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SWP 8/94 CORE PROCESS REDESIGN IN THE PUBLIC SECTOR

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CORE PROCESS REDESIGN IN THE PUBLIC SECTOR:

The case of the police -- an initial view

by

Sanjoy Mukherjee and Ashley Braganza

Abstract

This article suggests that CPR could be used in the public sector. After defining processes and CPR, the paper shows that CPR is being used by the private sector to address several issues which are also faced by the public sector, such as improving efficiency, effectiveness and value for money. The article goes on to examine CPR in the public sector and finally illustrates its potential use in the police force.

Introduction

The purpose of this article is to highlight the possible use of Core Process Redesign (CPR) in the public sector. Up to now CPR has been used largely in the private sector by companies such as Ford and Motorola's Government Electronics Group. These and other organisations like British Telecom, First Direct and British Aerospace (which discussed their implementation of CPR at a symposium held at the Cranfield School of Management) have used CPR in a variety of ways to enhance their operations, and to achieve their objectives in a more effective manner. This article proposes that CPR could be of great value to the pubic sector.

As with many new ideas, CPR is known under several names which include: business process redesign process reengineering, network redesign, process innovation, network reengineering. However all these share the same attributes of CPR, namely a process focus.

A process is "a structured measured set of activities designed to produce a specified output for a particular customer .... with a beginning, an end, and clearly identified inputs and outputs". That customer can either be internal to the organisation or an external entity. Processes therefore provide organisations with structures for action.

While objectives are the key issue in the minds of most senior managers, the question of *how* the objectives are reached is rarely considered in a holistic manner. Historically, many organisations have evolved according to the scientific management principles first espoused by Taylor in the early part of this century. Taylorism is characterised by the division and fragmentation of activities based on pools of specialisation (or functions) together with a strict hierarchy. Over time many organisations have been driven by the need to provide their customers with greater value for money, and have consequently undertaken various change initiatives such as Total Quality Management (TQM) and restructuring programmes. However, these initiatives have focused on improving the performance of existing functional

specialisms. They have therefore failed to address the 'fundamentals' such as the organisation's purpose and customer focus. Organisations are now beginning to recognise that many previous change campaigns have simply tinkered with their processes rather than addressing these on a cross functional basis. Thus to some extent the term core process redesign is a misnomer as few if any organisations have deliberately designed processes in the first place.

What is CPR?

CPR has several important features. The main characteristics are that it is cross functional in nature and involves the transfer of power, responsibility and information from functional heads to process "owners". The core mission of all organisations whether public or private is to deliver a product or service to a customer or market. Clearly no one function within that organisation is able to deliver independently the full product or service. The particular product or service is the sum of the activities within various functions. CPR is about combining and integrating these cross functional activities so that the organisation can deliver the service to the customer in an effective and efficient manner.

CPR is also different to traditional matrix management in one sense. It necessitates a shift in authority from traditional functional heads to the people responsible for delivery of the final service. Thus, in order for CPR to be made reality the commitment of senior management is essential.

Issues common to the private and public sectors

Although BPR is being applied primarily in the private sector at the current time, there are several issues which both private and public sectors face. The recession has forced organisations in the private sector to ensure that they become increasingly efficient. This has been combined with a rapid realisation, based on substantial research and an array of industry examples, that automating existing manual processes provides few benefits. Often automation means little more than added cost to the organisation. For example, Mutual Benefit Life, the eighteenth largest life insurance company in the US before redesigning its processes, took several months, five departments, 19 specialists, 30 internal checks, seven different computer systems, and 225 staff to process a single policy application. After a CPR initiative, 20% more policies were issued usually on the same day, using 1 case manager, one integrated computer system, and a total staff of 100. It could have simply automated the issuing processes but the magnitude of benefits would not have been as great.

This focus on benefits in the private sector is because many companies face the same constraints: scarce resources and limited budgets. This means that managers need to demonstrate that the organisation produces value for money by focusing on performing effectively. Increasingly organisations are re-evaluating their objectives and core business. The driving force behind much of the analysis is the question "what is our purpose?". Deeply ingrained assumptions about the organisation's activities are being questioned. No longer are the phrases 'that's the way we've always done things here'

or 'we know what our customers really want' acceptable. The trend of customer friendliness and focus, and in the case of the police, public friendliness, is on the increase.

Up to now, CPR has only been used successfully in the private sector. However, there is considerable scope for its application in public sector organisations in this country.

