



Public Analyst
Scientific Services

Modernising the Public Analyst Service

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- Official Control Laboratories
 - Current Laboratory Capacity and Public Analysts
- Elliott Review
 - Recommendations on Laboratory Capacity
 - Options for the Future
- An Example of a Modern Public Analyst Service
 - Laboratory Operation using “Lean” principles
 - Business improvement approach



- European law requires the UK to have an official laboratory control system for food and feed
- Sampling and analysis is a Local Authority function
- Food authenticity scientific investigation is a mix of informal surveillance
- Formal sampling and testing through which wrongdoers can be brought to justice
- Concerns about numbers of public analysts and the deterioration of public sector laboratory capacity have been developing for a long time



27 Public Analysts Currently Working in the UK

- England:
 - 6 Local Authority laboratories (10 PAs)
 - 3 Private Laboratories (PASS) (7 PAs)
- Scotland:
 - 4 Local Authority Laboratories (7 PAs)
- Wales:
 - 1 Private Company (2 sites) (3 PAs)



Most are members of the Association of Public Analysts



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Public Analyst Provision in England

Private
Sector

Public Analyst
Scientific Services
Limited

Minton,
Treharne &
Davies Ltd

Public
Sector

Hants

Kent

Lancs

Staffs

W
Yorks

Worcs

APA coordination but also competing for diminishing funding – public sector labs each fairly small, and exist at the whim of individual local authorities operating under continual cuts in funding, strategic foresight lacking



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Elliott Review into the Integrity and Assurance of Food Supply Networks

Final Report published in September
2014



Those involved with audit, inspection and enforcement must have access to resilient, sustainable laboratory services that use standardised, tested approaches.

As with all crime, prevention, detection and, if necessary, prosecution of food crime hinges on

- Multi-agency collaboration, of which forensic science plays a key part.

Food fraud is often undetectable except by scientific analysis, so

- Common acceptance of the need for testing, supported by investment in methodologies which minimise disruption of trade.



- The processes and methods used by all to ensure the integrity and assurance of food should be to acknowledged standards and agreed performance criteria.
- An efficient scientific service must review and adapt its testing methodologies regularly to keep up to date with possible frauds and detection techniques.



Recommendation: The laboratory community testing for food authenticity should continue their work to standardise their approaches.

- within a UK Reference Laboratory Network for Authenticity

Recommendation: develop a network of “Centres of Excellence”, creating a framework for standardising authenticity testing

What would that look like?



- Public Analyst Laboratories
 - Public Sector Research Establishments (PSREs)
 - Private Laboratories
 - University departments
 - Professional bodies
 - Some Centres of Excellence may be expert in more than one technique
- DNA
 - Mass Spectrometry
 - Sensors
 - Spectroscopy (IR/Raman)
 - Nuclear Magnetic Resonance
 - Microscopy
 - Immunology
 - Elemental analysis
 - Proteomics
 - Metabolomics
 - Rapid and point of use approaches
 - Data Quality / Chemometrics
 - Nitrogen Factors

