



Animal &
Plant Health
Agency

The Disaster Management Cycle

**An Introduction to the United Kingdom's Emergency
Planning Processes**

Matt Price – Head of APHA's Contingency Planning Division

Aims of Today

- Develop an understanding of the role of the UK's Animal and Plant Health Agency
 - Understand how risk is identified and dealt with across the United Kingdom
 - Identification of information resources that may assist you post this event
-

Introduction to Me

- I am not a vet (although I advise and direct [some] of them!)
 - I am an Australian citizen and I live and work in the UK
 - I have been delivering the services of the Competent Authority and applying OIE and other international standards since 1995
 - 13 years with the Australian Quarantine and Inspection Service – inspecting imported and exported cargo to verify freedom of pests and diseases
 - 10 years with the Animal and Plant Health Agency – first off as a contract manager, then head of national field operations and now head of the contingency planning division
-



Australia and Europe Area size comparison

Darwin to Perth 4396km • Perth to Adelaide 2707km • Adelaide to Melbourne 726km



Defra Lead Government Department Responsibilities

- Flooding
- Pollution of controlled waters
- Consequence management of CBRN incidents, inc HAZMAT
- Overseas nuclear accidents
- Drinking water contamination
- Drinking water supply
- Food supply
- Plant pests & diseases
- Dam inundations
- Animal diseases

Truly the department of biblical disasters!

The Contingency Planning Division

- A stand alone business unit of APHA that works across a range of operational partners and stakeholders to ensure that Government (with a big “G”) has capability to respond to a disease outbreak – or other disruptive event
 - Promote planning emergency and continuity planning activities across government and stakeholders
 - Subject Matter Experts for the local contacts
 - Subject Matter Experts for national contacts
 - **We are the oil in the machine!**
-

Our people – your best asset!

We employ around 2,300 people including:

- Veterinarians
- Plant Health and Seed Inspectors
- Bee Inspectors
- GM Inspectors
- Scientists
- Laboratory Technicians
- Animal Technicians
- Epidemiologists
- Animal Health Officers
- Wildlife Officers
- Administrators



Our locations across England, Scotland & Wales

- Staff based in Cardiff, Edinburgh, London and Sand Hutton alongside policy customers and their teams
- Corporate teams at Worcester, Weybridge, York and Sand Hutton
- Large research & laboratory facility at Weybridge
- Veterinary investigation centres and laboratories
- Customer Service Centres
- Centres for International Trade
- Port and airport border inspection posts
- Field service offices



Simplified Contingency Planning Wheel



The Contingency Planning Division

Resilience and Technical Lead Network

Head of Resilience & Business Support
 Mike Harris
 07917 593748

Acting Head of Resilience & Business Continuity
 Ray Blasco
 Stafford
 0208 2257633

Senior Resilience & Business Continuity Lead
 Field Capability, Equipment, Contracts, Recovery & RTA Lead
 Matt Price
 London
 0208 0263676

Resilience Manager
 Technical Resilience & Field Support
 Kirsty Thaw
 Perth
 0208 0269197

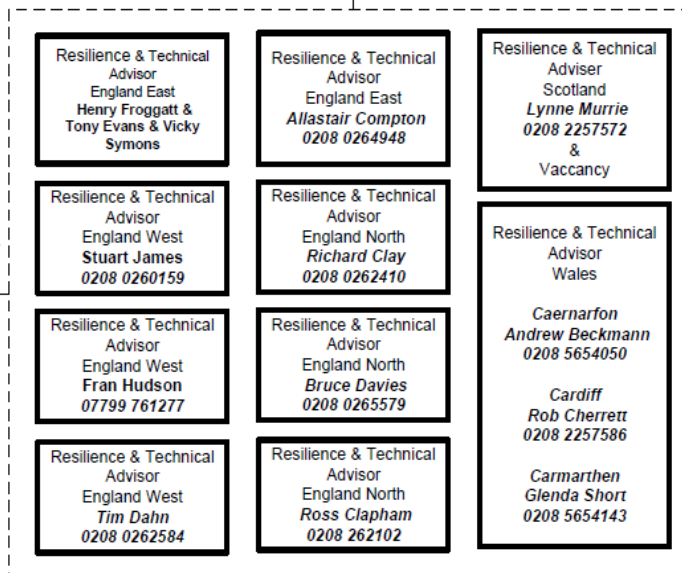
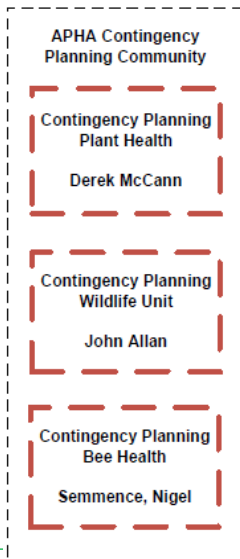
Senior Resilience & Business Continuity Lead
 Engagement, Exercising & Lessons Identified
 Dan Gauntlett
 London
 0208 0262963

Acting Senior Resilience & Business Continuity Lead
 Admin Capability, Plans, Procedures & Continuity
 Grahame Chaplin
 Newcastle
 07464 491628

Senior Operational Technical Lead
 Technical Lead, Training, QA and Equipment and Stores
 Jim Cooknell
 Chelmsford
 0208 0264966

Functional Manager

Functional Manager



Resilience Manager - Engagement & Assurance
 Grahame Chaplin
 Newcastle
 0191 2153005

Resilience Manager - Exercises
 Rob Mathias
 Cardiff
 0208 0260644

Resilience Manager - National Exercise
 Owain Thomas
 Cardiff
 0208 2258034

National Exercise Support
 Tom Evans
 Carmarthen
 0208 2257562

Resilience Manager - IT & Procedures (Temp Seconded to FSM)
 Gemma Roden
 Newcastle
 0208 0264769

Resilience Manager - Business Continuity
 Alastair Smith
 Preston
 0208 0265571

Resilience Manager - Plans & Estates
 Eurig James
 Carmarthen
 0208 5654138

Resilience Manager - CSCs Resilience
 Carole Zeall
 Preston
 0208 0265582

Our service users & delivery partners

- Over 220,000 agricultural holdings in Great Britain
 - 18,000 registered veterinary surgeons
 - Over 186,000 livestock keepers registered on Sam
 - Over 38,000 beekeepers, 51,000 apiaries and 188,000 colonies registered on BeeBase
 - Over 800 authorised plant nurseries/gardens centres/plant suppliers in England and Wales
 - **How do we engage with our staff and stakeholders?**
-

Defra Strategy: Impact & Outcomes

We are creating a great place for living through our strategic objectives

EU Exit



A smooth and orderly exit from the EU, developing new approaches - both to grow more, sell more, and export more; and to leave the environment in a better state than we found it.

Excellent Delivery



Excellent delivery for customers, on time and to budget and with outstanding value for money

Environment



A cleaner, healthier environment, benefiting people and the economy

Food and Farming



A world-leading food and farming industry

Rural



A rural economy that works for everyone, contributing to national productivity, prosperity and wellbeing

Protection



A nation better protected against floods, animal and plant diseases and other hazards, with strong response and recovery capabilities

An Outstanding Organisation



An organisation continually striving to be the best, focused on outcomes and constantly challenging itself

Our People



An inclusive, professional, flexible, workforce where leaders recognise the contribution of people, and build capability to deliver better outcomes

Objective 4: Protection

A nation better protected against floods, animal and plant diseases and other hazards, with strong response and recovery capabilities



Our ambition

For the UK to be well protected against natural hazards, with the right balance of responsibility between government, communities and business

Our aims

- UK better protected against:
 - flooding and coastal erosion
 - animal and plant pests and diseases
 - invasive non-native species
 - the risks of antimicrobial resistance
- Enhanced resilience of businesses and individuals to drought and loss of water supply
- Strong preparedness to respond to emergencies where Defra group has lead responsibility

Key outputs

- 300,000 homes across UK better protected from flooding and coastal erosion
- Increased percentage of cattle herds in England that are free from bovine TB
- Research investment delivering ash die back tolerant trees
- Reduction of 20% in overall antibiotics sold for use in farming animals by 2018

Our approach

- Invest £2.5 billion over the next 6 years on enhanced flood protection, and safeguard £171 million of maintenance spending in real terms
- Invest in animal and plant health science
- Invest in the Livestock Information Programme to manage livestock information more effectively, changing the way we interact with the industry and enabling us to respond better during a disease outbreak
- Base interventions on sound evidence, including through the National Resilience Review of protection from floods
- Take an integrated, catchment based approach to managing the environment and protecting from natural hazards including natural flood risk management options
- Improve modelling and mapping, including through open data
- Play our part and empower others to play theirs
- Lead the way to recovery when incidents occur
- Spot and manage emerging threats in proportionate ways, working with national and international partners as needed

Our purpose



Our purpose

We are responsible for identifying, managing and eradicating incidences and outbreaks of endemic and exotic diseases and pests in animals, plants and bees.