CPR and the Public Sector: the case of the police

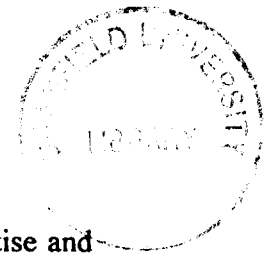
At first glance the two sectors would appear to have very little in common: private sector companies are influenced by the profit motive which is often less important in the priorities of most public bodies. On closer inspection, nevertheless, there are critical issues of concern to both, such as the cost effective deployment of resources, the possible uses of IT and most importantly the achievement of customer satisfaction - whoever they may be. Taking the police service as an example, its **final** customers can be broadly defined as the law-abiding public who rely on the police to protect them and their property, enabling them to go about their normal activities. "The police are merely paid to act on the public's behalf".

At the present time the police services of Great Britain, are under immense pressure to improve their performance and to change the manner in which they operate (the two may not necessarily be related). Since the report of the last Royal Commission on the Police in 1962 the rate and nature of crime has altered dramatically. For instance, there has been a colossal rise in the level of car theft in the intervening thirty-three years, while terrorist crimes perhaps unimaginable at that time have come to absorb an increasingly significant proportion of police time and effort.

When looking at the organisation of most police forces in this country, they are characterised at all levels by their high degree of specialisation. A typical example is illustrated in exhibit 1. This division is on the basis of time (for example work-shifts or rotation of duties), place (patrol beats, force areas) and, especially, function.

Most police forces have evolved piecemeal since the 19th Century in response to a great variety of changes in their operating environment. Because many were originally modelled on a military pattern with divisions, sub-divisions, sections and the like, reflecting the organisation of the British Army, it has been relatively easy for those in command to respond to change by forming specialist functions or departments - such as traffic or community relations - and adding these on to the pre-existing organisation. Thus many police forces have evolved reactively to cope with changes in technology, public attitudes and the level and type of crime committed.

The effects of this development can be seen in the organisational design of almost any police force. Looking again at exhibit 1, in a typical force separate functional divisions have been set-up to deal with, amongst other things, traffic, community relations, criminal investigation, training and uniform operations. This level of organisational homogeneity is replicated throughout the constabularies of England and Wales, and is possibly the result of the over-arching influence of the Home Office and H.M. Inspectorate of Constabulary in defining the structural shape of the various forces.



While specialisation may have benefits in terms of developing functional expertise and excellence, it is vitally flawed in a number of ways. Critically, it can act as a barrier to effective co-ord)ination - across tasks, specialisations and divisions. It might be argued that the 'divorce' of functions leads perhaps to ineffectiveness and slowness in dealing with crime. For example, the delay in tracking down the "Yorkshire Ripper," and more recently the apparent inability of the police to apprehend those responsible for acts of terrorism.

Although individual functions may be optimised at the expense of an entire force; the narrow perspective generated by this type of organisation can mean that problems and their solution are restricted to a specialised function rather than across an entire force. In addition there may be an unnecessary waste of manpower through the need to fill command and control positions in the organisational hierarchy to allow the complete entity to function. Clearly then, there may be significant benefits to police forces in adopting the integrated approach afforded by CPR.

Core process redesign should, however, be distinguished from TQM programmes underway in many forces at the moment. TQM is limited in its possible benefits by its application - which deals with an organisation as it is, whether functionally specialised or not. It can therefore fail to deal with problems that span more than one or two functions within a force, and which might affect the entire organisation's performance. CPR, on the other hand, is customer-driven; the organisation is re-built around processes which are critical in satisfying the needs and expectations of those whom it serves.

However, while we previously stated that the ultimate end customer of any police service was the community it served, there is an overall process within which the police service operates namely the criminal justice system. In this context the police provide the main input which enables the final service - justice - to be delivered to the satisfaction of the public good.

This highlights a key aspect of CPR; that process-oriented organisations must pay attention to the objectives of the overall process. Managers need to understand and link the often disparate objectives to ensure that the service which is delivered is of the standard required. One would expect greater effectiveness, for example, if the police worked more closely with the Crown Prosecution Service to ensure that investigations are carried out in such a way that there is a good chance of obtaining a conviction if a case is brought to court. This might mean greater involvement on the part of the CPS in the actual conduct of investigations, perhaps to the extent where they provide overall guidance or supervise the police, as happens in Scotland. This may prevent the unnecessary expenditure of police time and effort on cases which are either dropped by the Crown Prosecution Service or are dismissed by the courts. Despite the current increase in crime, the number of cases brought to court in 1992 was 15% lower than in the previous year. Sir Patrick Sheehy in his report recommended that co-operation between the police and the CPS should be increased to improve effectiveness.

