



Strategy Statement 2017 — 2019

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I am pleased to present this Strategy Statement for the State Laboratory which sets out the goals and strategies of the Laboratory for the period 2017 – 2019.

The State Laboratory is fortunate to have first class laboratory facilities available to it that have enabled it to grow and develop the highly specialised analytical service that it currently provides. The focus for the coming years will be to build on the progress made to date and to continue to develop its capability and expertise to provide the quality and range of service required by its clients.

Over the past five years, the Laboratory has had to cope with the retirements of many long-serving staff members and the consequent loss of scientific knowledge and expertise was significant and had a negative impact on the service provided in a number of areas. However during 2015 and 2016, a total of 26 new staff joined the Laboratory, which represents almost 30% of its workforce and further recruitment is planned for 2017. This presents a major opportunity for the Laboratory to build for the future and deliver on its vision of providing a world class regulatory scientific service to the State. In the short term it will be a priority for the Laboratory to provide the required levels of training and development needed by new staff to become effective in their roles in a highly complex, regulatory laboratory environment.

In feedback gained from annual Customer Satisfaction surveys, the most important service attribute is always the quality of the service provided and this is reflected in the Laboratory's current scope of accreditation. This has grown from 22 test methods covering 52 analytes in 2006 to 46 test methods covering 448 analytes in 2016.

However, over the lifetime of the previous Strategy Statement, timeliness has become an issue for a number of clients, mainly as a result of the loss of highly experienced staff at a time of increased

complexity of analysis. This has led to significant backlogs developing in some areas and it is a priority for the Laboratory to reduce these to acceptable levels as soon as possible.

The Laboratory will also continue to expand its range of testing in response to client requirements and where possible it will employ new and emerging technologies to improve the efficiency of the service provided. Since 2014, while there was only a 1% increase in the number of samples submitted, there was a 15% increase in the number of analytes tested for annually. This reflected the State Laboratory's ongoing strategy to focus on highly specialised testing in the areas of human and veterinary drug analysis and undesirable substances and toxins in food and feed.

In the Customs and Excise area, the introduction of a new fiscal fuel marker in Ireland in 2015, in which the State Laboratory played a pivotal role, is estimated to have increased Excise receipts by €700 million during the 2015/2016 period as evidenced by the significant reductions in both fuel laundering detections and the amount of toxic waste being dumped illegally. The new marker also has EU recognition and is under active consideration as the new Euro Marker which may be used in the fight against fuel fraud across Europe.

In the coming years, the State Laboratory will continue to provide a high quality, efficient and timely analytical chemistry service to its public sector clients and provide expert scientific advice to support decision making, regulation, formulation of legislation and court prosecutions.



Ita Kinahan

Ita Kinahan,
State Chemist

Our Mission

To provide a quality analytical and advisory service to Government Departments and Offices that require chemical analysis and/or scientific advice to implement their policies, regulatory programmes and strategic objectives.

Our Vision

To provide a world class regulatory scientific service to the State.

Our Values

The State Laboratory will support and promote:

- ◆ excellent customer service
- ◆ the highest standards of professionalism and scientific excellence
- ◆ a public service ethos of independence, integrity and impartiality
- ◆ innovation and continuous improvement
- ◆ a culture of accountability, efficiency and value for money
- ◆ a positive work environment, treating people with dignity and respect

High Level Objective

To provide an accredited, high quality and timely chemical analysis and scientific advisory service to Government Departments and Offices that supports their policies, regulatory programmes and strategic objectives, particularly in the areas of food and feed safety; revenue collection; fraud prevention; and public health and environment protection and to provide centralised human and veterinary toxicology services to the public sector.

Context and Opportunities

The State Laboratory is a scheduled Office (Vote 14) under the aegis of the Department of Public Expenditure and Reform. It is the Government's principal analytical chemistry laboratory and provides an analytical and advisory service to clients across a range of Government Departments and Offices.

The State Laboratory's main clients currently are:

- ◆ the Department of Agriculture, Food and the Marine (DAFM);
- ◆ the Office of the Revenue Commissioners;
- ◆ the Coroners, the Office of the State Pathologist and the Garda Síochána; and
- ◆ the Health Products Regulatory Authority (HPRA).