This requires expertise in the areas of:

- inspection
 - testing and diagnosis
 - epidemiology
 - surveillance
 - disease and pest identification, containment and eradication
 - post-outbreak recovery
 - customer support and advice
-

A snapshot of a year's activities

- 196,248 plants/plant material checks and visits
- 56,948 bovine TB surveillance herd test visits
- 71,082 animal export health certificates issued
- 4,003 animal by-product control inspections
- 1,382 welfare inspections
- 900 cross-compliance inspections



A snapshot of a year's activities

- 39 wildlife inspections
- 27,874 bee colony inspections
- 104 bee colony import consignment checks
- 877 bird registrations
- 42,907 CITES permits and certificates issued
- 110 zoo inspections
- 5 circus inspections
- 83,500 pet passports issued



A snapshot of a year's activities

- 5,522 plant export certificates issued
- 57 seed audits aimed at minimising the risk of non-GM seed becoming contaminated with GM seed
- 10 audit/inspections of consent holders/release sites for consents to release experimental GMOs
- 1 peer-reviewed publication on new breeding techniques for GM seed



A snapshot of a year's activities

- 525 research projects
- 233 scientific and veterinary papers published
- 650,757 laboratory tests for surveillance, international trade, research projects and commercial customers
- 300 commercial projects



Products and services

Biological Reagents



Vaccine Development



Bacterial ID and Characterisation



Intellectual Property



Proficiency Testing



Virus Discovery



Culture Collection



Pathology and Bio-imaging



Wildlife Management



Laboratory Testing



Research and Development



Additional Services



Disease emergency response

During recent years we have provided a disease emergency response to the following outbreaks:

- **Foot and mouth disease and bluetongue in 2007**
- **Highly pathogenic avian influenza in 2007/8 & 2014/15/16/17**
- **Asian hornet in 2016 (and now 2018!)**
- **Sweet chestnut blight in 2017**
- **Rabies in quarantine in 2008**
- **Equine infectious anaemia in 2010 and 2012**
- **Chalara (ash dieback) since 2012**
- **Asian longhorn beetle in 2012**

Our response involves teams from across the agency working with our delivery partners on diagnosis, testing, epidemiology, surveillance and disease containment

The Four “F’s” of the early 2000’s

- Foot and Mouth Disease – 6.5 million animals culled, direct cost to government £3 billion!
 - Flood Events – lasted in some areas for over 14 weeks – leading to a wide range of issues that affected human and animal health
 - Fire Brigade Strike – army was called to deliver services
 - Fuel Blockade – refineries and distributors were blockaded leading to fuel shortages
 - Lead to the creation of the Civil Contingencies Act 2004
 - Places a legal obligation to identify, prepare and plan to respond to a range of events
-

Local Resilience Forums

- Local Resilience Forums identify local risks and determine how they should deal with them locally
 - Risk Registers are collated and risks are “themed”
 - Risks are elevated to the Lead Government Department for subject matters to provide expertise and advice
 - National Risk Register is then drawn together – this is published to allow the public and other stakeholders to make their own risk based decisions that may affect their business
 - In a response, the LRF is headed up by the Chief of Police – draws together the other response bodies – if the event is large, there may be multiple LRFs – these need to be coordinated
-

Guidance

National Risk Register of Civil Emergencies – 2017 Edition

The National Risk Register 2017 explains the risks of major emergencies that could affect the UK in the next five years and provides resilience advice and guidance.

Find out if you're at risk of flooding in England

You can find out if you're:

- at immediate risk of flooding - check [current flood warnings](#) and [river and sea levels](#)
 - at risk of [flooding in the next 5 days](#)
 - in an area that's likely to flood in the future - check your [long term risk of flooding](#) and view your area's flood maps
-

Command & Control

Strategic
(Gold)

Ministers &
Senior Officials

Tactical
(Silver)

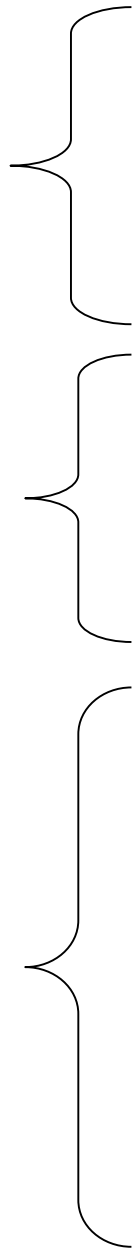
National Disease Control
Centre (NDCC)

Operational
(Bronze)

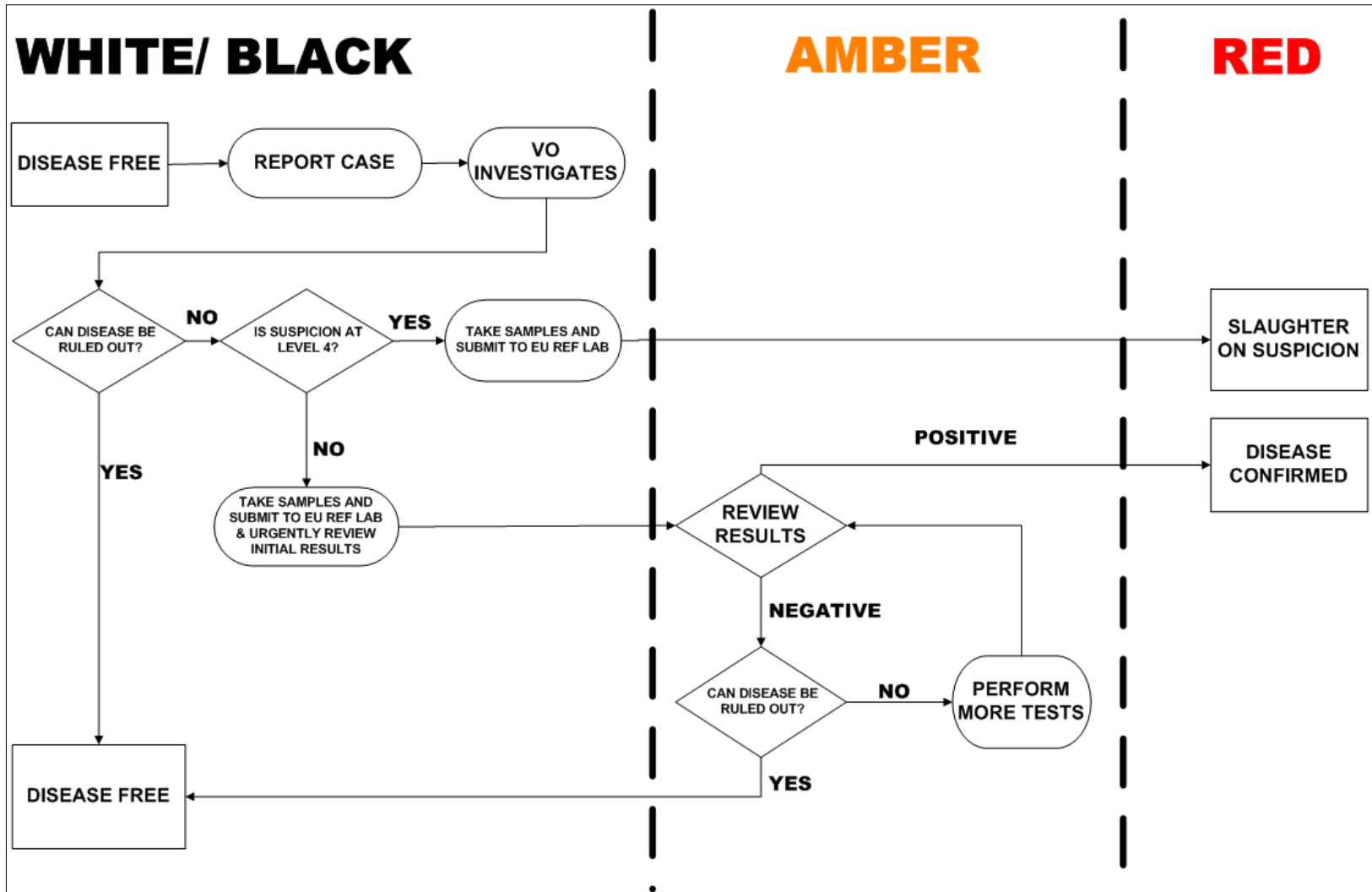
Central Disease Control
Centre(s) (CDCC)

