Eyes and Ears

Ensure your organisation has 20:20 Vision

Integrated Management is about managing an organisation as a whole – forgetting to fragment management. Can we ever really see an organisation as a whole with all of the detail in its place within the big picture? May be not, but it makes good business sense to be less blind than one's competitors. Ian Dalling, director of 'Unified Management Solutions', suggests that we take a joined up view of monitoring. A critical gap in the monitoring arrangements can lead to significant loss or even the death of the organisation.

Why monitor?
Integrated management is about forgetting to fragment management and the principle also applies to integrated monitoring. It should be a holistic observing and checking structure that connects with all other management arrangements to optimise the performance of the organisation leading to the most efficient and effective use of internal and contracted resources.

As humans, with advanced consciousness, we seek to understand ourselves via our five senses, in order to maximise gain and minimise loss. We reactively learn from our and other's mistakes and proactively continually check that risks to personal objectives are adequately controlled or avoided in order to feel happy and confident. We make use of our intelligence, knowledge and experience - more attention is given where actions are critical such as crossing a busy road or selecting a partner. When growing as a child our parents frequently say to us 'look where you are going' and 'look what you have just done' - a successful person makes optimal use of proactive and reactive monitoring respectively.

These principles can also be applied to an organisation, commercial or otherwise. An organisation can be understood as a super organism that is sustained by satisfying the needs and expectations of its stakeholders who have varying degrees of interest in its quality, health, safety, environment, security, ethics, sustainability and financial performance. Like the individual an organisation must monitor reactively and proactively as part of a 'plan – do – check – act' cycle. Monitoring within an organisation also has the added benefit of acting as a feed back loop reinforcing good practice and deterring procedural violations.

All of the monitoring actions should be intelligently integrated in the sense that they should be managed collectively and not in isolation. An organisation's limited monitoring resource needs to be used in an optimal way to equitably satisfy stakeholders – not forgetting the customer in prime place. However, the customer must not win at the expense of other stakeholders.

The monitoring process should employ several diverse and complementary methods to efficiently and effectively address the differing aspects and areas of the organisation. Like an individual person an organisation should use both reactive and proactive monitoring methods. As in nature, if integrated, the sum of the monitoring will be greater than the sum of the individual monitoring parts through the principal of synergy.

What needs monitoring?