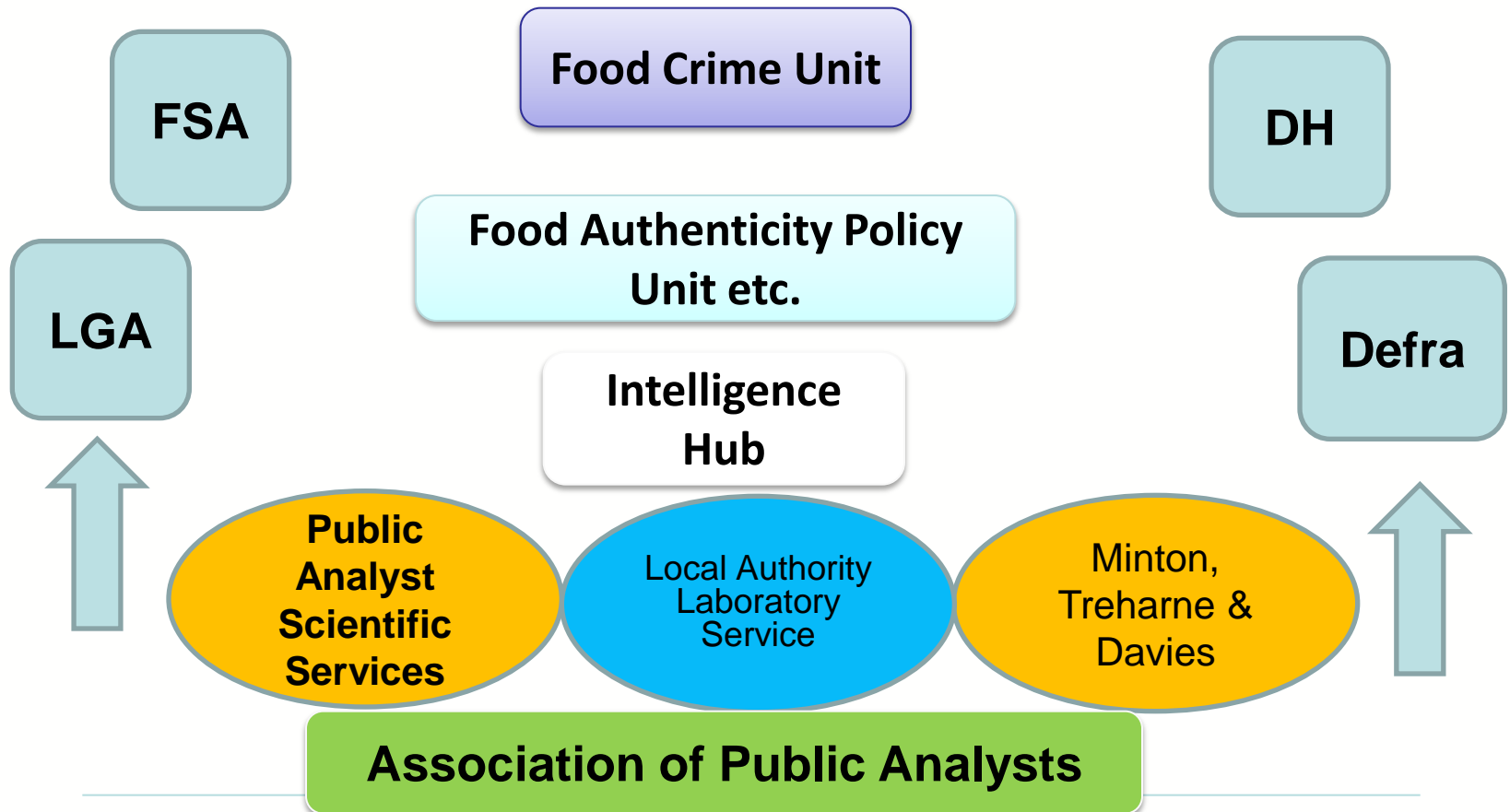


Option 1: Do nothing

- LA labs struggle with small teams, limited planning, uncertain future, limited investment and continue to decline, in next 3-5 years LA labs close, service provided by private sector
- Potential Gains –
 - private sector efficiencies of scale in routine analysis, access to sophisticated techniques not available in LA labs at present (e.g. isotope mass spectrometry)
- Potential Losses –
 - Limited strategic direction (is there any now?)
 - No strategic asset to UK
 - Subverts Local / Central Government ability readily to access information (e.g. data bases) and manage a crisis
 - Continued disconnect between microbiology and chemistry
 - Risk of Market Failure



Option 2: Transition to a mix of private and public sector supply by a modernised shared service of LA labs





What should a modern public analyst lab look like?

- Sufficient numbers of suitably qualified scientific and legal experts with continuous professional development
- Modern analytical techniques, fit for purpose, standardised method performance criteria
- Efficient and affordable testing and advice
- Adaptable to emerging issues, ability to react quickly and upscale capacity



- Public Analyst Scientific Services (PASS) is a limited company owned by the Eurofins group
- Set up from the Eurofins public analyst team in 2010 to focus exclusively on local authority food and feed safety enforcement
- PASS has 7 public analysts and works with over 150 local authorities in the UK





- 16,000 employees in 200 laboratories in 36 countries
- 100,000 different analytical methods
- Investments in R&D and state-of-the-art equipment
- Rapid response capabilities and large capacity
- In-depth industry expertise in technical & regulatory matters