The main areas of activity of the Laboratory are:

- ◆ supporting DAFM to ensure Ireland's food and feed meet EU standards and are thus suitable for export and consumption
- ◆ supporting Revenue to ensure compliance with Customs and Excise legislation, in particular the collection of excise duties on alcohol and motor fuels, and to assist Revenue to combat fraud and illicit trade e.g. counterfeit spirits and fuel laundering and supporting the Department of Jobs, Enterprise and Innovation (DJEI) by providing technical advice on the processing of Applications for Suspension of Customs Duty
- ◆ providing a forensic toxicology service to support Coroners' and the State Pathologist's investigations into cases of unexplained deaths and Garda investigations into criminal offences and
- ◆ assisting the HPRA and DAFM to control the use of unlicensed human and veterinary medicines

The Laboratory has an important advisory function, particularly in the Customs and Excise area, and its staff act as the Irish representatives at EU committees and technical working groups on behalf of Revenue and DJEI. As a large proportion of Ireland's international trade is currently with the UK, there is likely to be a significant increase in the level of testing and the number of tariff classification opinions requested by Revenue after the UK leaves the EU in 2019.

The Laboratory has also been designated as Ireland's main Official Control Laboratory for animal feedingstuffs and as a National Reference Laboratory (NRL) for parameters such as nutritional additives for use in animal feed, veterinary residues in food of animal origin and dioxins and other contaminants in feed and food. Staff attend NRL network meetings and workshops organised by EU Reference Laboratories and they also represent Ireland as national experts in analytical chemistry at EU and other international meetings such as Codex Alimentarius, Eurachem, ISO and CEN (European Committee for Standardisation).

In late 2016, the Laboratory agreed to a request from the Department of Health to reactivate tobacco analysis work it had previously carried out for the Office of Tobacco Control and become the designated laboratory for Ireland to carry out testing under the 2014 Tobacco Products Directive. The Laboratory hopes to commence this testing in 2018.

The State Laboratory has a high level of expertise in testing for drugs at low levels in complex biological matrices and it is well positioned to provide a centralised service for this type of testing to any Government Departments or Offices that might need to avail of such a service in the future.

Strategic Goal 1

Support National Food and Feed Safety Programmes

During the economic downturn, the Agri-Food sector was a strong performer in an otherwise depressed economy. In 2016, Irish food and drink exports increased by an estimated 2% to a record high of €11.15 billion and the proposed further expansion of primary production and export trade envisaged by Food Wise 2025 aims to increase the value of these exports by 70% to €19 billion. As the food industry is now consumer led, the highest standards of food safety and traceability are required to retain existing export markets and develop new ones. This will give rise to increased requirements for laboratory resources to deal with new and emerging risks to the food chain and the environment, including chemical contaminants in food and feed.

Closer collaboration between the State Laboratory and other state-funded laboratories involved in delivering Ireland's National Residue Control Plan (on behalf of DAFM and the Food Safety Authority (FSAI)) will enhance national capability in the application of analytical chemistry and new technologies for food and feed safety purposes. The top priority for DAFM in this area is the bringing in-house of outsourced analyses.

Actions 2017 - 2019

- ◆ Support National Food and Feed safety inspection programmes and discharge National Reference Laboratory responsibilities
- ◆ Respond to changes in testing requirements resulting from changes to food and feed safety legislation in particular
 - ◇ Enhance and develop the range of testing offered under the national residue control plan and develop new test methods for veterinary drug residues to bring in-house outsourced analyses
 - ◇ Develop analytical methods for the detection of brominated flame retardants (BFRs) in food
 - ◇ Move towards compliance with the additional requirements of new legislation for official laboratories and National Reference Laboratory functions
- ◆ Maintain accreditation to ISO 17025 for all food and feed testing
- ◆ Support DAFM Fertiliser and Limestone inspection programmes and prepare for the introduction of new legislation covering fertiliser products such as growing media, soil improvers, compost, additives and bio-stimulants
- ◆ Collaborate with other public sector laboratories and explore the feasibility of providing analytical services to the FSAI where there are gaps in existing services

Strategic Goal 2

Support Revenue Collection and Fraud Prevention

The Office of the Revenue Commissioners plays a key role in Ireland's economy by collecting taxes and duties due to the State. One of Revenue's two key strategic priorities for 2017-2019 is to confront non-compliance. The State Laboratory supports Revenue in its efforts to target and disrupt shadow economy activities, including fraud, illicit trade and smuggling, by providing scientific advice and analytical results to support court prosecutions.