Internally as well, the different components of a police force should regard each other as customers to whom they must deliver a quality service that meets what is required.

This is especially important given that each core process is comprised of several different activities that operate in a cross-functional manner. Thus work-flows must be linked together in a chain leading to the satisfaction of (internal and external) customers.

The responsibilities and duties of a police force could perhaps be reduced to four core processes: traffic control, training and development, the pursuit and apprehension of criminals and the maintenance of public order (dealing with such matters as terrorism, public order disturbances and certain aspects of community relations). This is illustrated in exhibit 2.

The application of CPR to the police can be illustrated by examining the core process of pursuing and apprehending criminals. This process would include activities such as uniform operations, criminal investigation, and specialised units such as drug and vice squads. These could be organised under the "ownership" of a single assistant chief constable in multi-skilled teams rather than on the basis of individuals working together but reporting to different functional heads. Such teams could be cross-trained so that members are able to perform each of the tasks necessary to the entire process. They might also be able to set their own performance targets, organise their own duties and shifts to the extent that they achieve a degree of self-management in their organisation.

This requires a transfer of authority and power away from senior officers to *process owners* to enable the optimal combination of operational and managerial activities within the teams. One of the recommendations implemented as a result of the Sheehy Report is that three middle management ranks should be abolished to create a more efficient organisational structure. This is one aspect of the implementation of CPR. The Report described the existing police management systems as "ineffective and inefficient".

Although the CPR approach can be criticised for diluting functional excellence, it downplays biases and rivalries that currently exist within forces. Moreover, the maintenance of specialist quality should be balanced by the requirement to provide a comprehensive quality service that meets public expectations.

A significant side-affect of re-designing a police force around core processes is its possible withdrawal from activities which could be considered peripheral. For example, the idea of outsourcing computing and communications to a contractor could be examined. A recent report from the Home Office showed that police officers involved in crime related activities spent 12% of their time on paper work. It recommended that increased use should be made of civilian administrators in order to release police officers' for front line duties.

Summary

This paper has highlighted the possible benefits of CPR to a public sector organisation. It has shown that CPR increases customer focus while eliminating unnecessary bureaucracy, waste, and inefficiency while it provides an opportunity to increase value for money. The key principle of CPR is to undertake radical cross functional transformation which will enable organisations to reap the benefits espoused by TQM.

References

Bedfordshire Police: Annual Report 1991.

Buchanan, David A. and Huczynski, Andrej A. "Organizational Behaviour: An Introductory Text" Prentice Hall, Hemel Hempstead 1991.

Bunyard, R.S. "Police: Organisation and Command" MacDonald and Evans, Plymouth 1978.

Davenport, Thomas H. "Process Innovation: Reengineering Work Through Information Technology" Harvard Business School Press, Boston 1991.

Davenport, Thomas H. and Short, E.J. " The New Industrial Engineering: Information Technology and Business Process Redesign" *Sloan Management Review*, vol.32, No.4, 1990.

Derbyshire Constabulary: Chief Constable's Annual Report 1991.

Dyfed-Powys Police: Annual Report 1991.

Enquiry into Police Responsibilities and Rewards, HMSO 1993

Finnimore, Superintendent Peter, "Measuring Police Performance" *Management Services*, November 1993.

Guardian, 21st October 1993, article by Duncan Campbell "Paperwork Could free 2,300 Police".

Greater Manchester Police: Chief Constable's Report 1991.

Her Majesty's Stationary Office

Hammer, Michael "Reengineering Work: Don't Automate, Obliterate" in *Harvard Business Review*, July-August 1991.

Hegel III, J. "Keeping CPR on Track" *The McKinsey Quarterly*, No.1, 1993.

Heygate, Richard and Brebach, Gresh "Memo to a CEO: Corporate Reengineering" *McKinsey Quarterly*, No.2, 1991.

Heygate, Richard "Accelerating Front-line Change" *McKinsey Quarterly*, No.1, 1992

Kaplan, Robert B. and Murdock, Laura "Core Process Redesign " *McKinsey Quarterly*, No.2, 1991.

