *use a different font*.

Style

People in business do not have the time to marvel at your florid turn of phrase or incessant illiteration. They want to know what the document is about and (possibly) what it says; there is no real interest in style, except for ease of access.

In some articles a summary can be obtained by reading the first sentence of each paragraph. The remainder of each paragraph is simply an expansion upon, or explanation of, the initial sentence. In other writing, the topic is given first in a summary form, and then successively repeated with greater detail each time. This is the pyramid structure favoured by newspapers.

A really short and simple document is bound to be read. This has led to the "memo culture" in which every communication is condensed to one side of A4. Longer documents need to justify themselves to their readers' attention.

The Beginning

Let us imagine the reader. Let us call her Ms X.

Ms X has a lot to do today: she has a meeting tomorrow morning with the regional VP, a call to make to the German design office, several letters to dictate concerning safety regulations, and this month's process-data has failed to reach her. She is busy and distracted. You have possibly 20 seconds for your document to justify itself to her. If by then it has not explained itself and convinced

her that she needs to read it - Ms X will tackle something else. If Ms X is a good manager, she will insist on a rewrite; if not, the document may never be read. action).

Thus the beginning of your document is crucial. It must be obvious to the reader *at once* what the document is about, and why it should be read. You need to catch the readers attention but with greater subtlety than this article; few engineering reports can begin with the word sex.

Unlike a novel, the engineering document must not contain "teasing elevations of suspense". Take your "aim", and either state it or achieve it by the end of the first paragraph.

For instance, if you have been evaluating a new software package for possible purchase then your reports might begin: "Having evaluated the McBlair Design Suite, I recommend that ...".

Punctuation

Punctuation is used to clarify meaning and to highlight structure. It can also remove ambiguity: a cross section of customers can be rendered less frightening simply by adding a hyphen (a cross-section of customers).

Engineers tend not to punctuate - which deprives us of this simple tool. Despite what some remember from school, punctuation has simple rules which lead to elegance and easy interpretation. If you want a summary of punctuation, try *The Concise Oxford Dictionary (1990)*; and if you want a full treatise, complete with worked examples (of varying degrees of skill), read *You Have A Point There* by Eric Partridge.

For now, let us look at two uses of two punctuation marks. If you do not habitually use these already, add them to your repertoire by deliberately looking for opportunities in your next piece of writing.

The two most common uses of *the Colon* are:

1) To introduce a list which explains, or provides the information promised in, the previous clause.

A manager needs two planning tools: prescience and a prayer.

2) To separate main clauses where the second is a step forward from the first: statement to example, statement to explanation, cause to effect, introduction to main point.

To err is human: we use computers.

The two most common uses of *the Semicolon* are:

- 1) to unite sentences that are closely associated, complementary or parallel:

Writing is a skill; one must practise to improve a skill.

Engineers engineer; accountants account for the cost.

- 2) to act as a stronger comma, either for emphasis or to establish a hierarchy

The report was a masterpiece; of deception and false promises.

The teams were Tom, Dick and Harry; and Mandy, Martha and Mary.

Spelling

For some, spelling is a constant problem. In the last analysis, incorrect spelling distracts the reader and detracts from the authority of the author. Computer spell-checking programmes provide great assistance, especially when supported by a good dictionary. Chronic spellers should always maintain a (preferably alphabetical) list of corrected errors, and try to learn new rules (and exceptions!). For instance (in British English) advice-advise, device-devise, licence-license, practice-practise each follow the same pattern: the -ice is a noun, the -ise is a verb.

Simple Errors

For important documents, there is nothing better than a good, old-fashioned proof-read. As an example, the following comes from a national advertising campaign/quiz run by a famous maker of Champagne:

Question 3: Which Country has one the Triple Crown the most times?

Won understands the error, but is not impressed by the quality of that company's product.

Sentence Length

Avoid long sentences. We tend to associate "unit of information" with "a sentence". Consequently when reading, we process the information when we reach the full stop. If the sentence is too long, we lose the information either because of our limited attention span or because the information was poorly decomposed to start with and might, perhaps, have been broken up into smaller, or possibly better punctuated, sentences which would better have kept the atten-

tion of the reader and, by doing so, have reinforced the original message with greater clarity and simplicity.

Word Length

It is inappropriate to utilize verbose and bombastic terminology when a suitable alternative would be to: keep it simple. Often the long, complex word will not be understood. Further, if the reader is distracted by the word itself, then less attention is paid to the meaning or to the information you wished to convey.

Jargon

I believe that a digital human-computer-interface data-entry mechanism should be called a keyboard; I don't know why, but I do.

Wordiness

When one is trying hard to write an impressive document, it is easy to slip into grandiose formulae: words and phrases which sound significant but which convey nothing but noise.

You must exterminate. So: "for the reason that" becomes "because"; "with regards to" becomes "about"; "in view of the fact that" becomes "since"; "within a comparatively short period of time" becomes "soon".

Often you can make a sentence *sound* more like spoken English simply by changing the word order and adjusting the verb. So: "if the department experiences any difficulties in the near future regarding attendance of meetings" becomes "if staff cannot attend the next few meetings". As a final check, read your document aloud; if it sounds stilted, change it.

Conclusion

Writing is a complex tool, you need to train yourself in its use or a large proportion of your activity will be grossly inefficient. You must reflect upon your writing lest it reflects badly upon you.

If you want one message to take from this article, take this: the writing of a professional engineer should be clear, complete and concise. If your document satisfies these three criteria, then it deserves to be read.

The Art of Delegation

by Gerard M Blair

Delegation is a skill of which we have all heard - but which few understand. It can be used either as an excuse for dumping failure onto the shoulders of subordinates, or as a dynamic tool for motivating and training your team to realize their full potential.

"I delegate myne auctorite" (Palsgrave 1530)

Everyone knows about delegation. Most managers hear about it in the cradle as mother talks earnestly to the baby-sitter: "just enjoy the television ... this is what you do if ... if there is any trouble call me at ..."; people have been writing about it for nearly half a millennium; yet few actually understand it.

Delegation underpins a style of management which allows your staff to use and develop their skills and knowledge to the full potential. Without delegation, you lose their full value.

As the ancient quotation above suggests, delegation is primarily about entrusting your authority to others. This means that they can act and initiate independently; and that they assume responsibility *with you* for certain tasks. If something goes wrong, you remain responsible since you are the manager; the trick is to delegate in such a way that things get done but do not go (badly) wrong.

