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OCCUPATIONAL HEALTH AND SAFETY SYSTEMS AND VIABLE SYSTEMS DIAGNOSIS

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Abstract

OHS (occupational health and safety) Management Systems are a key component of providing corporate governance processes for OHS. However, the paper system must be supported by the human and information infrastructure to enable the management system to be acted upon. This paper explores the implementation of a computer system to assist in providing a corporate governance system of OHS in a large, diverse Commonwealth government department. Consultation with stakeholders was undertaken and their comments were used to define the changes needed in the OHS system. Viable System Diagnosis was used to suggest an appropriate human and information infrastructure.

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INTRODUCTION

A large, diverse Australian Commonwealth Government Department (the Department) recognized that their OHS computer system was being underutilized and commissioned a study to examine how the system should be improved. While investigating the computer system, it became apparent that the compensation costs of this organization were increasing dramatically. In addition, the senior management and the OHS professionals were becoming concerned about the corporate governance (OECD 1999) of OHS in this complex Department. The initial study was expanded to include discussion with stakeholders about the OHS performance of the Department and to recommend modifications to the computer system and to OHS management practice in light of these concerns. Viable System Diagnosis (VSD) (Beer 1985) was used to assist in understanding the appropriate human and information infrastructure necessary to provide adequate information flow and to implement the OHS management system.

This paper focuses on the application of Viable Systems Diagnosis to the OHS information system of the Department.

METHODOLOGY

Key stakeholders were defined as those who had influence over the OHS performance of the organization. Within this group, interviews were organized with individuals or groups of strategic, operational and functional personnel of various levels of authority, in order to ensure that the widest range of opinions were canvassed. Interviews were semi-structured, with the key question being, 'What information do you need to fulfill your safety obligations?'

Several private and public sector organizations were interviewed to benchmark their safety processes and information flow. A report was prepared describing the wishes of the stakeholders, comparing these wishes to the best practice benchmarking and then recommending modifications to the safety computer system to reflect this input.

A qualitative Viable Systems Diagnosis was applied to the OHS system within this Department. VSD was deemed to be an appropriate technique for analysis because it focuses on organizational evolution rather than structure and it was observed that the Department had an evolutionary nature (Flood and Jackson 1991; Schwaninger 2001). VSD is mainly concerned with information flow and control processes (Flood and Jackson 1991), which the OHS system was attempting to provide. In addition, the issue in question was determined to be *complex* in its systems, due to the large number of elements and their interactions, yet *unitary* in the goals of the participants, or at least so it appeared at the time. These factors combine to make VSD an appropriate technique for analyzing the OHS computer system (Flood and Jackson 1991).

A simplified model of the organization and its OHS information flow was prepared based on information acquired during the discussions with stakeholders. This information was supplemented by consultation with the OHS professionals within the corporate OHS agency and further refined by discussions within the wider organization. The organizational/information model was compared to the 'text book' Viable System (VS) of Stafford Beer (Beer 1985). The findings below indicate the discrepancies between the 'text book' VS and the model of the existing processes.

FINDINGS

Initial preparation of the VS model involved aligning the Department organizational structure with the structures of Beer's Viable System. The first step is to define the '5 Systems' as described by Beer in 1985 (Beer 1985). For this Department, the Systems were defined as:

- System 1: System 1 is construed as the system that 'does' what the system does (Flood and Jackson 1991). The original viewpoint for this analysis was through the corporate OHS service of the Department. This was decided to be inappropriate because the OHS service was a support agency and not 'viable' in itself. To overcome this, System 1 was deemed to be the OHS human infrastructure within each Group that makes up the Department. They are the OHS implementers (they 'do' OHS) and thus became the 'system in focus' as required by VSD. These people should have feedback on their performance and should be held accountable for achievement of the Departmental goals related to OHS.

- System 2: System 2 is used to co-ordinate the various System 1 Groups by providing stability and conflict resolution (Walker 1999). The corporate OHS agency was deemed to be System 2 for the Department. However, at the time of the analysis, this agency had a mixture of roles, including policy development, provision of expert advice to two of the Groups, provision of the computer reporting system and preparation and analysis of data derived from the computer system. VSD would describe these as a combing System 5, 4 and 2.

- In the 'text book' model, System 3 is construed as the system that provides internal regulation, optimization and synergy (Walker 1999). For this Department, System 3 was deemed to be the senior OHS practitioners from the various Groups, meeting on a regular basis to consider OHS issues for the whole of the organisation. They would be responsible for coordinating the implementation of OHS policy and management system within their group, obtaining group resources for OHS and would be held accountable for the OHS performance. At the time of the analysis, the senior group OHS practitioners did not meet on a regular basis and as such each group within the Department had their own way of implementing OHS policy without regard to the lessons learned in the other groups.