**Local Scandinavian
Center of Competence
Lidköping (Sweden)**

- Food Chemistry
- Metals
- Pesticides

Vejen (Denmark)

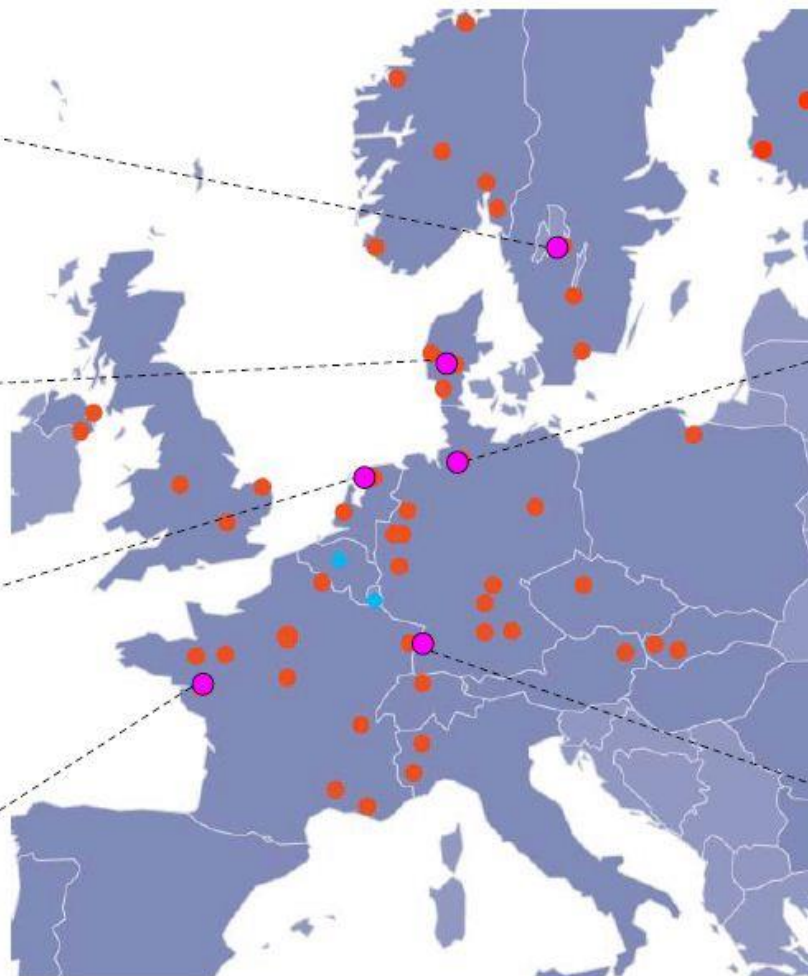
- Vitamins
- Amino Acids

**Heerenveen
(The Netherlands)**

- Carbohydrates &
Dietary Fibres

Nantes (France)

- Authenticity
- Isotopic analysis
- Allergens



Hamburg (Germany)

- Pesticides (Dr. Specht)
- Mycotoxins (WEJ)
- Veterinary Residues (WEJ)
- Organic Contaminants (WEJ)
- Irradiation (WEJ)
- Dioxins & persistent Organic Pollutants (GfA)
- Allergens (WEJ)

Freiburg (Germany)

- GMO (GeneScan)



Eurofins competence centres

Authenticity

Veterinary drug residues

Pesticides

Mycotoxins

Dioxins

Allergens

GMO

Vitamins

Microbiology

Packaging expertise

Heavy metals

Minerals / Trace elements



Sectorial testing demands

Fruits, flavours, oils

Milk, meat, poultry, honey

Fruit, vegetables, cereals, milk

Cereals, chocolate

Milk, oils & fats

Products, ingredients

Honey, soy

Baby and infant food

Hygiene

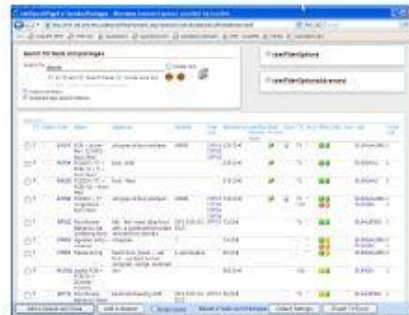
Packaging material

Vegetables, cereals, cacao

Finished products



**Eurofins Online
(EOL)**



**ComLIMS
Offer/Quotation**



eLIMS



Eurodat5

Common database ensures consistency across the Group, ease of identifying testing capability and transfer of data between labs and Competence Centre and the client