Objective

The objective of delegation is to get the job done by someone else. Not just the simple tasks of reading instructions and turning a lever, but also the decision making and changes which depend upon new information. With delegation, your staff have the authority to react to situations without referring back to you.

If you tell the janitor to empty the bins on Tuesdays and Fridays, the bins will be emptied on Tuesdays and Fridays. If the bins overflow on Wednesday, they will be emptied on Friday. If instead you said to empty the bins as often as necessary, the janitor would decide how often and adapt to special circumstances. You might suggest a regular schedule (teach the janitor a little personal time management), but by leaving the decision up to the janitor you will apply his/her local knowledge to the problem. Consider this frankly: do you want to

be an expert on bin emptying, can you construct an instruction to cover all possible contingencies? If not, delegate to someone who gets paid for it.

To enable someone else to do the job for you, you must ensure that:

- they know what you want
- they have the authority to achieve it
- they know how to do it.

These all depend upon communicating clearly the nature of the task, the extent of their discretion, and the sources of relevant information and knowledge.

Information

Such a system can only operate successfully if the decision-makers (your staff) have full and rapid access to the relevant information. This means that you must establish a system to enable the flow of information. This must at least include regular exchanges between your staff so that each is aware of what the others are doing. It should also include briefings by you on the information which you have received in your role as manager; since if you need to know this information to do your job, your staff will need to know also if they are to do your (delegated) job for you.

One of the main claims being made for computerized information distribution is that it facilitates the rapid dissemination of information. Some protagonists even suggest that such systems will instigate changes in managerial power sharing rather than merely support them: that the "enknowledgeed" workforce will rise up, assume control and innovate spontaneously. You may not believe this vision, but you should understand the premise. If a manager restricts access to information, then only he/she is able to make decisions which rely upon that information; once that access is opened to many others, they too can make decisions - and challenge those of the manager according to additional criteria. The manager who fears this challenge will never delegate effectively; the manager who recognizes that the staff may have additional experience and knowledge (and so may enhance the decision-making process) will welcome their input; delegation ensures that the staff will practise decision-making and will feel that their views are welcome.

Effective control

One of the main phobias about delegation is that by giving others authority, a manager loses control. This need not be the case. If you train your staff to apply the same criteria as you would yourself (by example and full explanations) then they will be exercising your control on your behalf. And since they will witness many more situations over which control may be exercised (you can't be in several places at once) then that control is exercised more diversely and more rapidly than you could exercise it by yourself. In engineering terms: if maintaining control is truly your concern, then you should distribute the control mechanisms to enable parallel and autonomous processing.

Staggered Development

To understand delegation, you really have to think about people. Delegation cannot be viewed as an abstract technique, it depends upon individuals and individual needs. Let us take a lowly member of staff who has little or no knowledge about the job which needs to be done.

Do you say: "Jimmy, I want a draft tender for contract of the new Hydro Powerstation on my desk by Friday"? No. Do you say: "Jimmy, Jennifer used to do the tenders for me. Spend about an hour with her going over how she did them and try compiling one for the new Hydro Powerstation. She will help you for this one, but do come to me if she is busy with a client. I want a draft by Friday so that I can look over it with you"? Possibly.

The key is to delegate gradually. If you present someone with a task which is daunting, one with which he/she does not feel able to cope, then the task will not be done and your staff will be severely demotivated. Instead you should build-up gradually; first a small task leading to a little development, then another small task which builds upon the first; when that is achieved, add another stage; and so on. This is the difference between asking people to scale a sheer wall, and providing them with a staircase. Each task delegated should have enough complexity to stretch that member of staff - but only a little.

Jimmy needs to feel confident. He needs to believe that he will actually be able to achieve the task which has been given to him. This means that either he must have the sufficient knowledge, or he must know where to get it or where to get help. So, you must *enable access to the necessary knowledge*. If you hold that knowledge, make sure that Jimmy feels able to come to you; if someone else holds the knowledge, make sure that they are prepared for Jimmy to come to

them. Only if Jimmy is sure that support is available will he feel confident enough to undertake a new job.

You need to feel confident in Jimmy: this means keeping an eye on him. It would be fatal to cast Jimmy adrift and expect him to make it to the shore: keep an eye on him, and a lifebelt handy. It is also a mistake to keep wandering up to Jimmy at odd moments and asking for progress reports: he will soon feel persecuted. Instead you must agree beforehand how often and when you actually need information and *decide the reporting schedule at the onset*. Jimmy will then expect these encounters and even feel encouraged by your continuing support; you will be able to check upon progress and even spur it on a little.

When you do talk to Jimmy about the project, you should avoid making decisions of which Jimmy is capable himself. The whole idea is for Jimmy to learn to take over and so he must be encouraged to do so. Of course, with you there to check his decisions, Jimmy will feel freer to do so. If Jimmy is wrong - tell him, and explain very carefully why. If Jimmy is nearly right - congratulate him, and suggest possible modifications; but, of course, leave Jimmy to decide. Finally, unless your solution has *significant* merits over Jimmy's, take his: it costs you little, yet rewards him much.

Constrained Availability

There is a danger with "open access" that you become too involved with the task you had hoped to delegate. One successful strategy to avoid this is to formalize the manner in which these conversations take place. One formalism is to allow only fixed, regular encounters (except for emergencies) so that Jimmy has to think about issues and questions before raising them; you might even insist that he draw-up an agenda. A second formalism is to refuse to make a decision unless Jimmy has provided you with a clear statement of alternatives, pros and cons, and *his recommendation*. This is my favourite. It allows Jimmy to rehearse the full authority of decision making while secure in the knowledge that you will be there to check the outcome. Further, the insistence upon evaluation of alternatives promotes good decision making practices. If Jimmy is right, then Jimmy's confidence increases - if you disagree with Jimmy, he learns something new (provided you explain your criteria) and so his knowledge increases. Which ever way, he benefits; and the analysis is provided for you.

Outcomes and Failure

Let us consider your undoubtedly high standards. When you delegate a job, it does not have to be done as well as you could do it (given time), but only as well as necessary: never judge the outcome by what you expect you would do (it is difficult to be objective about that), but rather by fitness for purpose. When you delegate a task, agree then upon the criteria and standards by which the outcome will be judged.

You must enable failure. With appropriate monitoring, you should be able to catch mistakes before they are catastrophic; if not, then the failure is yours. You are the manager, you decided that Jimmy could cope, you gave him enough rope to hang himself, you are at fault. Now that that is cleared up, let us return to Jimmy. Suppose Jimmy gets something wrong; what do you want to happen?