Forward Operations Base(s)
(FOB)

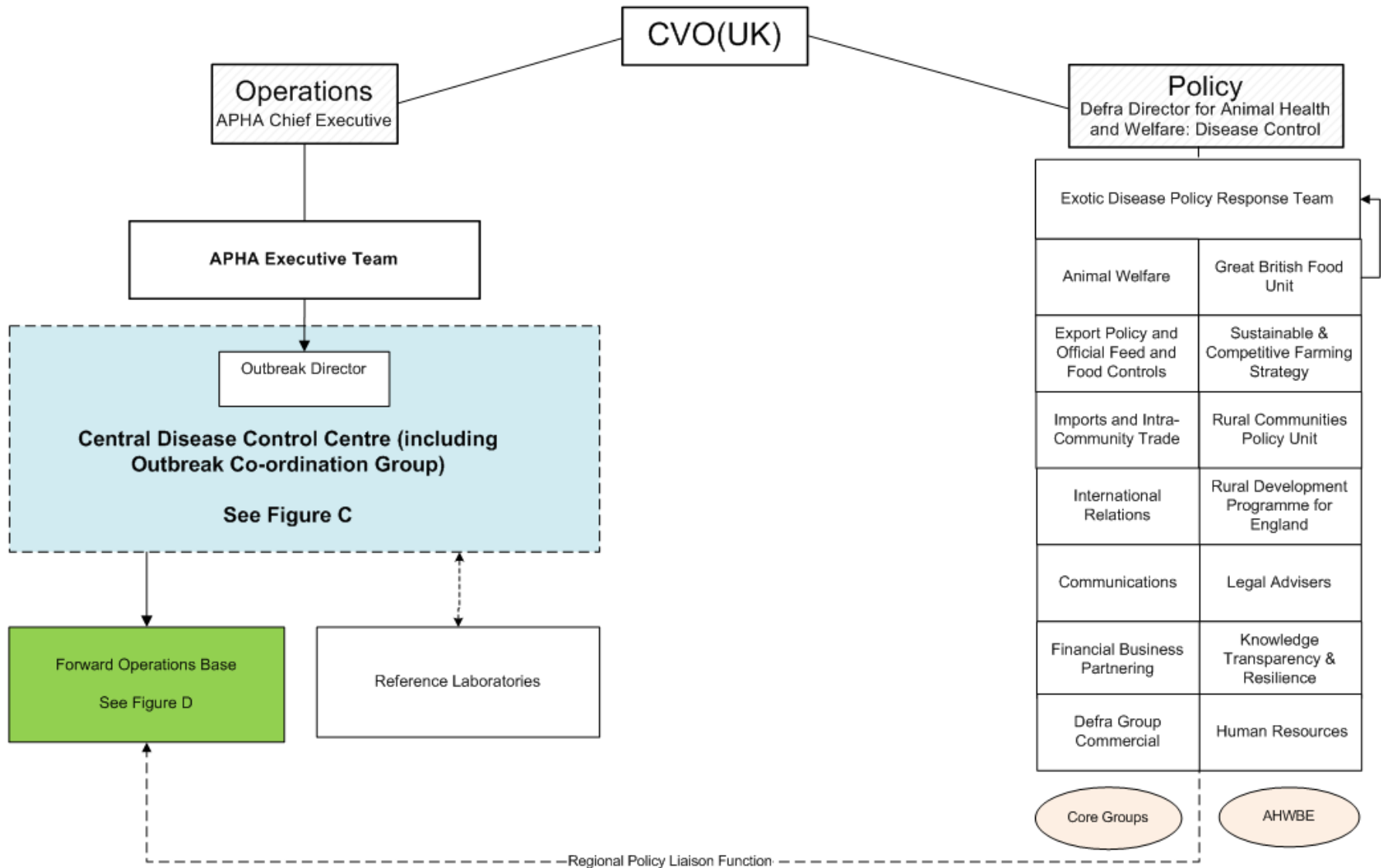
Infected Premises



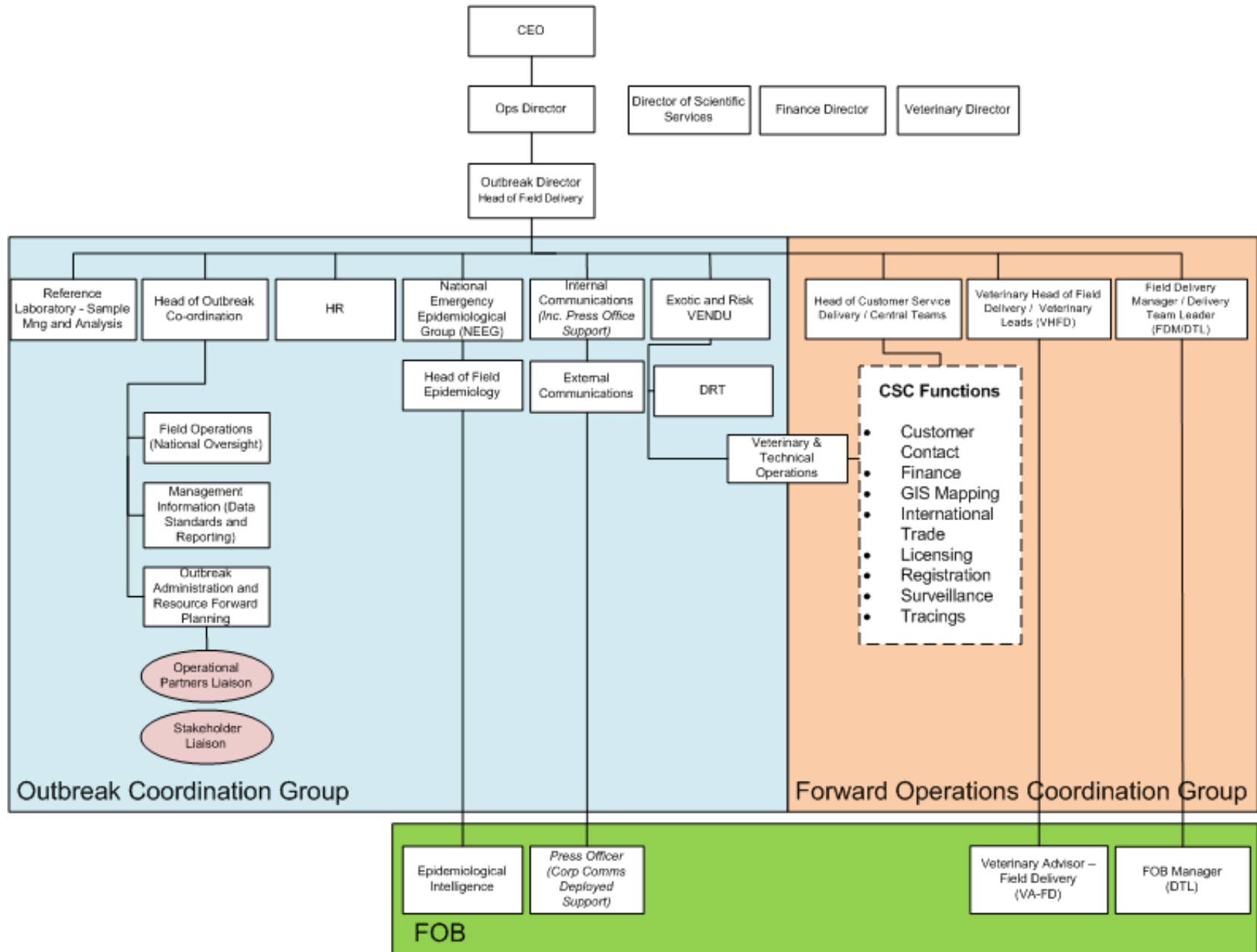
Alert Status – Moving to Confirmation



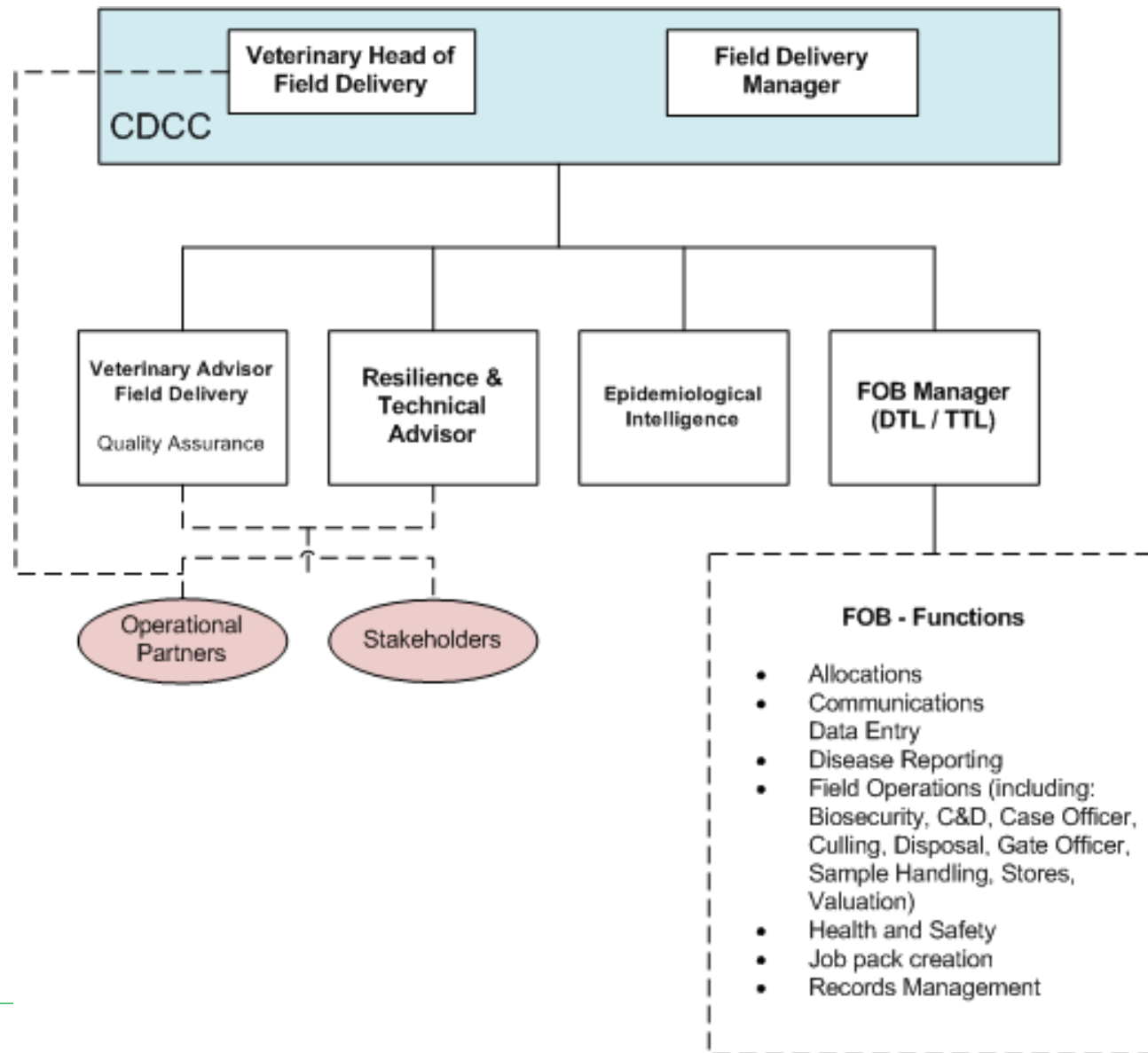
NDCC



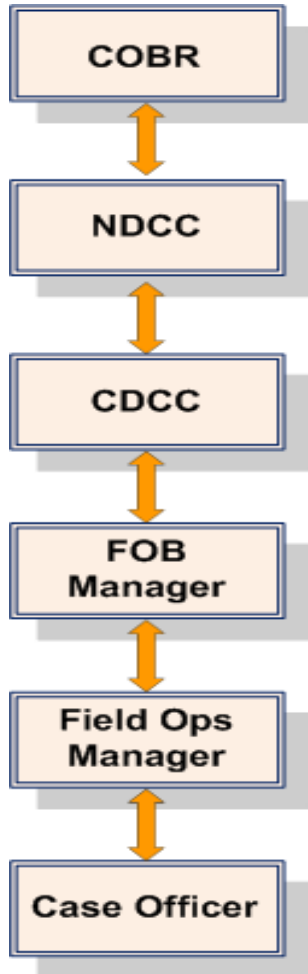
CDCC



FOB



REPORTING STRUCTURE



Competent authorities



- The UK is complex in relation to how things are managed. For the purposes of this presentation, we will be focusing on England's response.
 - Defra (Department for Environment Food and Rural Affairs) is the nominated Lead Government Department (LGD) – but is supported by other Government Departments
 - The Environment Agency is the Defra agency that leads on flooding events