- Completed May 2012
- Lab is shared with Eurofins Food Testing UK
- 40,000 square feet, purpose built
- Increase in capacity
- On-going investment – ICP-MS, GC-MS/MS and LC-MS/MS
- Turnover £14 million
- 220+ staff





Main services from the site:

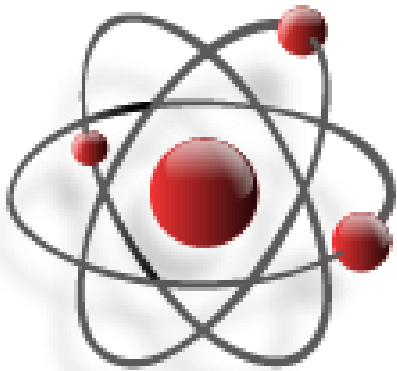
- Nutritional analysis
- Food Chemistry
- Inorganics
- Contaminants analysis
- Allergens
- Microbiology
- *Application of 'Lean' processing...*



Lean Principles:

‘maximize customer value while
minimizing waste’

“faster, better, cheaper”



eurofins lean approach

“improving every day”

Our philosophy:

We will strive to create and deliver customer value.

We are passionate about eliminating waste.

We will actively engage and develop people.

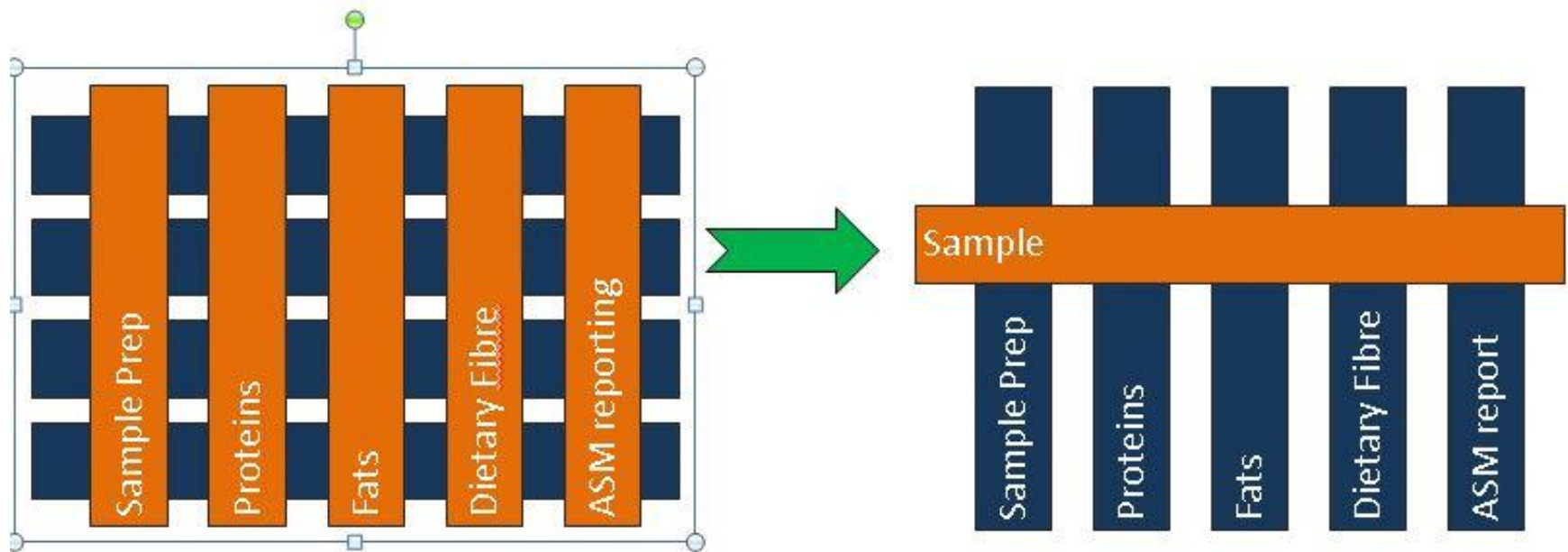
We will actively encourage problem solving.

