

Exercising New Zealand FMD Preparedness

Exercise Taurus EDRC/FORT

14-18 March 2005

Science Week 2005

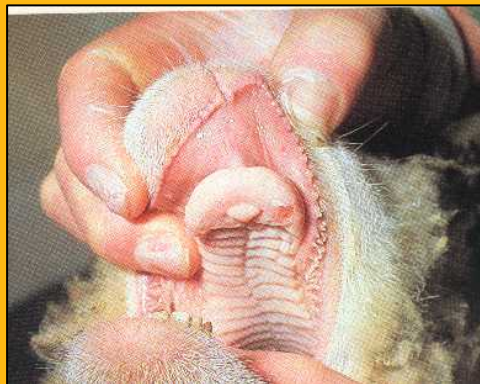
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Incursion Investigator (Animals)

Investigation and Diagnostic Centre

Wallaceville

New Zealand

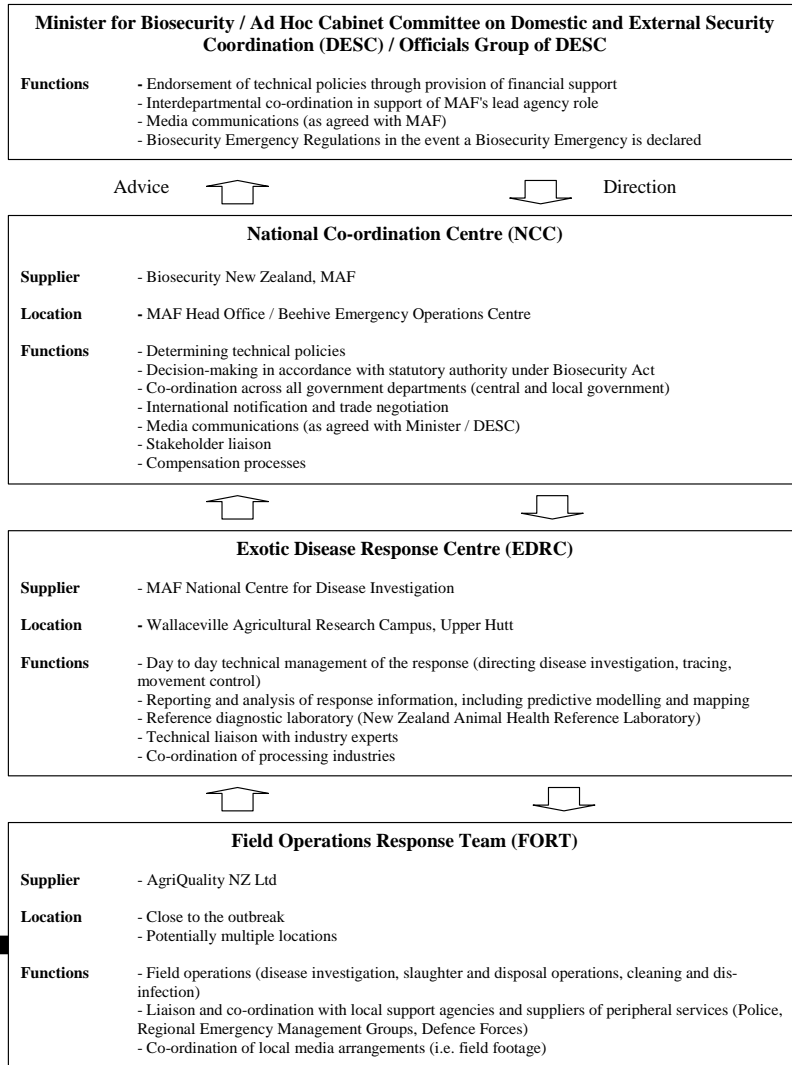


Why Exercise?

- **Test the system**
 - Training of individuals and groups
 - Clarify roles and responsibilities
 - Improve performance
 - Enhancing current contingency plans
 - Reveal planning weaknesses
 - Reveal resource deficiencies
- **Promote cooperation, awareness, confidence**
 - Industry
 - Professional bodies
 - Central government and regional bodies
 - General public

What are we testing?