Firstly, you want it fixed. Since Jimmy made the mistake, it is likely that he will need some input to develop a solution: so Jimmy must feel safe in approaching you with the problem. Thus you must deal primarily with the solution rather than the cause (look forward, not backwards). The most desirable outcome is that Jimmy provides the solution.

Once that is dealt with, you can analyse the cause. Do not fudge the issue; if Jimmy did something wrong say so, but only in very specific terms. Avoid general attacks on his parents: "were you born stupid?", and look to the actual event or circumstance which led to the error: "you did not take account of X in your decision". Your objectives are to ensure that Jimmy:

- understands the problem
- feels confident enough to resume
- implements some procedure to prevent recurrence.

The safest ethos to cultivate is one where Jimmy actually looks for and anticipates mistakes. If you wish to promote such behaviour, you should always praise Jimmy for his prompt and wise action in spotting and dealing with the errors rather than castigate him for causing them. Here the emphasis is placed upon checking/testing/monitoring of ideas. Thus you never criticise Jimmy for finding an error, only for not having safe-guards in place.

What to delegate

There is always the question of what to delegate and what to do yourself, and you must take a long term view on this: you want to delegate as much as possible to develop you staff to be as good as you are now.

The starting point is to consider the activities you used to do before you were promoted. You used to do them when you were more junior, so someone junior can do them now. Tasks in which you have experience are the easiest for you to explain to others and so to train them to take over. You thus use your experience to ensure that the task is done well, rather than to actually perform the task yourself. In this way you gain time for your other duties and someone else becomes as good as your once were (increasing the strength of the group).

Tasks in which your staff have more experience must be delegated to them. This does not mean that you relinquish responsibility because they are expert, but it does mean that the default decision should be theirs. To be a good manager though, you should ensure that they spend some time in explaining these decisions to you so that you learn their criteria.

Decisions are a normal managerial function: these too should be delegated - especially if they are important to the staff. In practice, you will need to establish the boundaries of these decisions so that you can live with the outcome, but this will only take you a little time while the delegation of the remainder of the task will save you much more.

In terms of motivation for your staff, you should distribute the more mundane tasks as evenly as possible; and sprinkle the more exciting ones as widely. In general, but especially with the boring tasks, you should be careful to delegate not only the performance of the task but also its ownership. Task delegation, rather than task assignment, enables innovation. The point you need to get across is that the task may be changed, developed, upgraded, if necessary or desirable. So someone who collates the monthly figures should not feel obliged to blindly type them in every first-Monday; but should feel empowered to introduce a more effective reporting format, to use Computer Software to enhance the data processing, to suggest and implement changes to the task itself.

Negotiation

Since delegation is about handing over authority, you cannot dictate what is delegated nor how that delegation is to be managed. To control the delegation,

you need to establish at the beginning the task itself, the reporting schedule, the sources of information, your availability, and the criteria of success. These you must negotiate with your staff: only by obtaining both their input and their agreement can you hope to arrive at a workable procedure.

When all is done for you

Once you have delegated everything, what do you do then?

You still need to monitor the tasks you have delegated and to continue the development of your staff to help them exercise their authority well.

There are managerial functions which you should never delegate - these are the personal/personnel ones which are often the most obvious additions to your responsibilities as you assume a managerial role. Specifically, they include: motivation, training, team-building, organization, praising, reprimanding, performance reviews, promotion.

As a manager, you have a responsibility to represent and to develop the effectiveness of your group within the company; these are tasks you can expand to fill your available time - delegation is a mechanism for creating that opportunity.

CONVERSATION AS COMMUNICATION

by Gerard M Blair

Communication is best achieved through simple planning and control; this article looks at approaches which might help you to do this and specifically at meetings, where conversations need particular care.

Most conversations sort of drift along; in business, this is wasteful; as a manager, you seek communication rather than chatter. To ensure an efficient and effective conversation, there are three considerations:

- you must make your message understood
- you must receive/understand the intended message sent to you

- you should exert some control over the flow of the communication

Thus *you must learn to listen as well as to speak*. Those who dismiss this as a mere platitude are already demonstrating an indisposition to listening: the phrase may be trite, but the message is hugely significant to your effectiveness as a manager. If you do not explicitly develop the skill of listening, you may not hear the suggestion/information which should launch you to fame and fortune.

AMBIGUITY AVOIDANCE

As a manager (concerned with getting things done) your view of words should be pragmatic rather than philosophical. Thus, words mean not what the dictionary says they do but rather what the speaker intended.

Suppose your manager gives to you an instruction which contains an ambiguity which neither of you notice and which results in you producing entirely the wrong product. Who is at fault? The answer must be: who cares? Your time has been wasted, the needed product is delayed (or dead); attributing blame may be a satisfying (or defensive) exercise but it does not address the problem. In everything you say or hear, you must look out for possible misunderstanding *and clarify* the ambiguity.

The greatest source of difficulty is that words often have different meanings depending upon context and/or culture. Thus, a "dry" country lacks either water or alcohol; "suspenders" keep up either stockings or trousers (pants); a "funny" meeting is either humorous or disconcerting; a "couple" is either a few or exactly two. If you recognize that there is a potential misunderstanding, you must stop the conversation and ask for the valid interpretation.

A second problem is that some people simply make mistakes. Your job is not simply to spot ambiguities but also to counter inconsistencies. Thus if I now advocate that the wise manager should seek out (perhaps humorous) books on entomology (creepy crawlies) you would deduce that the word should have been etymology. More usual, however, is that in thinking over several alternatives you may suffer a momentary confusion and say one of them while meaning another. There are good scientific reasons (to do with the associative nature of the brain) why this happens, you have to be aware of the potential problem and counter for it.

Finally, of course, you may simply mishear. The omission of a simple word could be devastating. For instance, how long would you last as an explosives

engineer if you failed to hear a simple negative in: "whatever happens next you must [not] cut the blue wi..."?

So, the problem is this: the word has multiple meanings, it might not be the one intended, and you may have misheard it in the first place - how do you know what the speaker meant?

Rule 1: PLAY BACK for confirmation

Simple, you ask for confirmation. You say "let me see if I have understood correctly, you are saying that ..." and you *rephrase* what the speaker said. If this "play back" version is acknowledged as being correct by the original speaker, then you have a greater degree of confidence in your own understanding. For any viewpoint/message/decision, there should be a clear, concise and verified statement of what was said; without this someone will get it wrong.