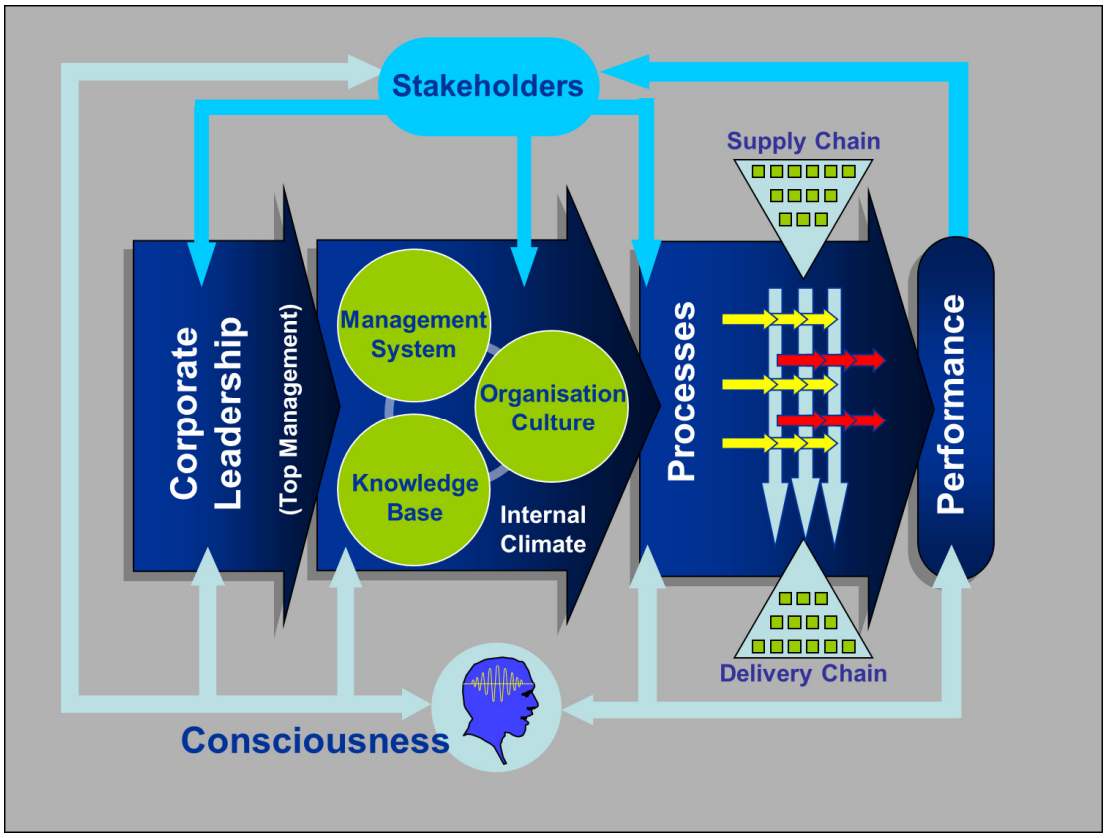

Figure 1: Organisation Unified Model

This will be unique to the organisation but there are broad aspects that apply to most organisations. Figure 1 is a unified model of an organisation that was published in Quality World in January 2000. All of the components such as process, management system, culture, knowledge base, corporate leadership, stakeholders, human consciousness, supply and delivery chains and external climate (comprising regulations, markets, competitors and new innovations) individually and collectively determine the performance of the organisation and require appropriate monitoring.

If the organisation is project based then project monitoring will also be required that takes account of a project specific risk register. All too often organisations use a standard non risk informed approach leading to poor use of monitoring resources – a novel complex project may receive the same monitoring as a project regularly performed with zero incident.

The management of monitoring needs to be carefully defined in an approved management procedure and an integrated comprehensive monitoring schedule maintained which is subject to continual management review. A gap in the monitoring arrangements or non-effective arrangements can expose the organisation to loss that may in extreme cases threaten the very existence of the organisation, for example:

- Barings Bank brought down by a rogue trader Nick Leeson,
- the serial killer Dr Shipman killing over 200 of his patients and
- BNFL upsetting its key customers because one isolated section performing a repetitive task replicated inspection data.

Should everything receive the same degree of attention?

Some aspects of an organisation are obviously more critical than others. But how can we determine this in a systematic way? An integrated approach requires that we assess all the significant risks to the organisation and record them in a risk register. This register will ideally be universal using a

common measure for all types of risk and record the totality of risk impacting the organisation, except perhaps for those risks that are commercially or security sensitive (Figure 1). Quality can be included in the risk register if we express it as the risk of failing to satisfy or delight customers.

The organisation's monitoring schedule should be risk informed and take account of the degree that controls are contributing to risk reduction. Additional monitoring may be required where processes are complex, novel, infrequently performed or involve specialist equipment. Other factors may include employee experience and the implications of corrective action, for example, the need for additional steel reinforcement after the concrete has been poured on a construction site would be difficult, costly and delay completion. Such critical points in projects are often referred to as 'hold points' and included in process plans.

Broad and narrow performance

Excessive variation in any parameter is a universal problem contributing to risk, not just in manufactured items, but pervading the whole of an organisation and its external climate. Research conducted by the author in conjunction with Det Norske Veritas on behalf of British Energy and BNFL showed that important parameters across an organisation may be individually improving, steady or deteriorating – performance is not homogeneous. In particular the research showed that measured occupational safety performance should not be used as a performance indicator for plant safety performance.

Monitoring needs to take account of what and how something is to be measured and the degree to which any sampling measure is representative. Failure to achieve this can lead to significant loss or organisational collapse. Management systems, processes (core, supporting and contingency), competence, culture (including sub-cultures) and human consciousness (Figure 1) can all be subject to local variation.