Structural diagram of the MAF exotic disease response system: Overview of Command and Control



Field Exercise 14-18 March 2005



Who was involved?

- **MAF**
 - National Response Centre:
 - National Centre for Disease Investigation (NCDI):
 - New Zealand Food Safety Authority (NZFSA):
- AgriQuality New Zealand
- Asure New Zealand
- EpiCentre
- **Police:**
- **Transit New Zealand:**
- **Road Transport Forum -New Zealand:**
- **Regional Council and Territorial Local Authorities:**
- **Regional Emergency Management Groups:**
- **Animal product processing industries: (Meat, Dairy, H&S, Rendering)**
- **National Institute of Water and Atmospheric Research (NIWA):.**
- **Rural stock and station agencies:**
- **Affected farmers**
- **Local Veterinarians**
- **Overseas Visitors**



How to test the system

- Need an Overall Aim
 - To hold a full scale operational level simulation to test New Zealand's national exotic disease response systems
- Avoid strategic drift with specific Objectives
 - New FMD plan
 - Refined operational structure
 - Communication between groups
 - Resources and capacity

Key questions – size does matter?

- What size epidemic are you funded to manage?
 - How to challenge all operational groups?
 - Where do objectives focus planning?
 - What type of exercise design?
 - Tabletop
 - Functional
 - Full scale
- Other considerations
 - Realism
 - Maintaining interest
 - Managing workloads
 - Build on past achievements

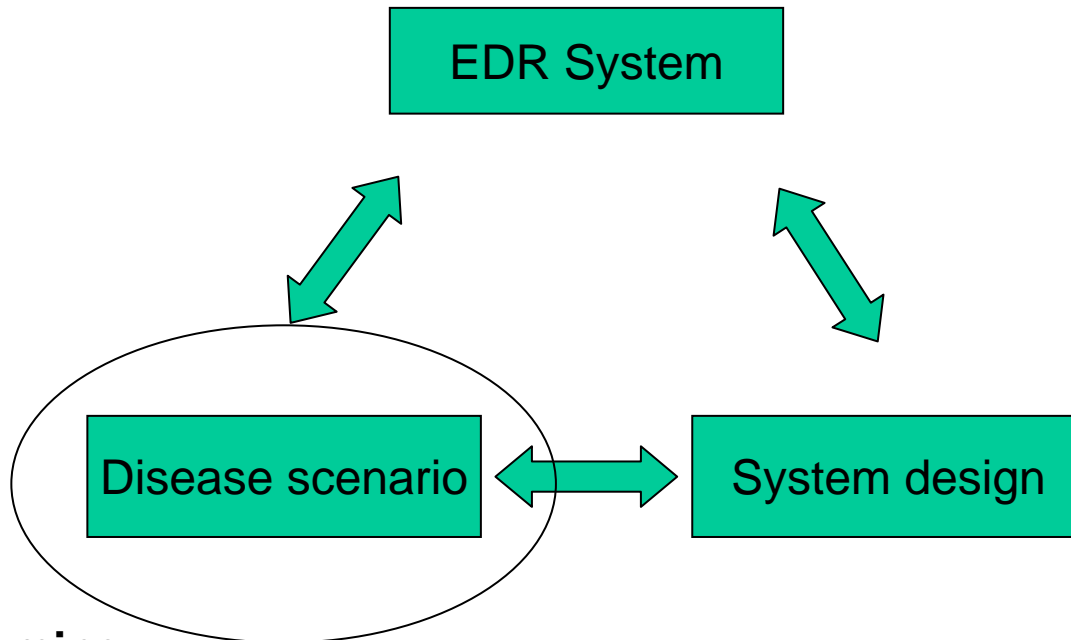


Answers?

- May not be apparent at the start – don't worry.
- Make some decisions- (shoot...aim...fire!)
 - Location
 - Epidemic size
 - Number of clusters
 - Silent spread period
 - Major spread types
 - Duration of epidemic and exercise.



Keys to success



Complex
Time consuming.