 - Local Resilience Forums (LRFs) are “stood up” in the event of an incident occurring. These are usually coordinated by the Police department that services the area.
 - LRF's bring together a range of local operational partners and stakeholders to support the local response
 - The Animal Plant and Health Agency (also a Defra agency) participate in the LRF meetings
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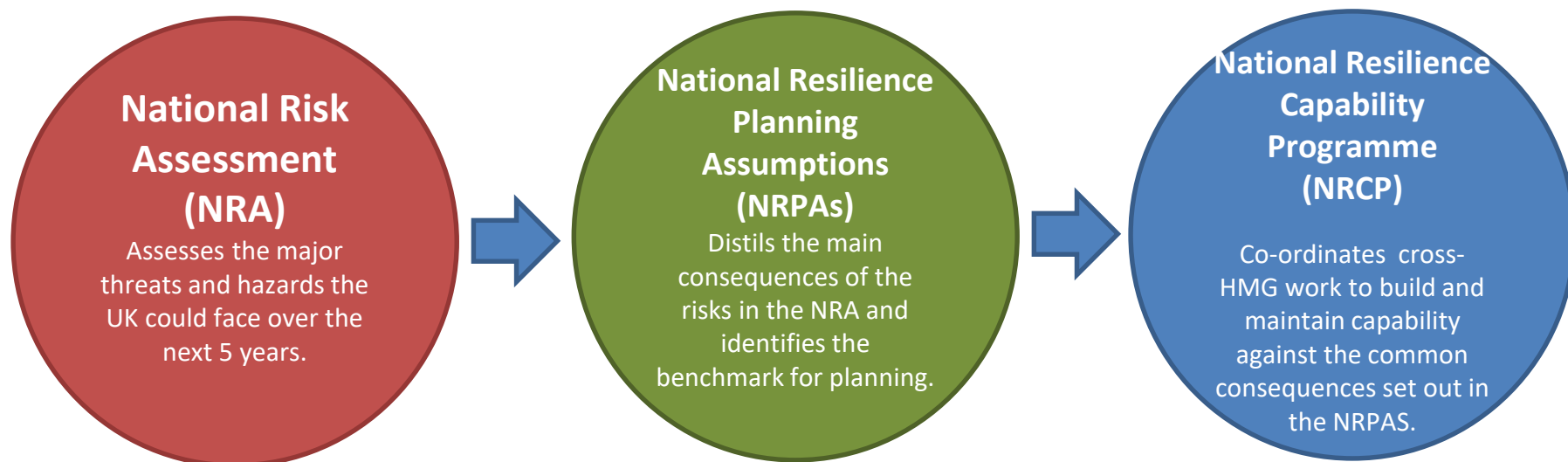


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NRCA – mechanisms for a National Capability Assessment



Assessing risks to the UK, identifying the common consequences of these risks, and building capabilities to respond to these consequences.