Rule 2: WRITE BACK for confidence

But do not stop there. If your time and effort depend upon it, you should write it down and send it to everyone involved as a double check. This has several advantages:

- Further clarification - is this what you thought we agreed?
- Consistency check - the act of writing may highlight defects/omissions
- A formal stage - a statement of the accepted position provides a spring board from which to proceed
- Evidence - hindsight often blurs previous ignorance and people often fail to recall their previous errors

Rule 3: GIVE BACKground for context

When speaking yourself, you can often counter for possible problems by adding information, and so providing a broader context in which your words can be understood. Thus, there is less scope for alternative interpretations since fewer are consistent. When others are speaking, you should deliberately ask questions yourself to establish the context in which they are thinking. When others are speaking, you should deliberately ask questions yourself to establish the context in which they are thinking.

PRACTICAL POINTS

As with all effective communication, you should decide (in advance) on the purpose of the conversation and the plan for achieving it. There is no alternative to this. Some people are proficient at "thinking on their feet" - but this is gener-

ally because they already have clear understanding of the context and their own goals. You have to plan; however, the following are a few techniques to help the conversation along.

Assertiveness

The definition of *to assert* is: "to declare; state clearly". This is your aim. If someone argues against you, even loses their temper, you should be quietly assertive. Much has been written to preach this simple fact and commonly the final message is a three-fold plan of action:

- acknowledge what is being said by showing an understanding of the position, or by simply replaying it (a polite way of saying "I heard you already")
- state your own point of view clearly and concisely with perhaps a little supporting evidence
- state what you want to happen next (move it forward)

Thus we have something like: yes, I see why you need the report by tomorrow; however, I have no time today to prepare the document because I am in a meeting with a customer this afternoon; either I could give you the raw data and you could work on it yourself, or you could make do with the interim report from last week.

You will have to make many personal judgement calls when being assertive. There will certainly be times when a bit of quiet force from you will win the day but there will be times when this will get nowhere, particularly with more senior (and unenlightened) management. In the latter case, you must agree to abide by the decision of the senior manager but you should make your objection (and reasons) clearly known. For yourself, always be aware that your subordinates might be right when they disagree with you and if events prove them so, acknowledge that fact gracefully.

Confrontations

When you have a difficult encounter, be professional, do not lose your self-control because, simply, it is of no use. Some managers believe that it is useful for "discipline" to keep staff a little nervous. Thus, these managers are slightly volatile and will be willing "to let them have it" when the situation demands. If you do this, you must be consistent *and fair* so that you staff know where they stand. If you deliberately lose your temper for effect, then that is your decision - however, you must never lose control.

Insults are ineffective. If you call people names, then they are unlikely to actually *listen* to what you have to say; in the short term you may feel some relief at "getting it off your chest", but in the long run you are merely perpetuating the problem since you are not addressing it. This is common sense. There are two implications. Firstly, even under pressure, you have to remember this. Secondly, what you consider fair comment may be insulting to another - and the same problem emerges. Before you say *anything*, stop, establish what you want as the outcome, plan how to achieve this, and then speak.

Finally, if you are going to criticise or discipline someone, always assume that you have misunderstood the situation and ask questions first which check the facts. This simple courtesy will save you from much embarrassment.

Seeking Information

There are two ways of phrasing any question: one way (the closed question) is likely to lead to a simple grunt in reply (yes, no, maybe), the second way (the open question) will hand over the speaking role to someone else and force them to say something a little more informative.

Suppose you conduct a review of a recently finished (?) project with Gretchen and it goes something like this:

- "Have you finished project X Gretchen?"
- "Yes"
- "If everything written up?"
- "Nearly"
- "So there is documentation left to do?"
- "Some"
- "Will it take you long?"
- "No, not long"

Before your fingers start twitching to place themselves around Gretchen's neck, consider that your questions are not actually helping the flow of information. The same flow of questions in an *open* format would be: what is left to do of project X, what about the documentation, when will that be completely finished? Try answering Yes or No to those questions.

Open questions are extremely easy to formulate. You establish in your own mind the topic/aim of the question and then you start the sentence with the words:

WHAT - WHEN - WHICH - WHY - WHERE - HOW

Let others speak

Of course, there is more to a conversation (managed or otherwise) than the flow of information. You may also have to win that information by winning the attention and confidence of the other person. There are many forms of flattery - the most effective is to give people your interest. To get Gretchen to give you all her knowledge, you must give her all your attention; talk to her about *her* view on the subject. Ask questions: what do you think about that idea, have you ever met this problem before, how would you tackle this situation?

Silence is effective - and much under-used. People are nervous of silence and try to fill it. You can use this if you are seeking information. You ask the question, you lean back, the person answers, you nod and smile, you keep quiet, and the person continues with more detail simply to fill your silence.

To finish

At the end of a conversation, you have to give people a clear understanding of the outcome. For instance, if there has been a decision, restate it clearly (just to be sure) in terms of what should happen and by when; if you have been asking questions, summarize the significant (for you) aspects of what you have learnt.

MEETING MANAGEMENT - PREPARATION

In any organization, "meetings" are a vital part of the organization of work and the flow of information. They act as a mechanism for gathering together resources from many sources and pooling them towards a common objective. They are disliked and mocked because they are usually futile, boring, time-wasting, dull, and inconvenient with nothing for most people to do except doodle while some opinionated has-been extols the virtues of his/her last great (misunderstood) idea. Your challenge is to break this mould and to make your meetings effective. As with every other managed activity, meetings should be planned beforehand, monitored during for effectiveness, and reviewed afterwards for improving their management.

A meeting is the ultimate form of managed conversation; as a manager, you can organize the information and structure of the meeting to support the effective communication of the participants. Some of the ideas below may seem a little too precise for an easy going, relaxed, semi-informal team atmosphere - but if you manage to gain a reputation for holding decisive, effective meetings, then

people will value this efficiency and to prepare professionally so that their contribution will be heard.

Should you cancel?

As with all conversations, you must first ask: is it worth your time? If the meeting involves the interchange of views and the communication of the current status of related projects, then you should be generous with your time. But you should always consider canceling a meeting which has little tangible value.

Who should attend?

You must be strict. A meeting loses its effectiveness if too many people are involved: so if someone has no useful function, explain this and suggest that they do not come. Notice, they may disagree with your assessment, in which case they should attend (since they may know something you do not); however, most people are only too happy to be released from yet another meeting.

