

# Management of Quality in Analytical Laboratories: a Supply Model for the Regulatory Sector

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This article reflects the author's personal views and not necessarily those of the United Kingdom Accreditation Service

## Summary

*Following from a presentation the author gave at the Government Chemist Conference in London in April 2010 this paper gives, from a personal point of view, a fresh perspective on laboratory services operating in an increasingly competitive market. Buying an analytical service is unlike buying everyday consumer products therefore the paper challenges a supply model based on market forces alone. Purchasing criteria for regulatory laboratory services should also take into account the work ethics and culture of the providers. Customers will always look for the best value, but this need not equate to the cheapest contract rates especially where the service provider must deliver the one-off, or infrequently performed tests or address complex issues involving much interpretative skill and time. Customers and providers of analytical services need to work together to cultivate a symbiotic relationship, appreciative of each other's constraints and business environment. With ever increasing pressure on local and national authorities to reduce costs in all public sectors this will undoubtedly present new and interesting challenges to the Public Analyst laboratories in the future. Growth, productivity and quality will continue to exert their influence and provide the key measures of success in 21<sup>st</sup> Century management.*

## Introduction

This paper follows on from the presentation given at the Government Chemist Conference in London in April 2010, the underlying message of which was about achieving quality through effective management and partnership with stakeholders. My aim is to expand on the presentation and provide a fresh perspective on laboratory services operating in an increasingly competitive market. The need to be able to respond swiftly to ever changing desires of customers and challenging emerging issues is also explored

## Discussion

From my experience of managing accreditation, a laboratory with a highly sophisticated set up is no guarantee of survival nowadays. A laboratory that enjoys good customer support may still find itself faced with challenges to its viability due to factors (political and economic for example) beyond their control. Sudden changes in customer support may also arise from misalignment of perceived value between the customer and the service provider.

Up until the relatively recent past, Public Analyst laboratories could flourish on the strength of their expert technical knowledge and professional skills. Today, the business environment is much more complex and it involves deploying a wider range of skills and resources in order to fulfil the increasing diverging interests and needs of customers and stakeholders.

In a commercial analytical service sector, market forces normally determine the choice of tests and advice made available to consumers. However for the regulatory sector, other dominant factors come into play and we find that this supply model based on market forces does not work so well.

Although a total reliance on market forces would undoubtedly weed out the uncompetitive, it is important to appreciate that chasing profits may risk restricting choice for customers in the long run. A relentless drive down on costs could well turn out to be counterproductive with continual tension between the profitability of a service or test and the cost of delivering it.

Cost reduction can be achieved by economies of scale. This is perceived to be positive and can be effective when optimising service delivery. Conversely the cost of providing the one-off, or infrequently performed tests or addressing complex issues involving much interpretative skill and time is often disproportionately large. Regardless of accreditation, factors including quality assurance, quality control and maintaining competence need to be taken into account along with the on-going cost for method development and innovation. These added costs cannot always be fully recovered by income generated from sample analysis, thus putting more pressure on enforcement laboratories that are required to retain the ability to undertake regulatory methods. This problem may be exacerbated if the required regulatory test method has not been updated for many years and so does not permit the laboratory to take advantage of advances in analytical methodology.

In order to respond effectively to these challenges Public Analyst laboratories, by necessity, have to become astute businesses, balancing cost against the range of analytical services and costs of analysis versus number of samples. The balance can be rather delicate and over the years, has tipped against many Public Analyst laboratories. The outcome can be a continual battle to keep the head above water. From an outsider's perspective, those who survive appear to spend huge amount of energy honing their strategy for survival and this would seem to detract enforcement laboratories from their true purpose, protection of consumers and responsible traders.

A hundred years ago, microscopy was considered a powerful tool for food examination. Nowadays, a wider range of instrumentation and techniques are available to meet the demands on food safety and quality. Therefore for Public Analyst laboratories (or any future structure provision for that matter), it is important to invest in technology and staff training to maintain the science base appropriate to deal with ever increasingly challenges presented by sophisticated food production processes, frauds, adventitious or deliberate adulteration.

At present, private companies and publicly funded bodies co-exist to provide an enforcement service but the FSA is reviewing options for the Public Analyst service. Regardless of the structure for the future, customers and providers of analytical services need to work together to cultivate a symbiotic relationship, they also need to appreciate each other's constraints and business environment. Buying an analytical service is unlike buying everyday consumer products. The purchasing criteria should also take into account the work ethics and culture of the providers. Customers will always look for the best value, but this need not equate to the cheapest contract rates. National and/or local authority sampling programs whilst principally risk based, should also reflect the needs of the national knowledge management system and provide the stimuli for innovative application of analytical science.

## **Conclusions**

Innovation to meet continual challenges from unscrupulous traders is fostered by co-operation and knowledge transfer both in the professional arena and outside it. The mission of the Public Analyst laboratories is to protect public good. They serve a vital role in food analysis as well as other areas of health and safety with the utmost integrity. In order to respond effectively to today's customer needs Public Analyst laboratories will have to develop their know-how, balancing costs against their range of analytical services, whilst maintaining an ability to respond quickly to any national food crises. With ever increasing pressure on local and national authorities to reduce costs in all public sectors this will undoubtedly present new and interesting challenges to the Public Analyst laboratories in the future. Growth, productivity and quality will continue to exert their influence and provide the key measures of success in 21<sup>st</sup> Century management.