Lancashire Constabulary: Chief Constable's Annual Report 1992.

O'Sullivan, L. and Geringer, M. "harnessing the Power of Your Value Chain" Long Range Planning, vol.26 No.2, 1993.

Ostroff, Frank and Smith, Douglas "The Horizontal Organisation" *McKinsey Quarterly*, No.1, 1992.

Royal Commission on the Police: Final Report, Command Paper 1728, HMSO, London 1962.

Scott Morton, M.S. (ed), The Corporation of the 1990's: information and Organization Transformation, Oxford University Press, New York 1991.

Venkatraman, N. " IT-induced Business Reconfiguration" in M.S. Scott Morton (ed), *The Corporation of the 1990's: information and Organization Transformation*, Oxford University Press, New York 1991.

Greater Manchester Police Structure

Exhibit 1

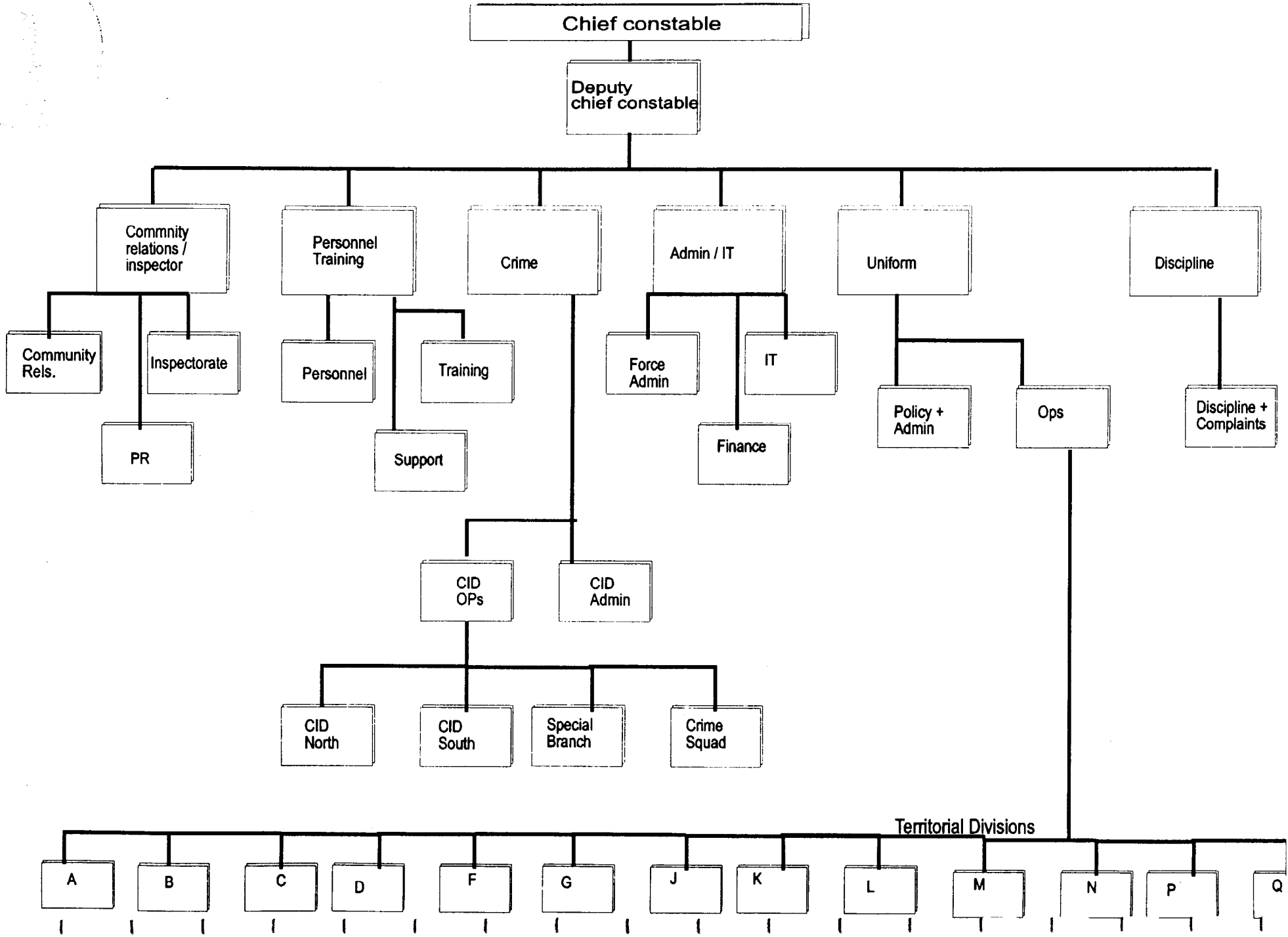
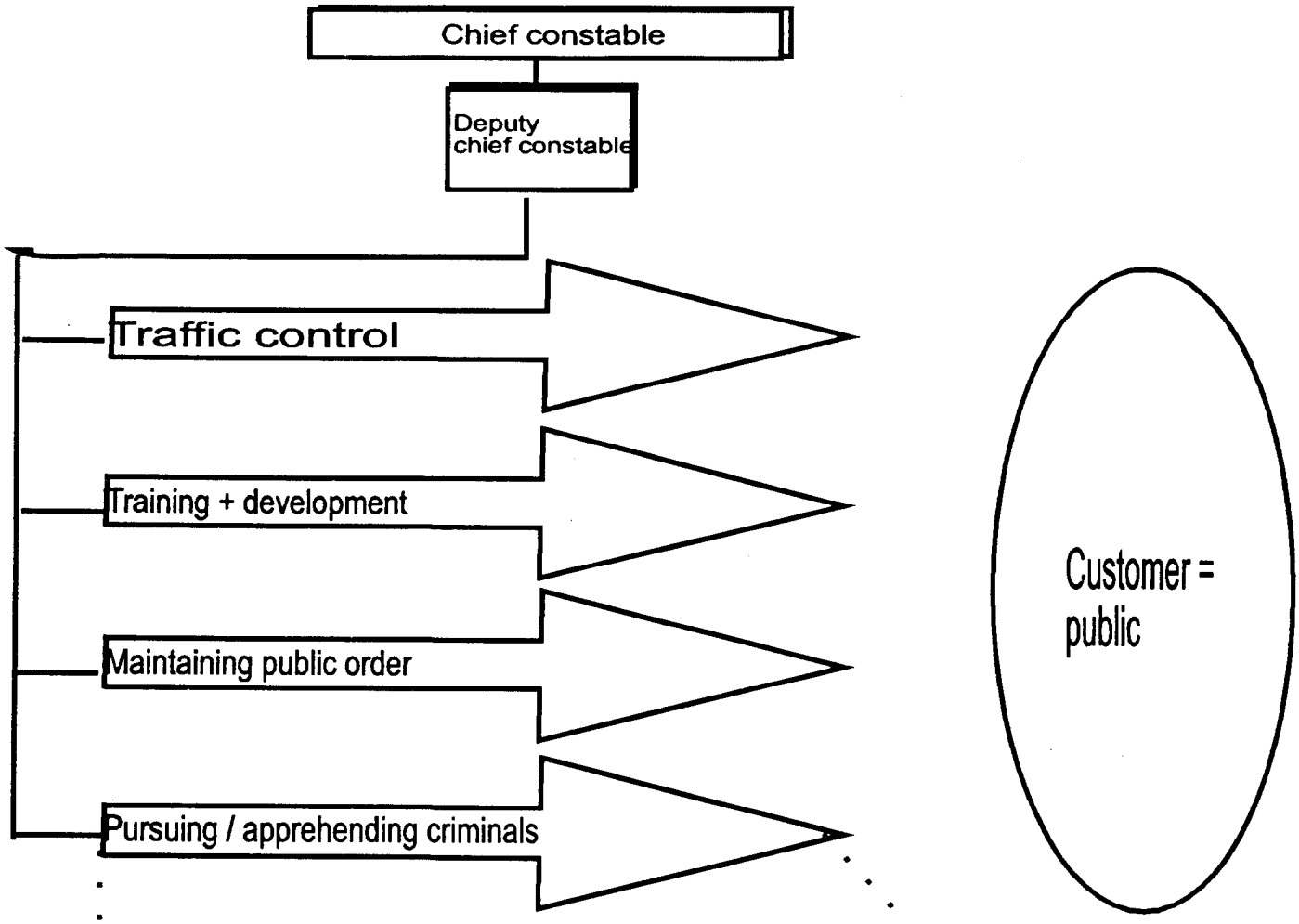


Exhibit 2

A potential shape for a redesigned police service



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