How long?

It may seem difficult to predict the length of a discussion - but you must. Discussions tend to fill the available time which means that if the meeting is open-ended, it will drift on forever. You should stipulate a time for the end of the meeting so that everyone knows, and everyone can plan the rest of their day with confidence.

It is wise to make this expectation known to everyone involved well in advance and to remind them at the beginning of the meeting. There is often a tendency to view meetings as a little relaxation since no one person has to be active throughout. You can redress this view by stressing the time-scale and thus forcing the pace of the discussion: "this is what we have to achieve, this is how long we have to get it done".

If some unexpected point arises during the meeting then realize that since it is unexpected: 1) you might not have the right people present, 2) those there may not have the necessary information, and 3) a little thought might save a lot of discussion. If the new discussion looks likely to be more than a few moments, stop it and deal with the agreed agenda. The new topic should then be dealt with at another "planned" meeting.

Agenda

The purpose of an agenda is to inform participants of the subject of the meeting in advance, and to structure the discussion at the meeting itself. To inform people beforehand, and to solicit ideas, you should circulate a draft agenda and ask for notice of any other business. Still before the meeting, you should then send

the revised agenda with enough time for people to prepare their contributions. If you know in advance that a particular participant either needs information or will be providing information, then make this *explicitly* clear so that there is no confusion.

The agenda states the purpose of each section of the meeting. There will be an outcome from each section. If that outcome is so complex that it can not be summarized in a few points, then it was probably too complex to be assimilated by the participants. The understanding of the meeting should be sufficiently precise that it can be summarized in short form - so display that summary for all other interested parties to see. This form of display will emphasize to all that meetings are about achieving defined goals - this will help you to continue running efficient meetings in the future.

MEETING MANAGEMENT - CONDUCTING

Whether you actually sit as the Chair or simply lead from the side-lines, as the manager you must provide the necessary support to coordinate the contributions of the participants. The degree of control which you exercise over the meeting will vary throughout; if you get the structure right at the beginning, a meeting can effectively run itself especially if the participants know each other well. In a team, your role may be partially undertaken by others; but if not, you must manage.

Maintaining Communication

Your most important tools are:

- Clarification - always clarify: the purpose of the meeting, the time allowed, the rules to be observed (if agreed) by everyone.
- Summary - at each stage of the proceedings, you should summarize the current position and progress: this is what we have achieved/agreed, this is where we have reached.
- Focus on stated goals - at each divergence or pause, re-focus the proceedings on the original goals.

Code of conduct

In any meeting, it is possible to begin the proceedings by establishing a code of conduct, often by merely stating it and asking for any objections (which will only be accepted if a demonstrably better system is proposed). Thus if the group contains opinionated wind-bags, you might all agree at the onset that all contributions should be limited to two minutes (which focuses the mind admirably).

You can then impose this with the full backing of the whole group.

Matching method to purpose

The (stated) purpose of a meeting may suggest to you a specific way of conducting the event, and each section might be conducted differently. For instance, if the purpose is:

- to convey information, the meeting might begin with a formal presentation followed by questions
- to seek information, the meeting would start with a short (clear) statement of the topic/problem and then an open discussion supported by notes on a display, or a formal brainstorming session
- to make a decision, the meeting might review the background and options, *establish the criteria* to be applied, agree who should make the decision and how, and then do it
- to ratify/explain decisions, etc etc

As always, once you have paused to ask yourself the questions: what is the purpose of the meeting and how can it be most effectively achieved; your common sense will then suggest a working method to expedite the proceedings. You just have to deliberately pause. Manage the process of the meeting and the meeting will work.

Support

The success of a meeting will often depend upon the confidence with which the individuals will participate. Thus all ideas should be welcome. No one should be laughed at or dismissed ("laughed with" is good, "laughed at" is destructive). This means that even bad ideas should be treated seriously - and at least merit a specific reason for not being pursued further. Not only is this supportive to the speaker, it could also be that a good idea has been misunderstood and would be lost if merely rejected. But basically people should be able to make naive contributions without being made to feel stupid, otherwise you may never hear the best ideas of all.

Avoid direct criticism of any person. For instance, if someone has not come prepared then that fault is obvious to all. If you leave the criticism as being simply that implicit in the peer pressure, then it is diffuse and general; if you explicitly rebuke that person, then it is personal and from you (which may raise unnecessary conflict). You should merely seek an undertaking for the missing preparation to be done: we need to know this before we can proceed, could you circulate it to us by tomorrow lunch?

Responding to problems

The rest of this section is devoted to ideas of how you might deal with the various problems associated with the volatile world of meetings. Some are best undertaken by the designated Chair; but if he/she is ineffective, or if no one has been appointed, you should feel free to help any meeting to progress. After all, why should you allow your time to be wasted.

If a participant strays from the agenda item, call him/her back: "we should deal with that separately, but what do you feel about the issue X?"

If there is confusion, you might ask: "do I understand correctly that ...?"

If the speaker begins to ramble, wait until an inhalation of breath and jump in: "yes I understand that such and such, does any one disagree?"

If a point is too woolly or too vague ask for greater clarity: "what exactly do you have in mind?"

If someone interrupts (someone other than a rambler), you should suggest that: "we hear your contribution after Gretchen has finished."

If people chat, you might either simply state your difficulty in hearing/concentrating on the real speaker. or ask them a direct question: "what do you think about that point."

If someone gestures disagreement with the speaker (e.g. by a grimace), then make sure they are brought into the discussion next: "what do you think Gretchen?"

If you do not understand, say so: "I do not understand that, would you explain it a little more; or do you mean X or Y?"

If there is an error, look for a good point first: "I see how that would work if X Y Z, but what would happen if A B C?"

If you disagree, be *very* specific: "I disagree because ..."

CONCLUDING REMARKS

The tower of Babel collapsed because people could no longer communicate; their speech became so different that no one could understand another. You need to communicate to coordinate your own work and that of others; without

explicit effort your conversation will lack communication and so your work too will collapse through misunderstanding and error. The key is to treat a conversation as you would any other managed activity: by establishing an aim, planning what to do, and checking afterwards that you have achieved that aim. Only in this way can you work effectively with others in building through common effort.

PLANNING A PROJECT

by Gerard M Blair

The success of a project will depend critically upon the effort, care and skill you apply in its initial planning. This article looks at the creative aspects of this planning.