Solutions -Deterministic?
-Stochastic?

Disease scenario – InterSpread plus

- Spatial and stochastic model – InterSpread plus
 - Denominator data – Manawatu Region Farms only.
 - Disease management parameters – MAF 153 STD for responding to exotic disease incursions.
 - Multiple iterations and some slight of hand
 - Result:
 - Approximate size
 - Locations/clusters
 - Duration

Model Output

Infected places

- Accurate reflection of farms from AgriBase
- Unique identifiers
- Spatial co-ordinates

Dates

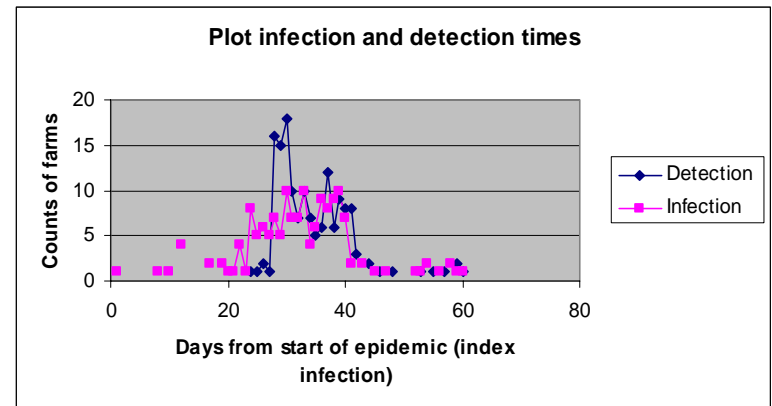
- Infection
- Detection
- Depopulation

Infection source

- Farms
- Spread types

Clinical data by farm

- Oldest lesions
- Signs
- Numbers affected



Model Output

Infected places

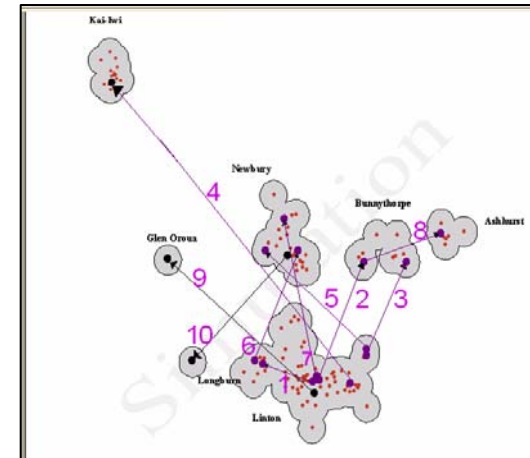
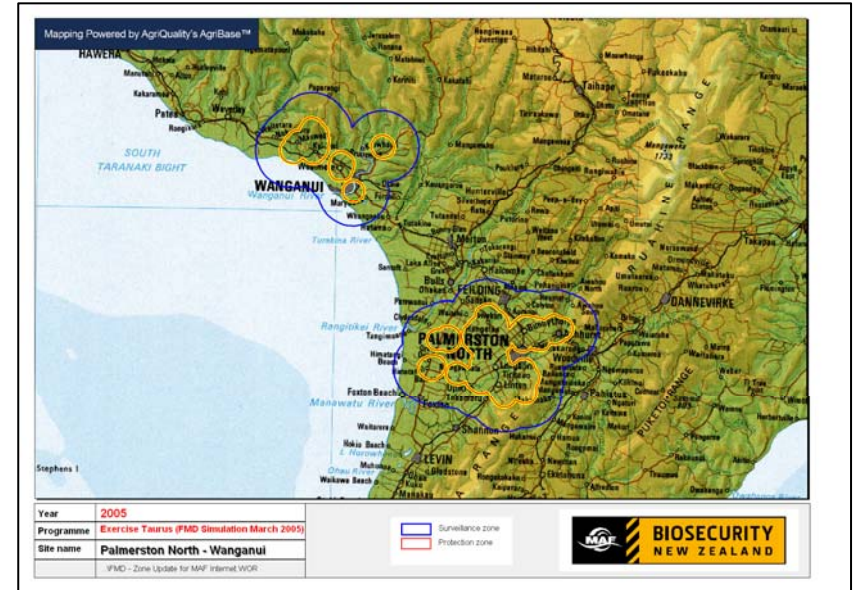
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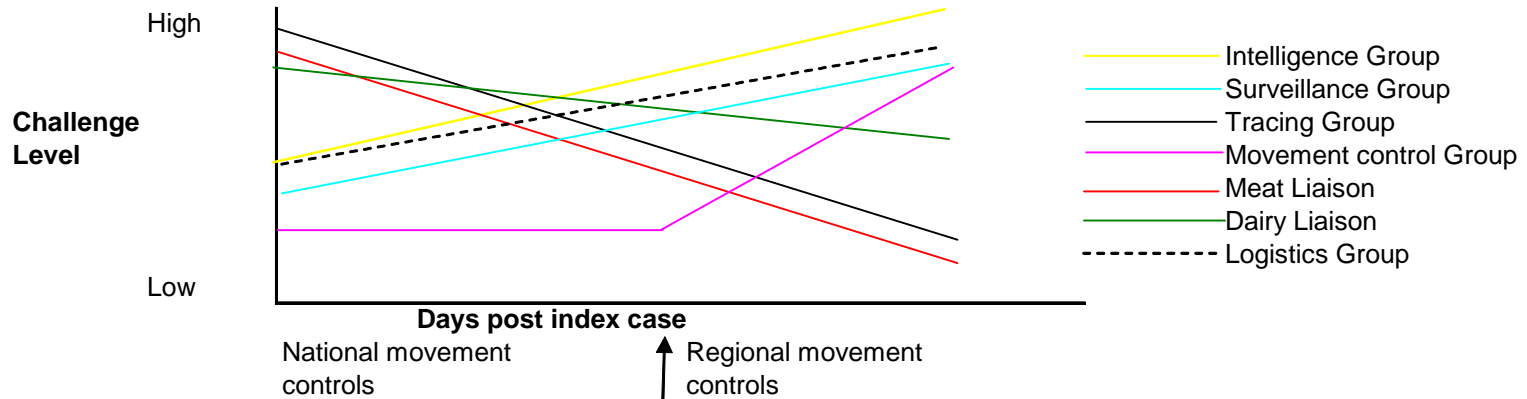
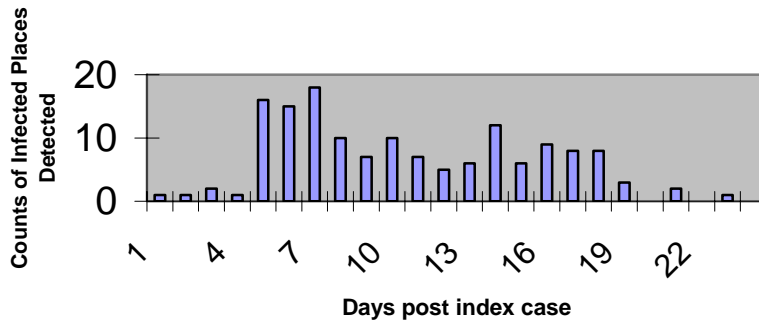
Infection source

- Farms
- Spread types



Degree of challenge over time by operational group

Epidemic Curve of detection dates - Taurus



Simulation start?

Use of week 3 farms- Implications

- High level of activation in all groups
 - Backlogs of work possible
 - Easier to maintain momentum for entire period
- Participants represent transition teams
- Planners obligated to inform participants
 - Key information from previous weeks.

Lead-up Information

'Real-Time' Sit-rep

- 1 at index case.
- Week one end.
- Week two end.
 - Email
 - On-website

Exercise Taurus Website

- Additional info
 - aims/objectives
 - rules-of-play
 - reference papers
 - current EDR plans
 - EDR structure/background

The image displays two screenshots of the Exercise Taurus website in Microsoft Internet Explorer. The top screenshot shows the main index page with a search bar and navigation tabs. The bottom screenshot shows a detailed page for 'Incident Controllers Reports' with a list of dates and PDF links.