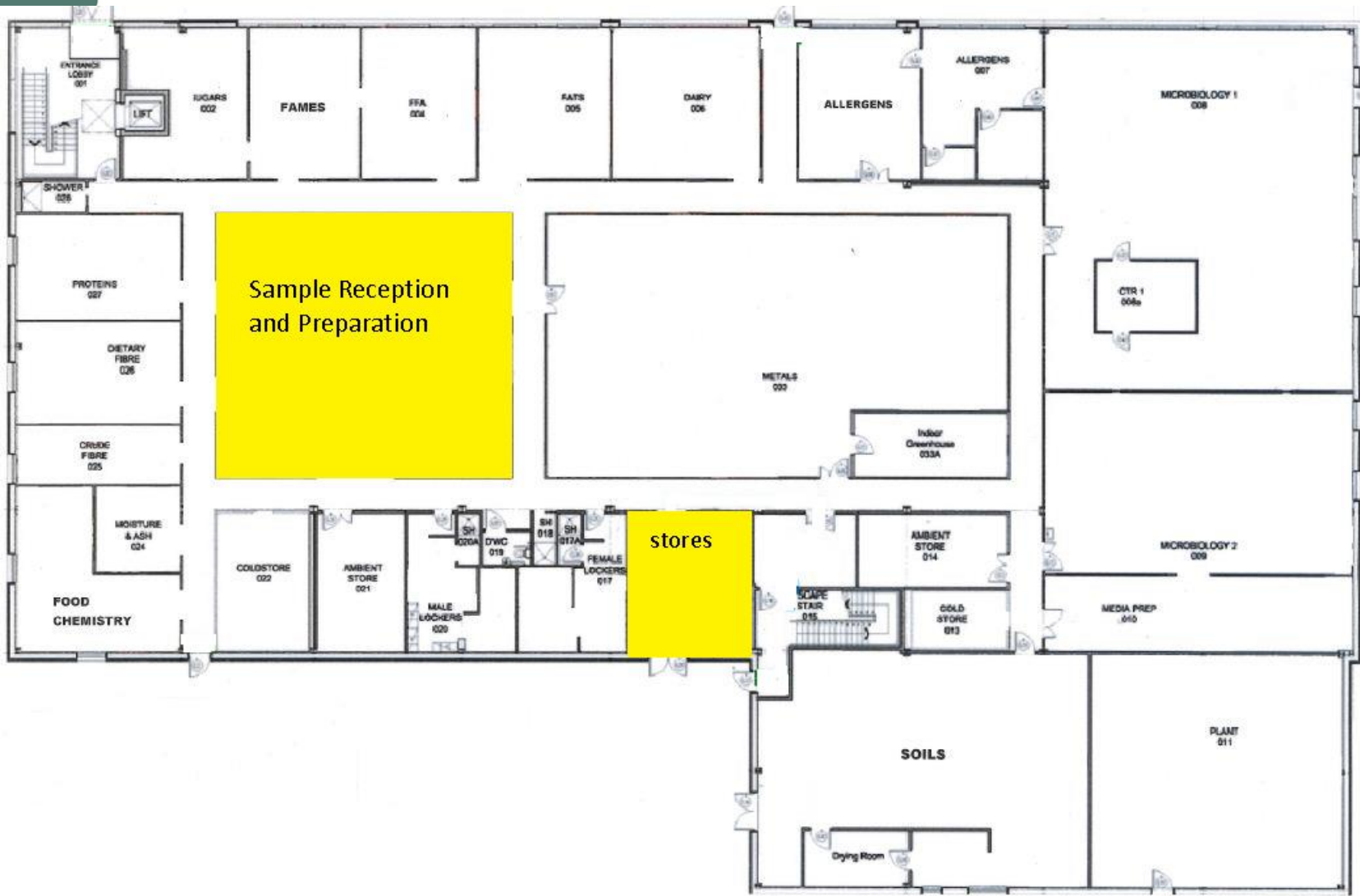
We will demonstrate respect.



Looking at the whole...

Eliminating waste along the value streams instead of at isolated points







A modernised UK public analyst service will still be dependent on samples or funding to be financially sustainable and future-proof.



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