THE SPECIFICATION

Before describing the role and creation of a specification, we need to introduce and explain a fairly technical term: a *numbty* is a person whose brain is totally numb. In this context, numb means "deprived of feeling or the power of unassisted activity"; in general, a numbty needs the stimulation of an electric cattle prod to even get to the right office in the morning. Communication with numbties is severely hampered by the fact that although they think they know what they mean (which they do not), they seldom actually say it, and they never write it down. And the main employment of numbties world-wide is in creating project specifications. You must know this - and protect your team accordingly.

A specification is the definition of your project: a statement of the problem, not the solution. Normally, the specification contains errors, ambiguities, misunderstandings and enough rope to hang you and your entire team. Thus before you embark upon the the next six months of activity working on the wrong project, you must assume that a numbty was the chief author of the specification you received and you must read, worry, revise and ensure that everyone concerned with the project (from originator, through the workers, to the end-customer) is working with the same understanding. The outcome of this deliberation should be a *written* definition of what is required, by when; and this must be *agreed* by all involved. There are no short-cuts to this; if you fail to spend the time initially, it will cost you far more later on.

The *agreement* upon a *written* specification has several benefits:

- the clarity will reveal misunderstandings
- the completeness will remove contradictory assumptions
- the rigour of the analysis will expose technical and practical details which numbties normally gloss over through ignorance or fear
- the agreement forces all concerned to actually read and think about the details

The work on the specification can be seen as the first stage of Quality Assurance since you are looking for and countering problems in the very foundation of the project - from this perspective the creation of the specification clearly merits a large investment of time.

From a purely defensive point of view, the agreed specification also affords you protection against the numbties who have second thoughts, or new ideas, half way through the project. Once the project is underway, changes cost time (and money). The existence of a demonstrably-agreed specification enables you to resist or to charge for (possibly in terms of extra time) such changes. Further, people tend to forget what they originally thought; you may need proof that you have been working as instructed.

The places to look for errors in a specification are:

- the global context: numbties often focus too narrowly on the work of one team and fail to consider how it fits into the larger picture. Some of the work given to you may actually be undone or duplicated by others. Some of the proposed work may be incompatible with that of others; it might be just plain barmy in the larger context.
- the interfaces: between your team and both its customers and suppliers, there are interfaces. At these points something gets transferred. Exactly what, how and when should be discussed and agreed from the very beginning. Never assume a common understanding, because you will be wrong. All it takes for your habitual understandings to evaporate is the arrival of one new member, in either of the teams. Define and agree your interfaces and maintain a friendly contact throughout the project.
- time-scales: numbties always underestimate the time involved for work. If there are no time-scales in the specification, you can assume that one will be imposed upon you (which will be impossible). You must add realistic dates. The detail should include a precise understanding of the extent of any intermediate stages of the task, particularly those which have to be delivered.
- external dependencies: your work may depend upon that of others. Make this very clear so that these people too will receive warning of your needs.

Highlight the effect that problems with these would have upon your project so that everyone is quite clear about their importance. To be sure, contact these people yourself and ask if they are able to fulfil the assumptions in your specification.

- resources: the numpty tends to ignore resources. The specification should identify the materials, equipment and manpower which are needed for the project. The agreement should include a commitment by your managers to allocate or to fund them. You should check that the actual numbers are practical and/or correct. If they are omitted, add them - there is bound to be differences in their assumed values.

This seems to make the specification sound like a long document. It should not be. Each of the above could be a simple sub-heading followed by either bullet points or a table - you are not writing a brochure, you are stating the definition of the project in clear, concise and unambiguous glory.

Of course, the specification may change. If circumstances, or simply your knowledge, change then the specification will be out of date. You should not regard it as cast in stone but rather as a display board where everyone involved can see the current, common understanding of the project. If you change the content everyone must know, but do not hesitate to change it as necessary.

PROVIDING STRUCTURE

Having decided what the specification intends, your next problem is to decide what you and your team actually need to do, and how to do it. As a manager, you have to provide some form of framework both to plan and to communicate what needs doing. Without a structure, the work is a series of unrelated tasks which provides little sense of achievement and no feeling of advancement. If the team has no grasp of how individual tasks fit together towards an understood goal, then the work will seem pointless and they will feel only frustration.

To take the planning forward, therefore, you need to turn the specification into a complete set of tasks with a linking structure. Fortunately, these two requirements are met at the same time since the derivation of such a structure is the simplest method of arriving at a list of tasks.

Work Breakdown Structure

Once you have a clear understanding of the project, and have eliminated the vagaries of the numpties, you then describe it as a set of simpler separate *activities*. If any of these are still too complex for you to easily organise, you break

them down also into another level of simpler descriptions, and so on until you can manage everything. Thus your one complex project is organised as a set of simple tasks which together achieve the desired result.

The reasoning behind this is that the human brain (even yours) can only take in and process so much information at one time. To get a real grasp of the project, you have to think about it in pieces rather than trying to process the complexity of its entire details all at once. Thus each level of the project can be understood as the amalgamation of a few simply described smaller units.

In planning any project, you follow the same simple steps: if an item is too complicated to manage, it becomes a list of simpler items. People call this producing a *work breakdown structure* to make it sound more formal and impressive. Without following this formal approach you are unlikely to remember all the niggling little details; with this procedure, the details are simply displayed on the final lists.

One common fault is to produce too much detail at the initial planning stage. You should stop when you have a sufficient description of the activity to provide a clear instruction for the person who will actually do the work, and to have a reasonable estimate for the total time/effort involved. You need the former to allocate (or delegate) the task; you need the latter to finish the planning.

Task Allocation

The next stage is a little complicated. You now have to allocate the tasks to different people in the team and, at the same time, order these tasks so that they are performed in a sensible sequence.

Task allocation is not simply a case of handing out the various tasks on your final lists to the people you have available; it is far more subtle (and powerful) than that. As a manager you have to look far beyond the single project; indeed any individual project can be seen as merely a single step in your team's development. The allocation of tasks should thus be seen as a means of increasing the skills and experience of your team - when the project is done, the team should have gained.

In simple terms, consider what each member of your team is capable of and allocate sufficient complexity of tasks to match that (and to slightly stretch). The tasks you allocate are *not* the ones on your final lists, they are adapted to better suit the needs of your team's development; *tasks are moulded to fit people*, which is far more effective than the other way around. For example, if Arthur is to learn something new, the task may be simplified with responsibility given to another to guide and check the work; if Brenda is to develop, sufficient tasks

are combined so that her responsibility increases beyond what she has held before; if Colin lacks confidence, the tasks are broken into smaller units which can be completed (and commended) frequently.