The State Laboratory played a pivotal role in the introduction of the new fiscal fuel marker for marked diesel in 2015, and in the process, developed a high level of expertise in the analysis of Accutrace. The method now needs to be developed further to cover other fuels such as kerosene and petrol. As this new marker is under active consideration as the new Euro Marker, the State Laboratory may have the opportunity in the coming years to become the European expert laboratory on Accutrace analysis and be involved with this and other initiatives introduced to combat fraud and tackle the problem of illegal designer fuels across Europe.

The decision of the UK to leave the EU will also have significant implications for the work of the Laboratory, particularly if the UK decides to leave the single market and the EU customs union. If this were to be the case, the general rules and procedures applicable to goods brought into or taken out of the EU could apply in full. Due to the volume of trade between Ireland and the UK, this would result in a large increase in the number of tariff classification requests and the number of samples submitted for analysis.

In Budget 2017, the Finance Minister announced that a tax on sugar-sweetened drinks will be introduced in April 2018, in line with similar plans in the UK. This may have implications for the testing service that the State Laboratory provides depending on the mechanism chosen for introducing the tax.

Actions 2017 - 2019

- ◆ Provide Revenue's Tariff Classification Unit with expert scientific advice, supported by chemical analysis, on the correct classification of goods under the Customs and Excise Tariff of Ireland
- ◆ Advise Revenue on the application of appropriate excise duties on hydrocarbon oil products, alcoholic beverages and non-potable alcohol-containing products and strengthen supports for prosecuting fraud
- ◆ Provide scientific experts to represent Ireland at meetings of EU Committees and Working Groups and Technical Committees of the World Customs Organisation
- ◆ Expand the method of analysis of Accutrace to include non gas oil matrices for the detection of petrol stretching and other illegal activities and develop methods for the detection of designer fuels. If required, support the introduction of a new European fuel marker
- ◆ Maintain strong links with Revenue and keep informed of the likely impact and resource implications that the outcome of Brexit negotiations will have for the Laboratory and the service it provides to Revenue and DJEI from 2019 onwards
- ◆ Provide analytical support for the introduction of a Sugar tax if required

Strategic Goal 3

Provide a Forensic Toxicology Service to the State

The State Laboratory has developed a high level of expertise in the analysis of a wide range of prescription medicines and illegal drugs in biological samples. The Laboratory's current clients include the Coroners and the Office of the State Pathologist. The Laboratory also carries out confirmatory analysis on ante-mortem samples for the Gardaí in criminal cases.

A major challenge is keeping the scope of testing relevant and the Laboratory must keep abreast of emerging drugs of abuse on the streets, which can include prescription drugs. The proliferation of new psychoactive substances available to drug users is a particular challenge due to the complexity of the analysis and the lack of availability of reference standards.

Clients are generally very satisfied with the quality and efficiency of the service provided but they have regularly indicated that the currently agreed turn around times need to be reduced significantly. Annual sample numbers have increased by almost 50% since 2012, but the increases have stabilised in recent years. This, along with increased staff resources assigned to this area from 2017, will enable the Laboratory to focus on streamlining processes and reducing backlogs and thereby achieve the shorter turn around times required by Coroners in the near future.

Actions 2017 - 2019

- ◆ Provide a comprehensive forensic toxicology service to public sector clients
- ◆ Keep abreast of emerging illicit drug use trends and adapt testing protocols accordingly
- ◆ Reduce turn around times to meet client requirements
- ◆ Optimise the current drug screening strategy to improve the overall efficiency of the service provided

Strategic Goal 4

Support Public Health and Environment Protection Initiatives

The Health Products Regulatory Authority regularly warns consumers about the dangers of buying prescription medicines on-line and in conjunction with the Revenue's Customs Service and An Garda Síochána it effectively monitors and investigates instances of illegal supply of medicinal products coming into Ireland via the postal system. The Investigations Division of DAFM also works to protect consumers and the food chain by monitoring the supply and use of veterinary products.