Exercise Taurus: Exotic Disease Responses Centre (EDRC)/Field Operations Response Team (FORT)

14-18 March 2005

- [Introduction and Housekeeping](#)
- [Simulation Instructions](#)
- [Operational Groups](#)
- [Incident Controllers Reports](#)
- [Teleconference Reports](#)
- Analyses
- Updated Policy
- [Maps](#)
- [Foot and Mouth Disease references](#)
- [Exercise Taurus Images](#)

Incident Controllers Reports

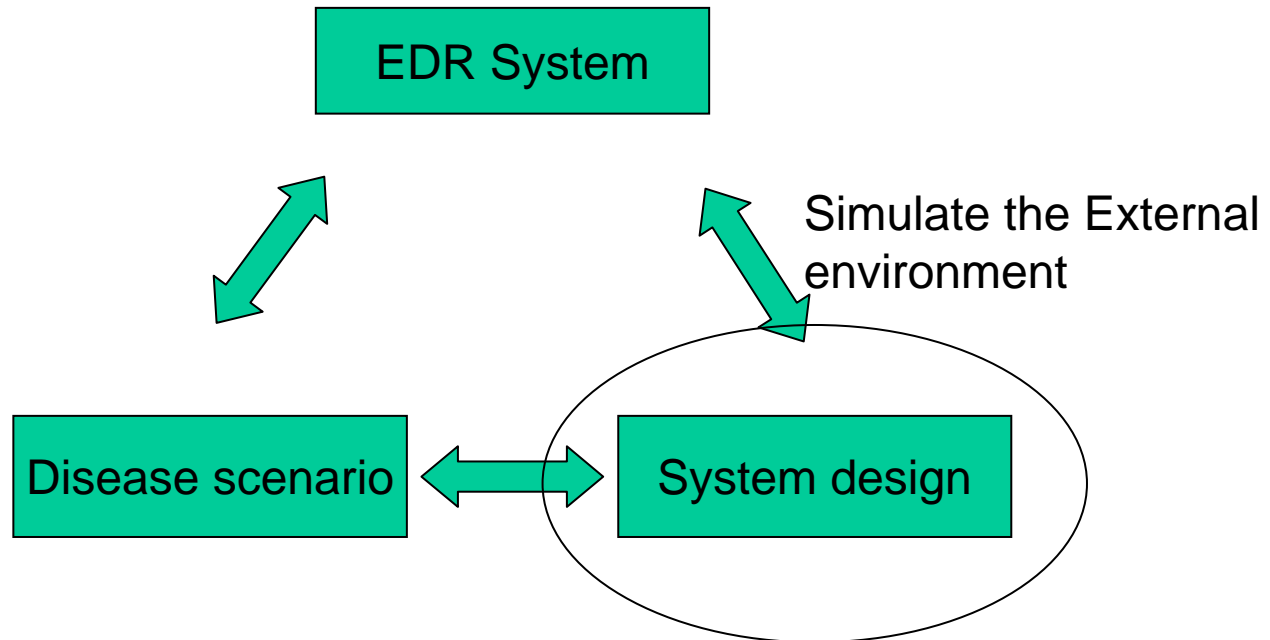
- 1 March 2005 [[PDF 1195](#)]
- 6 March 2005 [[PDF 2626](#)]
- 13 March 2005 [[PDF 4548](#)]
- 14 March 2005 [[PDF 8018](#)]
- 15 March 2005 [[PDF 1308](#)]
- 16 March 2005 [[PDF 3108](#)]
- 17 March 2005 [[PDF 4108](#)]
- 18 March 2005

More Information

- [Introduction and Housekeeping](#)
- [Simulation Instructions](#)
- [Operational Groups](#)
- [Teleconference Reports](#)
- [Maps](#)
- [Foot and Mouth Disease references](#)