The National Resilience Capability Programme provides a comprehensive framework for response to any emergency

Functional Workstreams

These build capability against specific outcomes of risk scenarios

Mass Fatalities (HO)	Mass Casualties (DH)	CBRN (HO)	Flooding (DEFRA)
Infectious Diseases (DH)	Animal Diseases (DEFRA)	Evacuation & Shelter (CO)	Site Clearance (DCLG)

Essential Services Workstreams

These drive work to respond to the loss or disruption of essential service sectors

Transport (DfT)	Energy (DECC)	Telecoms & Postal (DCMS)
Finance (HMT)	Food & Water (DEFRA)	Health (DH)

Structural Workstreams

These ensure that the frameworks for co-ordinating and directing a response are in place

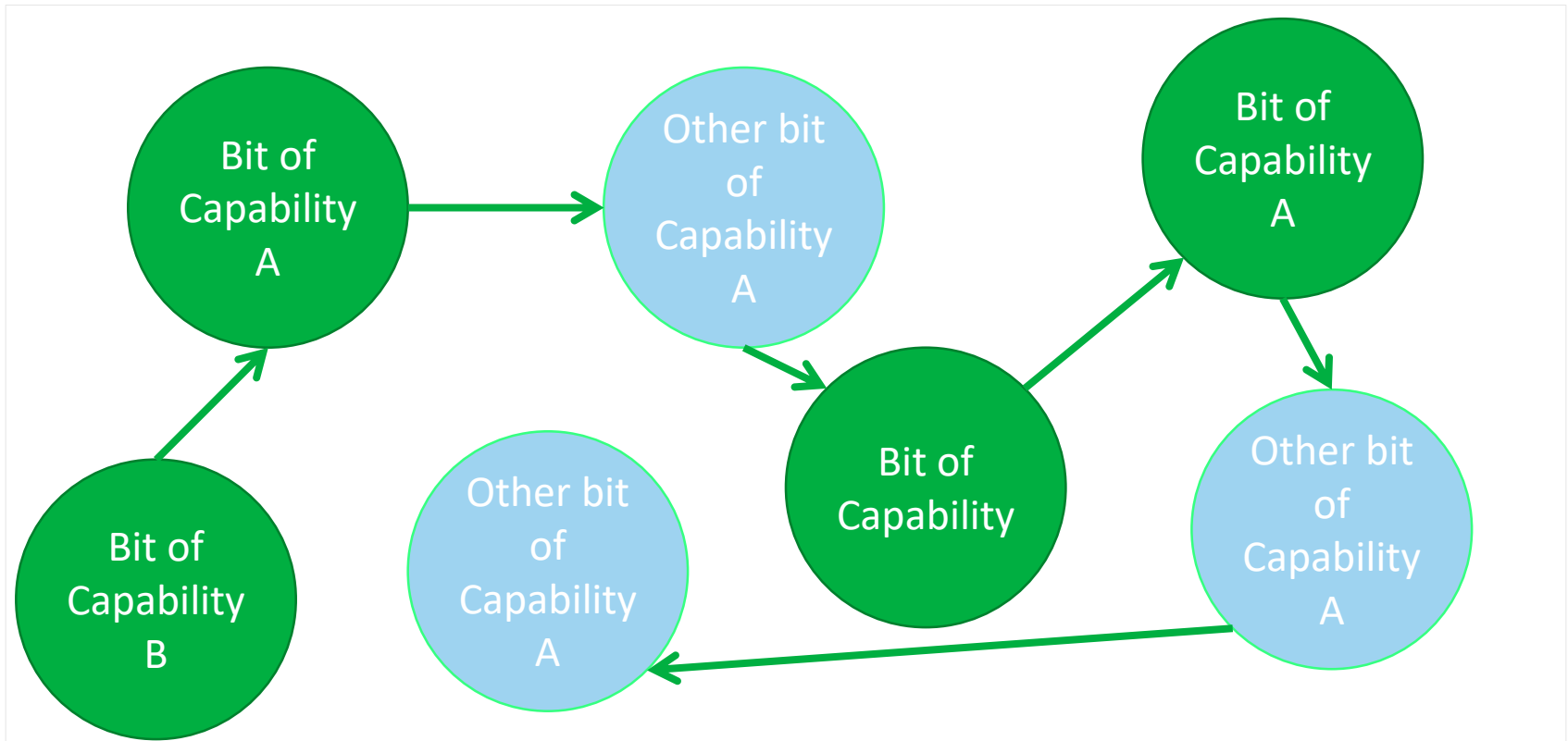
Central Response (CO)
Local Resilience (CO/DCLG)

Supporting Workstreams

These build capabilities that are needed in all risk scenarios

Warning & Informing (CO)	Resilient Telecommunications (CO)
Interoperability (CO)	Humanitarian Assistance (CO)
Community & Corporate Resilience (CO)	Recovery (CO)

CCS used to monitor disparate bits of capability

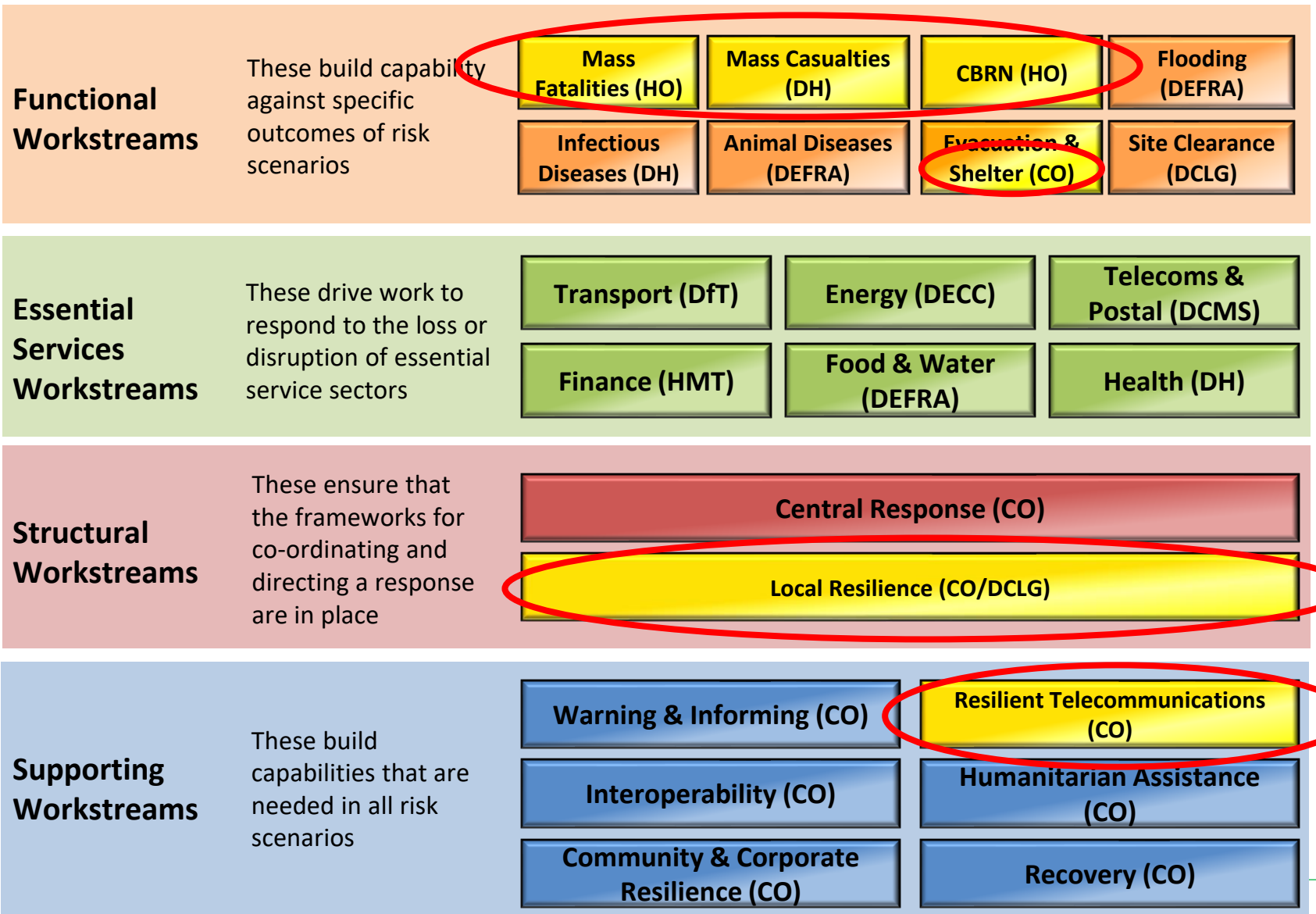


But this did not tell us whether we had all the correct capabilities or sufficient amounts of capabilities to meet an end-to-end response to the NRPA?