Dynamic monitoring and data management

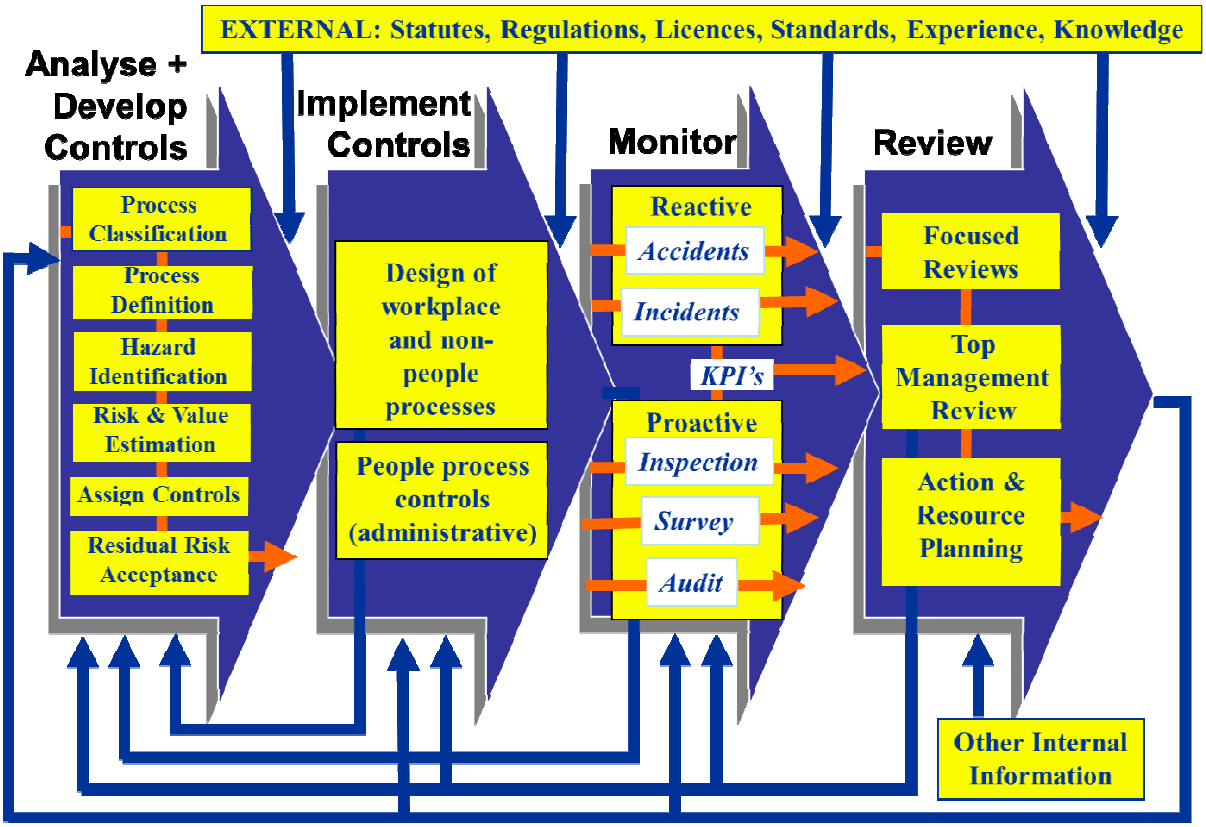

Figure 2: Unified Management System Model

Monitoring should not be a frozen structure – it should take account of current and future assessed risks, monitoring experience, planned initiatives, strengths and weaknesses of the organisation. The monitoring schedule should be continually reviewed and adjusted to ensure that it is meeting the needs of the organisation (Figure 2).

Proactive monitoring should be structured into a logical hierarchy, monitoring least frequently at the top using audits and most frequently at the bottom using inspections and self monitoring (Figure 3). Each layer of monitoring should monitor the subordinate levels. Frequencies and content should be continually adjusted with experience of both proactive and reactive monitoring performance. This process can be aided by defining a rating system corresponding to the significance of findings, observations and incidents and used to prioritise actions. The hierarchy of monitoring provides a source of data that may be selected for Key Performance Indicators (KPIs).

Monitoring should be managed within the organisation's integrated computer database so that intelligent enquiries can be made across the totality of the organisation's data and track close out of issues. Monitoring data should be classified by type, significance, process, project, customer etc. Observations can be equal if not more valuable than non-conformances. The effectiveness of processes is more important than blind compliance with management standards and regulations because processes directly determine stakeholder satisfaction. Management standards are just a set of general controls that may or may not be relevant to an organisation, based on a 'broad brush' generic risk assessment of a generalised organisation.