The State Laboratory is accredited to analyse seized pharmaceutical and herbal products for the presence of many different pharmaceutically active compounds and it provides expert testimony in subsequent court prosecutions. Future challenges include responding to analysis requests for new active ingredients (some from Asia and China) and testing for excipients to prove that seized veterinary products are counterfeit. A higher level of quantitative analysis may also be required.

In 2016, the State Laboratory agreed to a request from the Department of Health to become the designated laboratory for Ireland to carry out testing on tobacco products as set out in the Tobacco Products Directive (2014/40/EU) and S.I. No. 271 of 2016. The Laboratory had previously set up the necessary infrastructure and developed methods of analysis to carry out this testing for the Office of Tobacco Control under the Public Health (Tobacco) Act, 2002.

To reactivate this work will require an upgrade of the existing laboratory facilities and instrumentation as well as validation of methods before testing of tobacco products can commence.

Actions 2017 - 2019

- ◆ Provide a comprehensive pharmaceutical testing service to public sector clients in support of court prosecutions
- ◆ Develop new qualitative and quantitative test methods as required to meet client requirements
- ◆ Maintain accreditation to ISO 17025 for all testing
- ◆ Commission a tobacco testing laboratory and set up methods of analysis to test for tar, nicotine and carbon monoxide in tobacco products
- ◆ Provide analytical support to local authorities responsible for disposal of illegal waste associated with fuel laundering
- ◆ Explore the feasibility of providing analytical services to the Environmental Protection Agency (EPA) for priority substances under the EU Water Framework Directive legislation

Strategic Goal 5

Provide a Centralised Veterinary Toxicology Service

The State Laboratory has a high level of expertise in the analysis of toxicants and veterinary drug residues in biological samples and in recent years it has provided a veterinary toxicology service to DAFM and the National Parks and Wildlife Service to support their investigations into large scale poisoning incidents on farms and illegal poisoning of wildlife, especially re-introduced birds of prey. The work of the Laboratory also supports the Campaign for Responsible Rodenticide Use in Ireland (CRRU) and assists Customs and Excise officers to identify seized unknown powders.

There has been a steady increase in the number of requests for identification of unknown chemical compounds in different matrices from existing clients and the Laboratory has identified that it needs to further develop and strengthen its expertise in this area.

Actions 2017 - 2019

- ◆ Provide a comprehensive veterinary toxicology service to public sector clients and develop quantitative methods for known toxicants
- ◆ Improve internal capability for the identification of unknown compounds

People and Performance

- ◆ Develop and retain a highly skilled and expert staff in the area of chemical analysis
- ◆ Build capacity for responding to crisis situations by increasing mobility and cross-training
- ◆ Foster staff engagement and encourage high levels of performance and internal communications
- ◆ Promote a positive work environment and the well-being of staff
- ◆ Strengthen management and leadership capability
- ◆ Support and improve good performance and tackle underperformance

Technology, Processes and Infrastructure

- ◆ Optimise the delivery of services through the use of leading edge scientific technologies
- ◆ Maintain secure ICT systems and maximise the use of IT solutions to improve efficiencies
- ◆ Optimise internal processes to enhance services, address risks and deliver quality and efficient services
- ◆ Progress energy conservation projects to reduce energy consumption
- ◆ Maintain and upgrade the existing laboratory infrastructure

Governance

- ◆ Apply the highest standards of corporate governance, risk management and safety to the operation of the Laboratory
- ◆ Operate a Quality System that meets the requirements of ISO 17025 and maintain and expand the Laboratory's scope of accreditation to meet client requirements
- ◆ Progress Government renewal and reform programmes
- ◆ Participate in Shared Services and use centralised procurement and ICT frameworks to improve efficiencies and achieve value for money
- ◆ Raise the Laboratory's profile and explore opportunities to maximise the use of the available laboratory facilities

Strategic Outcomes

2017 - 2019

- ◆ High quality, efficient and timely analytical chemistry service provided to the public sector
- ◆ Expert scientific advice provided to support decision making, regulation and the formulation of legislation and expert evidence provided for court purposes
- ◆ Improved national capability in chemical analysis for official control, regulation and compliance purposes
- ◆ Optimal use of State resources by provision of centralised chemical testing services