Purpose of the NRCA

- The National Resilience Capability Assessment is designed to provide a **more detailed, systematic** assessment of UK capability at all response tiers.
 - It will identify **capability gaps and areas of duplication** across and within work-streams. It will identify where there is no HMG **lead for a capability**. It will also highlight where there are **information** gaps.
 - It will allow LGDs to gain a better understanding of **where their own priorities for capability building might lie** and provide a basis for discussions on capability building with their respective ministers.
-

The National Resilience Capability Programme provides a comprehensive framework for response to any emergency

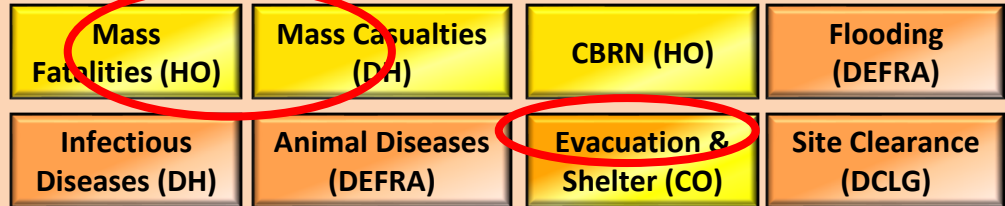


The National Resilience Capability Programme provides a comprehensive framework for response to any emergency

Functional Workstreams

Marauding Terrorist Firearms Attack

These build capability against specific outcomes of risk scenarios



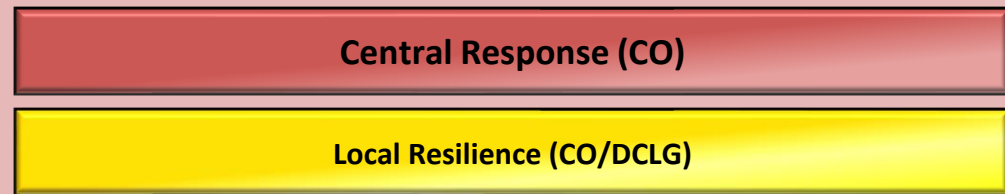
Essential Services Workstreams

These drive work to respond to the loss or disruption of essential service sectors



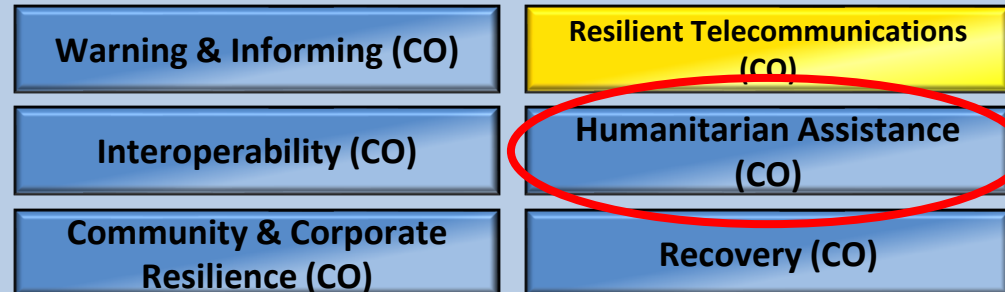
Structural Workstreams

These ensure that the frameworks for co-ordinating and directing a response are in place



Supporting Workstreams

These build capabilities that are needed in all risk scenarios





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NRCA Process

NRCA Stages

Stage 1:

What do we need:

*To meet strategic aim
of response to the
planning assumption
e.g. rapid culling of 1.9
million animals*

Stage 2:

**What do we
currently have...**

*To respond to the
planning assumption
e.g. ability to rapidly
cull X million animals*

Stage 1: What capability is needed to meet the Planning Assumption?

Question 1: What are our aims for each phase (e.g. identifying disease quickly, rapid culling of infected animals)

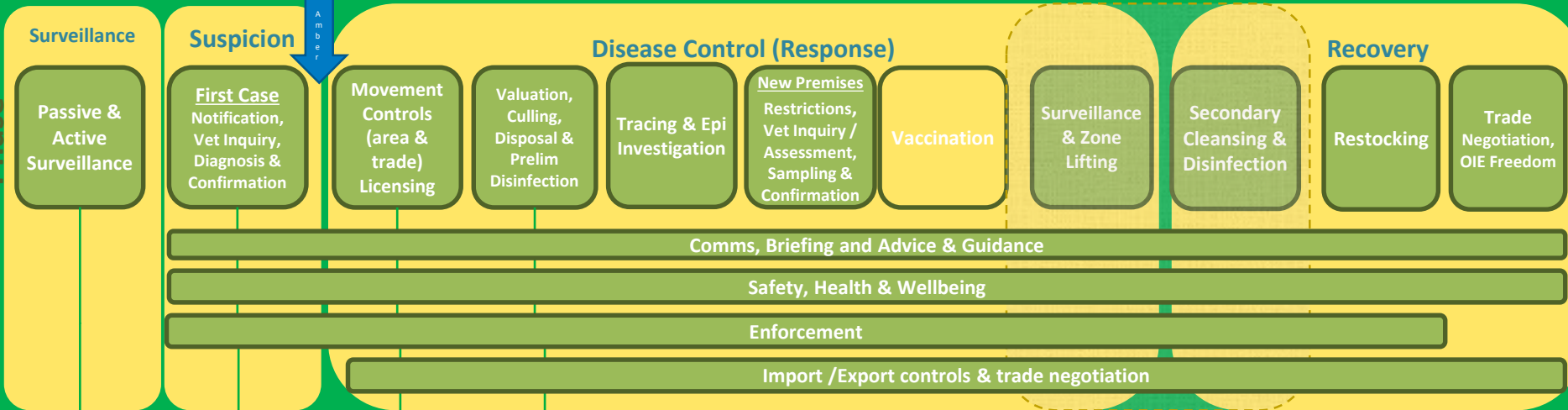
Question 2: How do we achieve that? Is it by:

- **Doing more of the same:** e.g. simply increasing the capability e.g. numbers of personnel or equipment, increasing training etc.
 - **Doing things differently:** e.g. strip out gold-standard components of a capability or task to make response more efficient without compromising the overall standard e.g. not sampling every premises or lifting zones county
 - **Acquiring a new capability:** this could be a new type of equipment, plans or training that does not currently exist.
-