Reactive and proactive monitoring statistics should be maintained, trends identified and investigated. This data can form part of KPIs used to track performance of the organisation and are ideally structured into a hierarchy. If variations occur in high level KPIs then subordinate KPIs can be investigated to help identify the problem areas. Key performance indicators should provide the earliest possible warning that an organisation has deteriorating performance. Proactive monitoring and KPIs is particularly important for major hazard plants because major accidents are high in consequence but low in frequency. Also accident causation is very complex with many sources of risk that must be managed effectively. A broad portfolio of key performance indicators is essential.

Monitoring Organisation

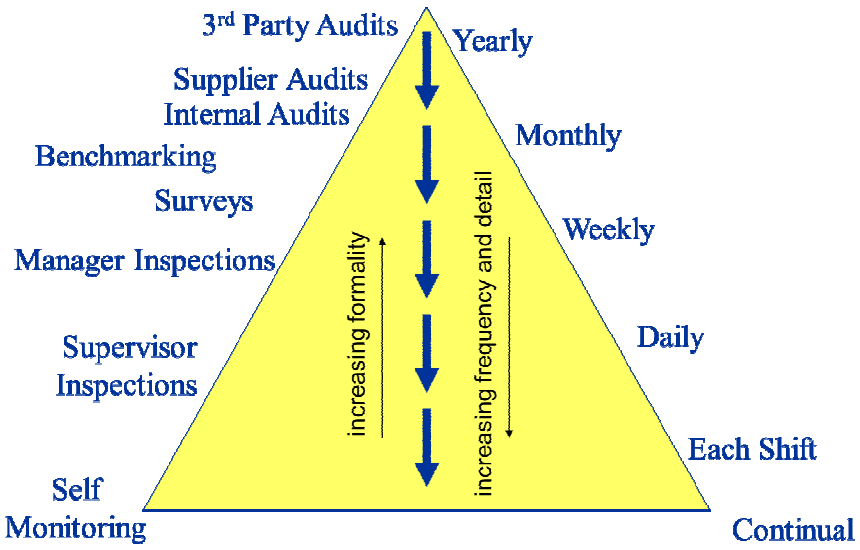

Figure 3: Typical Hierarchy of Proactive Monitoring

Everyone should be involved in monitoring even if they are only self monitoring – refer to figure 3. Organisation and responsibilities need to be defined to design, execute and continually review the

monitoring arrangements. This must be embedded in and be a part of the overall management organisation and not separately structured. A hierarchy of structured reviews reporting up to a fully integrated management review can be used when there is too much material for a single review. Unless there is good reason, separate autonomous audit committees should be avoided.

Reactive Monitoring

Reactive monitoring is used mainly when an incident or near miss has occurred (Figure 2), due to a management system, culture, knowledge base or top management failure or failures. Reactive monitoring is designed to:

- Establish the circumstances leading up to, during, and after the event,
- Identify whether existing management arrangements were adequate,
- Provide suitable records of the event for comparison with past and future events,
- Comply with regulatory and corporate reporting requirements.

Near miss reporting has the advantage over accident reporting because it generates large amounts of data. HSE research shows that for major or over three day lost-time injury there are 7 minor injuries and 189 near misses. Near misses represent failures in risk controls. Although near miss reporting is normally associated with safety it is just as applicable to any other type of management such as quality incidents upsetting customers. For personnel to freely report near misses there must be a 'just culture', previously termed a 'blame free culture' - deliberate violations should still be punished.

Accidents, incidents and near misses should be analysed to determine the direct and root causes. Corrective action is then taken to fix the direct cause of the incident and where applicable broader weaknesses in the management arrangements such as communication, training, documentation, risk assessment etc. Multiple events data can be used to review risk assessments.

Reports of positive events such as a congratulating letter from a customer should also be recorded, communicated and fed into the review process.