- System 3*, the audit function, did not exist. At the time of the analysis, there was debate as to whether the audit function should belong to the Corporate OHS agency or to the line management. Stafford Beer would say it reports its information to System 3, the meeting of the senior OHS practitioners. (Flood and Jackson 1991; Leonard 1994).

- System 4, the function that gathers intelligence from the environment (Flood and Jackson 1991), did not formally exist. There was some attempt by the corporate OHS agency to look for 'over the horizon' issues, but it was not officially empowered or resourced to do this. An 'algedonic signal' where significant events are immediately reported to senior management in the time of a crisis (Flood and Jackson 1991; Leonard 1994), was available, but functioned straight from System 1 (Operations) to System 5 (Senior Management). This seems appropriate in this department. However, an algedonic signal for OHS events in the external environment may need to be established.

- There was difficulty in recognizing the role/existence of System 5. System 5 is generally equated with the Board of an organization (Schwaninger 2001) or the Management Group responsible for establishing policy. Government Departments seldom have formal Boards, but this Department had a 'most senior managers' committee. This group occasionally received reports on the status of OHS in the department, but did not receive any regular reporting on performance. At the time of the analysis, this Committee was becoming very concerned about the ability to prove that they had adequately governed the Department with respect to their OHS responsibilities.

- The whole system had some components of being recursive, particularly System 1, but all levels had gaps with respect to System 4.

INTREPRETATION

As this is an initial interpretation of this VSD, it appears that:

- Senior management will have to take more responsibility for OHS by regularly receiving status information and actively forming OHS policy. Recommendation: establish an OHS System 5 by including OHS performance and policy on the agenda of the very senior managers meetings.

- Responsibility for monitoring the OHS external environment will need to be assigned and the communication channels for this reporting must be established. This could belong to the existing corporate OHS agency in addition to its System 2 role as long as the remit is clear. Recommendation: establish System 4 for environmental scanning and commit to regular reporting of issues to Systems 5 (senior management) and System 3 (the senior group OHS practitioners).

- An audit function that reports its findings to the combined group OHS practitioner committee (System 3), will need to be established. In addition, the audit data will need to be regularly summarized and reported to very senior management (System 5). Recommendation: establish System 3* audit function. The personnel may be part of the corporate OHS function (System 2) or some other location if appropriate, but they must be able to provide reliable audit information to the senior OHS practitioners committee.

- The information system coordinated by the corporate OHS agency will need to be enhanced to address the needs of the OHS staff in the groups and to provide reports for the senior managers. Recommendation: enhance System 2 to be able to provide these reports. This was the original scope of the study, but upgrading the computer system was clearly not sufficient to fix the corporate governance and system implementation issues.

- The OHS function in the operational Groups will need to be 'beefed up' to fill the gaps in the structure. This does not necessarily require additional personnel, merely recognition of functions that need to be performed and assignment of this responsibility. Recommendation: reinvigorate the System 1 operational areas so that there are personnel assigned to provide OHS information. Hold group managers responsible for implementation of OHS policy and for reporting on performance.

CONCLUSION

The Viable System Diagnosis was a useful technique for the author to use in determining a recommended organisational structure for this Department. Convincing the corporate OHS agency that this was an appropriate process for analysis involved extensive exchange of information / learning on both the part of the agency and the author. Cooperative inquiry processes (Heron and Reason 2001) where each group asked questions which were then researched, provided a robust means for achieving a common understanding for all parties.

The Department is large and complex with differing goals relating to safety. It will remain to be seen as to how the recommendations from this study are incorporated into Departmental practice.

REFERENCES

Beer, S. (1985). Diagnosing the System for Organizations. Chichester, Wiley.

Flood, R. L. and M. C. Jackson (1991). Creative Problem Solving: Total Systems Intervention, Wiley & Sons, Chichester, England.

Heron, J. and P. Reason (2001). The Practice of Co-operative Inquiry: Research 'with' rather than 'on' People. Action Research: Participative Inquiry and Practice. P. Reason and H. Bradbury, Sage: Chapter 16: pp 179-188.

Leonard, A. (1994). The Very Model of a Modern System-General: How the Viable System Model Actually Works. Beyond Dispute: The Invention of Team Syntegrity. S. Beer, John Wiley & Sons: 346-356.

OECD, A. H. T. F. o. C. G. (1999). OECD Principles of Corporate Governance. Paris, OECD: 1-25. www.oecd.org/daf/governance/principles.htm

Schwaninger, M. (2001). "Intelligent Organizations: An Intergative Framework." Systems Research and Behavioral Science **18**: 137-158.

Walker, J. (1999). Preliminary Diagnosis: Identification of the 5 Systems of the Viable Systems Model. www.grey-box.demon.co.uk/vsmg/3pd_5sys.htm **2001**.

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