Sometimes tasks can be grouped and allocated together. For instance, some tasks which are seemingly independent may benefit from being done together since they use common ideas, information, talents. One person doing them both removes the start-up time for one of them; two people (one on each) will be able to help each other.

The ordering of the tasks is really quite simple, although you may find that sketching a sequence diagram helps you to think it through (and to communicate the result). *Pert charts* are the accepted outcome, but sketches will suffice. Getting the details exactly right, however, can be a long and painful process, and often it can be futile. The degree to which you can predict the future is limited, so too should be the detail of your planning. You must have the broad outlines by which to monitor progress, and sufficient detail to assign each task when it needs to be started, but beyond that - stop and do something useful instead.

Guesstimation

At the initial planning stage the main objective is to get a *realistic* estimate of the time involved in the project. You must establish this not only to assist higher management with their planning, but also to protect your team from being expected to do the impossible. The most important technique for achieving this is known as: *guesstimation*.

Guesstimating schedules is notoriously difficult but it is helped by two approaches:

- make your guesstimates of the simple tasks at the bottom of the work break down structure and look for the longest path through the sequence diagram
- use the experience from previous projects to improve your guesstimating skills

The corollary to this is that you should keep records in an easily accessible form of all projects as you do them. Part of your final project review should be to update your personal data base of how long various activities take. Managing this planning phase is vital to your success as a manager.

Some people find guesstimating a difficult concept in that if you have no experience of an activity, how can you make a worthwhile estimate? Let us consider

such a problem: how long would it take you to walk all the way to the top of the Eiffel Tower or the Statue of Liberty? Presuming you have never actually tried this (most people take the elevator part of the way), you really have very little to go on. Indeed if you have actually seen one (and only one) of these buildings, think about the other. Your job depends upon this, so think carefully. One idea is to start with the number of steps - guess that if you can. Notice, you do not have to be right, merely reasonable. Next, consider the sort of pace you could maintain while climbing a flight of steps for a long time. Now imagine yourself at the base of a flight of steps you do know, and estimate a) how many steps there are, and b) how long it takes you to climb them (at that steady pace). To complete, apply a little mathematics.

Now examine how confident you are with this estimate. If you won a free flight to Paris or New York and tried it, you would probably (need your head examined) be mildly surprised if you climbed to the top in less than half the estimated time and if it took you more than double you would be mildly annoyed. If it took you less than a tenth the time, or ten times as long, you would be extremely surprised/annoyed. In fact, you do not currently believe that that would happen (no really, do you?). The point is that from very little experience of the given problem, you can actually come up with a working estimate - and one which is far better than no estimate at all when it comes to deriving a schedule. Guesstimation does take a little practice, but it is a very useful skill to develop.

There are two practical problems in guesstimation. First, you are simply too optimistic. It is human nature at the beginning of a new project to ignore the difficulties and assume best case scenarios - in producing your estimates (and using those of others) you must inject a little realism. In practice, you should also build-in a little slack to allow yourself some tolerance against mistakes. This is known as *defensive scheduling*. Also, if you eventually deliver ahead of the agreed schedule, you will be loved.

Second, you will be under pressure from senior management to deliver quickly, especially if the project is being sold competitively. Resist the temptation to rely upon speed as the only selling point. You might, for instance, suggest the criteria of: fewer errors, history of adherence to initial schedules, previous customer satisfaction, "this is how long it takes, so how can you trust the other quotes".

ESTABLISHING CONTROLS

When the planning phase is over (and agreed), the "doing" phase begins. Once it is in motion, a project acquires a direction and momentum which is totally in-

dependent of anything you predicted. If you come to terms with that from the start, you can then enjoy the roller-coaster which follows. To gain some hope, however, you need to establish at the start (within the plan) the means to monitor and to influence the project's progress.

There are two key elements to the control of a project

- milestones (clear, unambiguous targets of what, by when)
- established means of communication

For you, the milestones are a mechanism to monitor progress; for your team, they are short-term goals which are far more tangible than the foggy, distant completion of the entire project. The milestones maintain the momentum and encourage effort; they allow the team to judge their own progress and to celebrate achievement throughout the project rather than just at its end.

The simplest way to construct milestones is to take the timing information from the work breakdown structure and sequence diagram. When you have guesstimated how long each sub-task will take and have strung them together, you can identify by when each of these tasks will actually be completed. This is simple and effective; however, it lacks creativity.

A second method is to construct more significant milestones. These can be found by identify stages in the development of a project which are recognisable as steps towards the final product. Sometimes these are simply the higher levels of your structure; for instance, the completion of a market-evaluation phase. Sometimes, they cut across many parallel activities; for instance, a prototype of the eventual product or a mock-up of the new brochure format.

If you are running parallel activities, this type of milestone is particularly useful since it provides a means of pulling together the people on disparate activities, and so:

- they all have a shared goal (the common milestone)
- their responsibility to (and dependence upon) each other is emphasised
- each can provide a new (but informed) viewpoint on the others' work
- the problems to do with combining the different activities are highlighted and discussed early in the implementation phase
- you have something tangible which senior management (and numbties) can recognise as progress
- you have something tangible which your team can celebrate and which constitutes a short-term goal in a possibly long-term project
- it provides an excellent opportunity for quality checking and for review

Of course, there are milestones and there are mill-stones. You will have to be sensitive to any belief that working for some specific milestone is hindering rather than helping the work forward. If this arises then either you have chosen the wrong milestone, or you have failed to communicate how it fits into the broader structure.

Communication is your everything. To monitor progress, to receive early warning of danger, to promote cooperation, to motivate through team involvement, all of these rely upon communication. Regular reports are invaluable - if you clearly define what information is needed and if teach your team how to provide it in a rapidly accessible form. Often these reports merely say "progressing according to schedule". These you send back, for while the message is desired the evidence is missing: you need to insist that your team monitor their own progress with concrete, tangible, measurements and if this is done, the figures should be included in the report. However, the real value of this practice comes when progress is not according to schedule - then your communication system is worth all the effort you invested in its planning.

THE ARTISTRY IN PLANNING

At the planning stage, you can deal with far more than the mere project at hand. You can also shape the overall pattern of your team's working using the division and type of activities you assign.

Who know best?