Proactive Monitoring

Proactive monitoring is used to identify deficiencies in the organisation for subsequent remedial action to prevent future problems (Figure 2). Audits, surveys, inspections and other proactive monitoring such as benchmarking, health surveillance and random drug and alcohol testing etc. can be applied internally and externally to the supply and delivery chains as appropriate. They should form a hierarchy of monitoring measures and should take account of risk assessments and past monitored performance (Figure 3).

A diversity of approaches including organisation based and process based audits can add value. Scoring systems may be used which should ideally be unified – multiple scales like Centigrade and Fahrenheit impede communication. Audits and inspections should generally focus on all process potential losses rather than specifically on quality or safety alone etc. – although this will depend on the availability of competent auditors and inspectors. Involving all managers in monitoring helps them to keep in touch with processes and the workplace as well as being seen to be committed and involved by the workforce.

Supplementary audits, reviews and inspections can also be conducted to focus on specific issues. These may follow an incident or other hot topic confronting the organisation such as a new regulation.

All aspects of monitoring may be conducted using employees or contracted personnel.

Audit

Audits are conducted to assess the adequacy of an organisation's management system. The scope may be restricted to a part of the organisation or management system. It follows a formal plan and looks for objective evidence to validate auditee responses. There are 3 types of audit:

- 1st party audits conducted on the organisation for the manager of the organisation.
- 2nd party audits conducted on the organisations supplying products and services.
- 3rd party audits conducted on the organisation by independent bodies such as a regulator.

Surveys

Surveys can be conducted internally on and externally to the organisation on a range of topics such as customer satisfaction, organisation culture etc. Questionnaires and face to face interviews have been used together to assess safety culture in a range of industries including the assembly and disassembly of nuclear weapons.

Inspection

Inspections are used to assess processes and the workplace to identify hazardous conditions or defective product or practices for remedial action. They may be carried out by operatives, first line or more senior managers usually by referring to and completing a checklist.

Management Review

Management review should look at historical trends and current performance covering all the management arrangements and monitoring results to be able to plan and resource continual improvement actions. Planning should take account of new ventures, new legislation and organisational change. Management overall and the monitoring and review components should be each integrated as far as it provides value and this will depend on each set of circumstances.

Certification

Leading UK certification bodies have stated that surveillance savings of the order of one third can be given to organisations with truly integrated management systems. An organisation will also make comparable internal savings supporting the certification process as well as savings in its internal audits. These are just some of the many benefits of integrated management that improve efficiency and effectiveness of an organisation.

The Greatest Challenge

The greatest impact on organisations is people because they are the source of all creativity but also can perform errors and violate procedures. A person who puts personal gain above the interests of the organisation and its stakeholders becomes a significant risk. Sophisticated overt and covert monitoring methods may be used to identify extreme cases.

If such a person heads the organisation the threat can be major, for example, Enron directors who rigged its financial reporting such that stakeholders lost significant amounts of money and jobs. The chief executive has the power to impede the monitoring processes and any actions that should be taken. Internal arrangements need to be in place to facilitate, and where necessary protect, independent monitoring and 'whistle blowing' should an employee discover any regulatory or contractual violations. Many aspects of security management differ from others types of management because the hazard is invariably intelligent and will seek ways around risk controls.

Conclusion

An organisation should neither worship management standards or management models – it should be conscious of its totality (Figure 1) and how it impacts its stakeholders. Monitoring should be recognised and valued as an essential element of a management control and guidance system (Figure 2). Monitoring should be dynamic and based on the totality of the risk informed needs of

the organisation. Hierarchical structures (Figure 3) can improve vertical and horizontal integration. Data should be analysed in detail and collectively as a whole. Monitoring those who work hard to avoid being monitored is likely to remain the greatest challenge.

Author

Ian is a chartered electrical and mechanical engineer and started implementing integrated management systems in 1985 at Nuclear Electric. He has been a management consultant since 1990 and is the Director of Unified Management Solutions specialising in integrated management. Its mission is to take organisations beyond being standards and regulations driven and to effectively and efficiently manage all of their processes such that they equitably satisfy their stakeholders. The UMS consultancy delivers through its five 'I' values; Integrity, Integration, Intelligence, Ingenuity and Implementation. Ian believes that integrated management is very practical in its implementation but is simply based on a holistic attitude to management. He can be contacted via ian@unifiedmanagement.com.