Animal Disease

Workstream

Phase



Elements



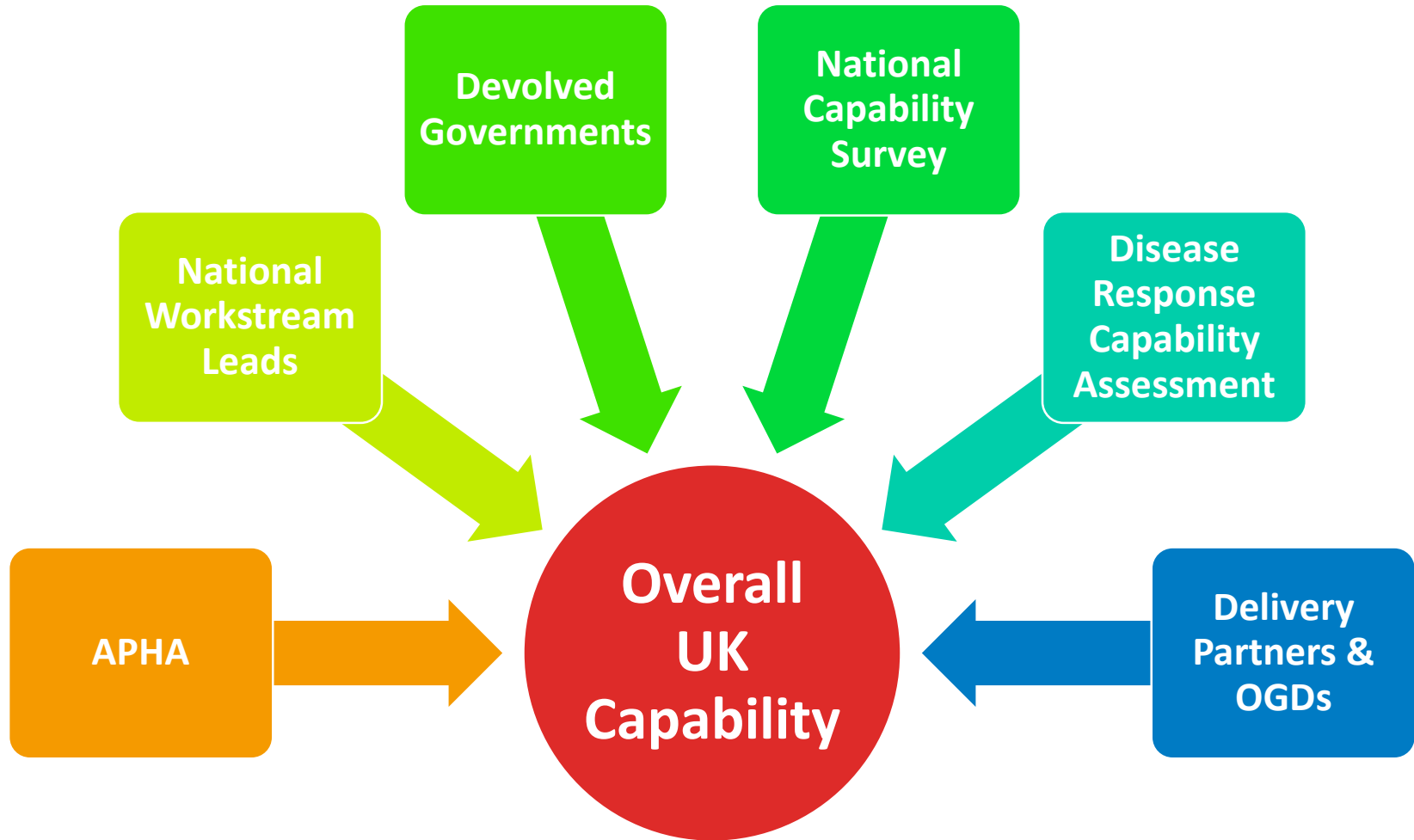
.....and the same for each activity

Generic Capability Components (Elements):

- **Personnel:** sufficient and capable personnel to deliver capabilities (permanent, NPR and suppliers).
 - **Equipment & Supplies:** these include expendable and non-expendable items need to support capabilities (e.g. PPE, lab consumables, transport vehicles, plant & equip etc.)
 - **Infrastructure:** lab capacity, buildings / facilities (NDCC, LDCC, FOB), disposal capacity that support capabilities.
 - **Plans & Policy:** these provide the principles that guide responders and other stakeholders in response
 - **Training & Exercising:** the means to practice, develop and validate plans to deliver capabilities.
 - **Information:** the data, information and knowledge requirements for each capability, and the methodology designed to gather, handle and exploit this information.
 - **Legislation:** provides the legal underpinning to guarantee the delivery of capabilities by relevant stakeholders.
-

Stage 2: What is our current capability?

We get information from:



Stage 2: Assessment Process

Phase 1: Surveillance

Strategic aim: Detect the incursion of exotic notifiable disease into the UK animal population at the earliest practical stage

Phase	Task	Legislation	Information	Personnel	Training	Infrastructure
Surveillance	Passive surveillance		Details on GOV.UK	Trained vets & techs – no.	Vets and farmers aware of clinical signs indicative of notifiable disease	Access to a network of PM providers
	Active surveillance	Statutory surveillance set out in Directives / Regulation		Trained vets & techs – no.		Lab capacity
	AI Survey					
	Sheep & Goat Survey					
	Wild bird					
	System in place for notifying suspicion of disease		Details on GOV.UK		Official vets	Rural helpline 03000 200 301- system for out of hours based on pagers and follow me nos. In Scotland - 5 out of hours



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The Reasonable Worst Case Scenario (RWC)

Based on national Risk Assessment (H25)

- FMD outbreak
 - 95th percentile of outbreaks (i.e only 5% possible outbreaks would be this big or bigger)
 - Disease incursion in sheep flock in north
 - Not immediately detected and infected sheep move off index premises before disease is identified
 - Involves nearly 900 IPs
 - Up to 2,000 DCs
 - 1.9 million animals culled
 - Cost to UK nearly £2billion
-

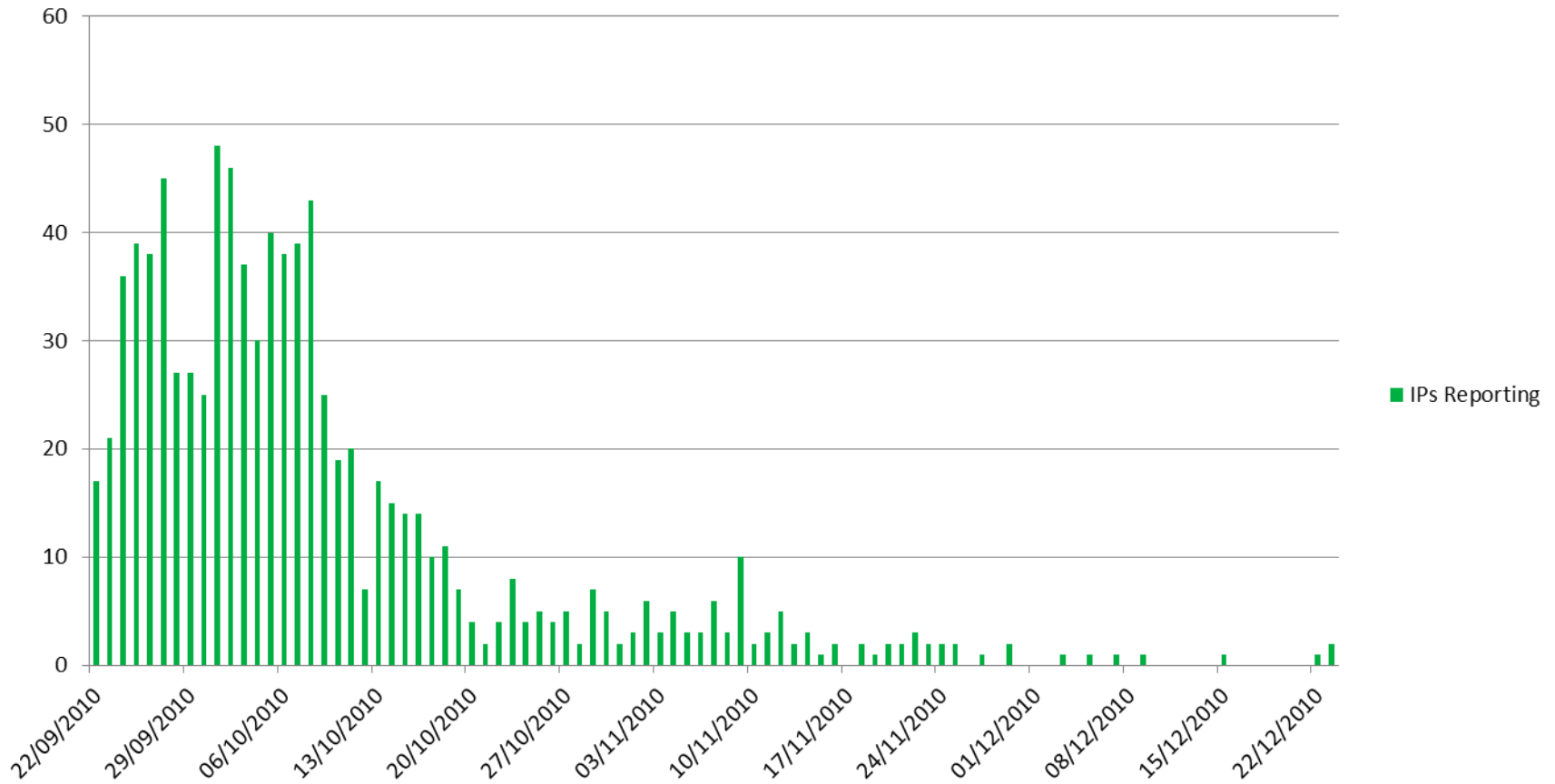
More detailed scenario

- Based on Exodis model (selected one run that was similar to H25)
- Duration nearly 4 months
- Over 1,000 welfare cull premises
- Affects 21 counties

	No. premises	Culled Cattle	Culled Pigs	Culled Sheep	Culled Goats	Culled Deer	Total Culled
IPs	894	162,245	3,554	988,255	29	761	1,154,844
DCs	1,726	94,005	18,267	651,445	291	12	764,020
Total IP & DC	2,620	256,250	21,821	1,639,700	320	773	1,918,864
Welfare culls	1,125	93,292	20,006	294,997	70	182	408,547
Total all premises	3,745	349,542	41,827	1,934,697	390	955	2,327,411