Ask your team. They too must be involved in the planning of projects, especially in the lower levels of the work breakdown structure. Not only will they provide information and ideas, but also they will feel ownership in the final plan.

This does not mean that your projects should be planned by committee - rather that you, as manager, plan the project based upon all the available experience and creative ideas. As an initial approach, you could attempt the first level(s) of the work breakdown structure to help you communicate the project to the team and then ask for comments. Then, using these, the final levels could be refined by the people to whom the tasks will be allocated. However, since the specification is so vital, *all* the team should vet the penultimate draft.

Dangers in review

There are two pitfalls to avoid in project reviews:

- they can be too frequent

- they can be too drastic

The constant trickle of new information can lead to a vicious cycle of planning and revising which shakes the team's confidence in any particular version of the plan and which destroys the very stability which the structure was designed to provide. You must decide the balance. Pick a point on the horizon and walk confidently towards it. Decide objectively, and explain beforehand, when the review phases will occur and make this a scheduled milestone in itself.

Even though the situation may have changed since the last review, it is important to recognise the work which has been accomplished during the interim. Firstly, you do not want to abandon it since the team will be demotivated feeling that they have achieved nothing. Secondly, this work itself is part of the new situation: it has been done, it should provide a foundation for the next step or at least the basis of a lesson well learnt. Always try to build upon the existing achievements of your team.

Testing and Quality

No plan is complete without explicit provision for testing and quality. As a wise manager, you will know that this should be part of each individual phase of the project. This means that no activity is completed until it has passed the (objectively) defined criteria which establishes its quality, and these are best defined (objectively) at the beginning as part of the planning.

When devising the schedule therefore you must include allocated time for this part of each activity. Thus your question is not only: "how long will it take", but also: "how long will the testing take". By asking both questions together you raise the issue of "how do we know we have done it right" at the very beginning and so the testing is more likely to be done in parallel with the implementation. You establish this philosophy for your team by include testing as a justified (required) cost.

Fitness for purpose

Another reason for stating the testing criteria at the beginning is that you can avoid futile quests for perfection. If you have motivated your team well, they will each take pride in their work and want to do the best job possible. Often this means polishing their work until it shines; often this wastes time. If it clear at the onset exactly what is needed, then they are more likely to stop when that has been achieved. You need to avoid generalities and to stipulate boundaries; not easy, but essential.

The same is also true when choosing the tools or building-blocks of your project. While it might be nice to have use of the most modern versions, or to develop an exact match to your needs; often there is an old/existing version which will serve almost as well (sufficient for the purpose), and the difference is not worth the time you would need to invest in obtaining or developing the new one. Use what is available whenever possible unless the *difference* in the new version is worth the time, money and the initial, teething pains.

A related idea is that you should discourage too much effort on aspects of the project which are idiosyncratic to that one job. In the specification phase, you might try to eliminate these through negotiation with the customer; in the implementation phase you might leave these parts until last. The reason for this advice is that a *general* piece of work can be tailored to many specific instances; thus, if the work is in a general form, you will be able to rapidly re-use it for other projects. On the other hand, if you produce something which is cut to fit exactly one specific case, you may have to repeat the work entirely even though the next project is fairly similar. At the planning phase, a manager should bear in mind the future and the long-term development of the team as well as the requirements of the current project.

Fighting for time

As a manager, you have to regulate the pressure and work load which is imposed upon your team; you must protect them from the unreasonable demands of the rest of the company. Once you have arrived at what you consider to be a realistic schedule, fight for it. Never let the outside world deflect you from what you know to be practical. If they impose a deadline upon you which is impossible, *clearly* state this and give your reasons. You will need to give some room for compromise, however, since a flat **NO** will be seen as obstructive. Since you want to help the company, you should look for alternative positions.

You could offer a prototype service or product at an earlier date. This might, in some cases, be sufficient for the customer to start the next stage of his/her own project on the understanding that your project would be completed at a later date and the final version would then replace the prototype.

The complexity of the product, or the total number of units, might be reduced. This might, in some cases, be sufficient for the customer's immediate needs. Future enhancements or more units would then be the subject of a subsequent negotiation which, you feel, would be likely to succeed since you will have already demonstrated your ability to deliver on time.

You can show on an alternative schedule that the project could be delivered by the deadline if certain (specified) resources are given to you or if other projects are rescheduled. Thus, you provide a clear picture of the situation and a possible solution; it is up to your manager then how he/she proceeds.

Planning for error

The most common error in planning is to assume that there will be no errors in the implementation: in effect, the schedule is derived on the basis of "if nothing goes wrong, this will take ...". Of course, recognising that errors will occur is the reason for implementing a monitoring strategy on the project. Thus when the inevitable does happen, you can react and adapt the plan to compensate. However, by carefully considering errors in advance you can make changes to the original plan to enhance its tolerance. Quite simply, your planning should include time where you stand back from the design and ask: "*what can go wrong?*"; indeed, this is an excellent way of asking your team for their analysis of your plan.

You can try to predict where the errors will occur. By examining the activities' list you can usually pinpoint some activities which are risky (for instance, those involving new equipment) and those which are quite secure (for instance, those your team has done often before). The risky areas might then be given a less stringent time-scale - actually planning-in time for the mistakes. Another possibility is to apply a different strategy, or more resources, to such activities to minimise the disruption. For instance, you could include training or consultancy for new equipment, or you might parallel the work with the foundation of a fall-back position.

Post-mortem

At the end of any project, you should allocate time to reviewing the lessons and information on both the work itself and the management of that work: an open meeting, with open discussion, with the whole team and all customers and suppliers. If you think that this might be thought a waste of time by your own manager, think of the effect it will have on future communications with your customers and suppliers.

PLANNING FOR THE FUTURE

With all these considerations in merely the "planning" stage of a project, it is perhaps surprising that projects get done at all. In fact projects do get done, but seldom in the predicted manner and often as much by brute force as by careful planning. The point, however, is that this method is non-optimal. Customers

feel let down by late delivery, staffs are demotivated by constant pressure for impossible goals, corners get cut which harm your reputation, and each project has to overcome the same problems as the last.

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ЕЛЕКТРОННЕ НАВЧАЛЬНЕ ВИДАННЯ

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МЕТОДИЧНИЙ ПОСІБНИК
ДЛЯ ПРАКТИЧНИХ ЗАНЯТЬ З АНГЛІЙСЬКОЇ МОВИ ДЛЯ СТУДЕНТІВ
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