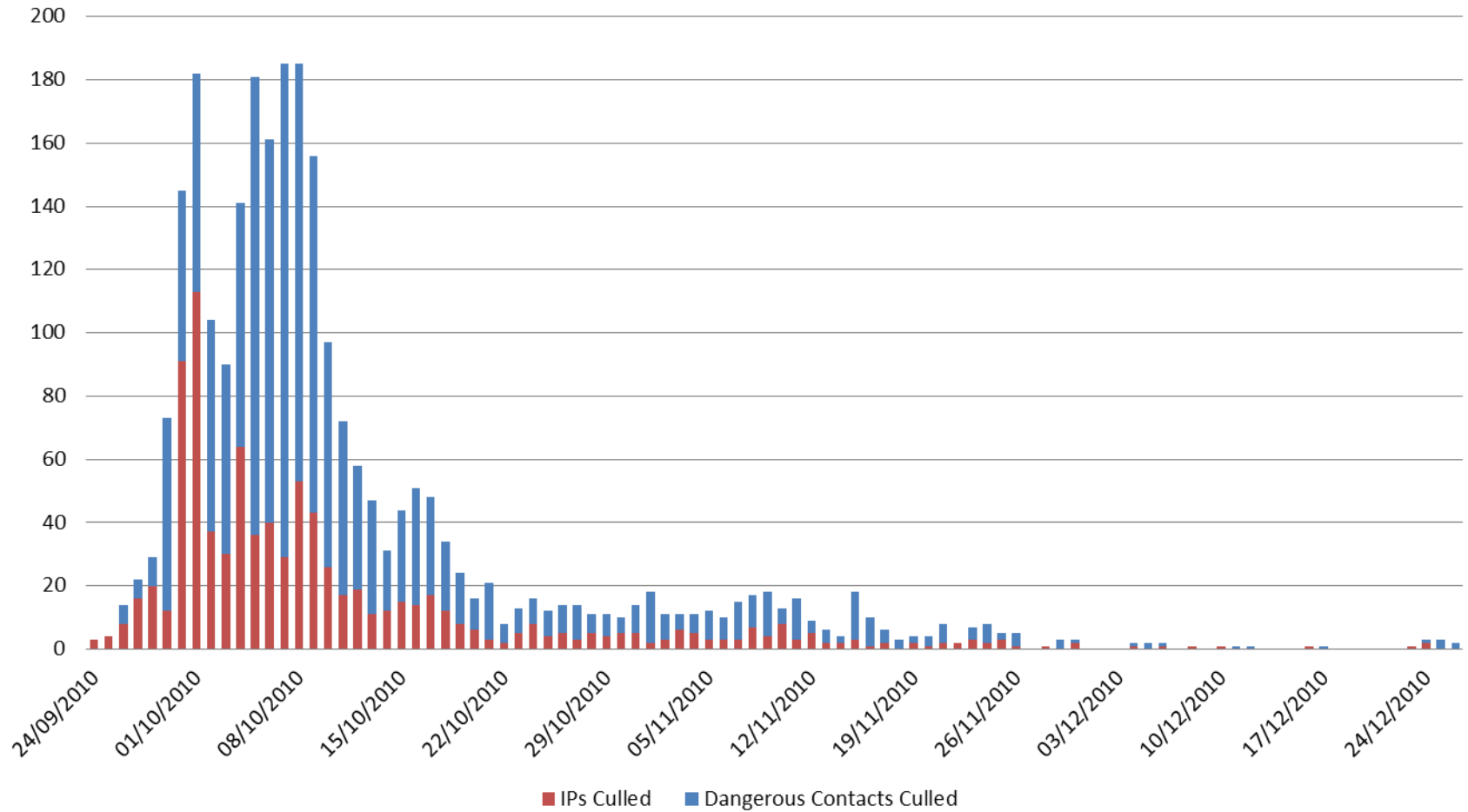
IP Report Dates

IPs Reporting



Premises to be Culled

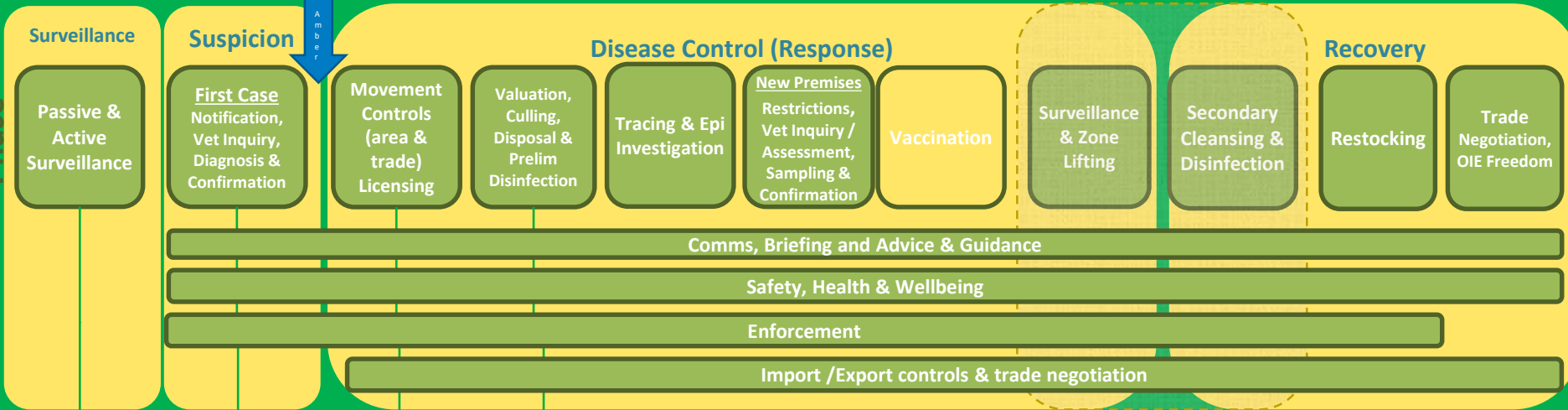
Premises Culled



Animal Disease

Workstream

Phase



Elements



.....and the same for each activity

Competent authorities



- The Defra Contingency Plan provides for command and control structures that can be adapted to support any emergency event
 - APHA have well defined incident management procedures prepared to support a number of disruptive events
 - APHA contracts are available for disease incidents – but also are available to support any other event
 - APHA is represented at Local Resilience Forums and deal with any animal health/welfare concerns that may be identified
-

Cooperation with private actors and non-governmental organisations



- Early engagement ensures “buy in” from the outset of the event occurring
 - Memorandum of Understanding sets out how each group will help/assist
 - Sets out legal/financial considerations that may need to be made
 - Regular meetings ensure parties are aware of their capabilities
-

Competent authorities



- The UK's overall preparedness is overseen by the Civil Contingencies Secretariat
 - Capability checks across the delivery agents responsible for carrying out this work
 - Animal health and welfare issues are lead centrally by APHA – supported locally by Trading Standards department of the Local Authority
 - Operational partners exercise their own capability – APHA input into the exercises for realism
 - Different elements of the response are tested at varying levels and times
-

Experience of natural disasters

- A large number of flooding events brought about by a variety of reasons – eg storms, tidal surges etc – some localised and some wide scale
 - 2007 flood an extreme event for scale of cost
 - Droughts/heat waves
 - Heath fires
 - Heavy snow/ice
-

Training and simulation exercises

- The UK's overall preparedness is overseen by the Civil Contingencies Secretariat
 - Capability checks across the delivery agents responsible for carrying out this work
 - Animal health and welfare issues are lead centrally by APHA – supported locally by Trading Standards department of the Local Authority
 - Operational partners exercise their own capability – APHA input into the exercises for realism
 - Different elements of the response are tested at varying levels and times
-

Exercises, training and lessons learned

- Lessons are an integral part of any response
 - Can be bad as well as good!
 - There will be synergies across the different levels of response for both animal disease and to deal with a response to a natural disaster
 - Local teams that deal with known issues/problems may engage more often
 - Lessons are published on the internet at provides for greater understanding of the problems
 - Lessons are assigned “owners” to take matters forward – application of lessons also require review
-

Links to Information

- **Will be provided before we close the conference!**



Any Questions?

Thank You For Listening