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Keys to success



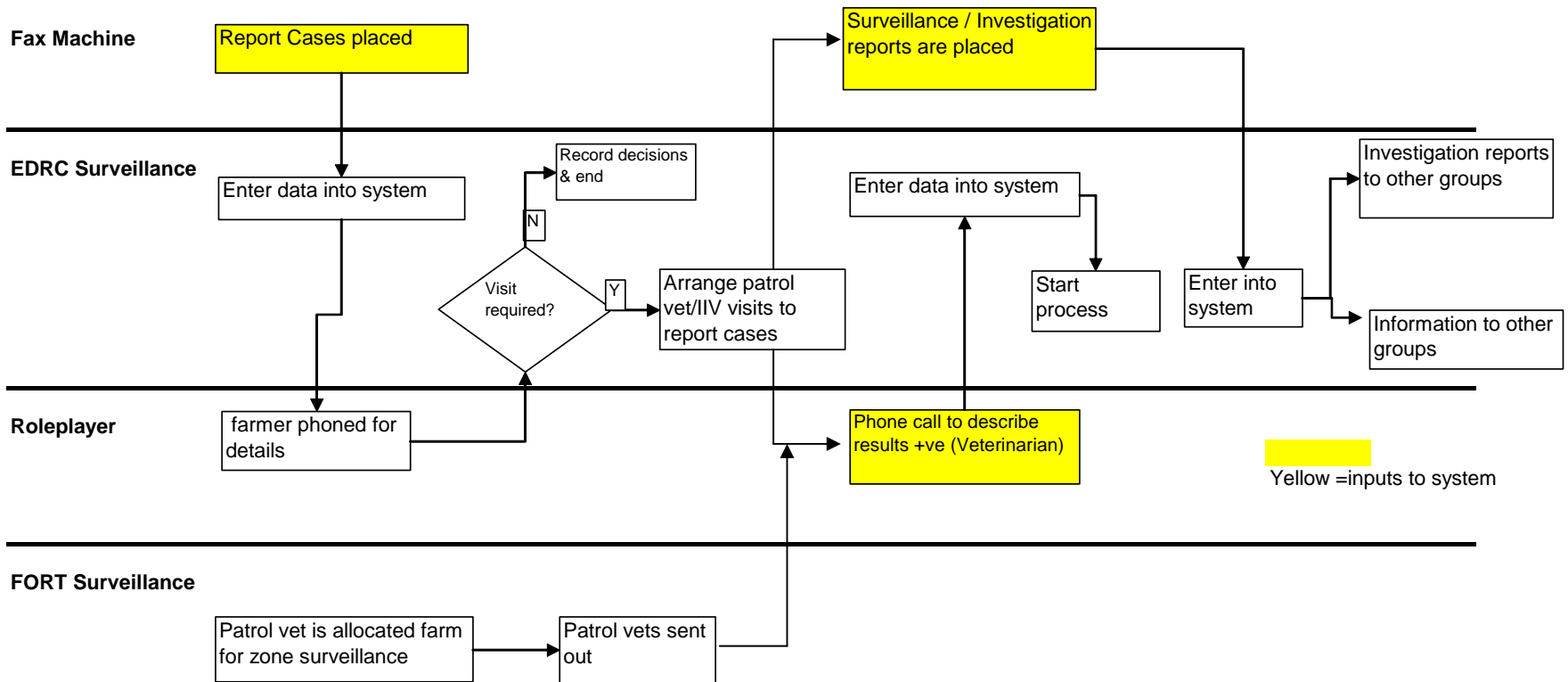
Simulating the external environment

- Information flow into the EDR system
 - Data
 - Injects (non-data)
 - Points of entry

Points of entry - Data

- Question: How is this operational group activated?
 - What goes in?
 - Key documents
 - Report case forms
 - Surveillance/Field investigation forms
 - Movement permit requests
 - Where does it enter?
 - How does it enter?
 - From where?

eg Process flow between inputs, and method of introduction for the surveillance group.



Injects (non-data)

Areas of the EDR system that are difficult to activate using data flow alone.

Identify these in advance - 'Real world problems'

Require

- resources
- time

Introduced by:

- Written messages
- Phone calls
- Emails
- Conference calls from The National Response Centre

Add

- uncertainty
- Stress
- realism

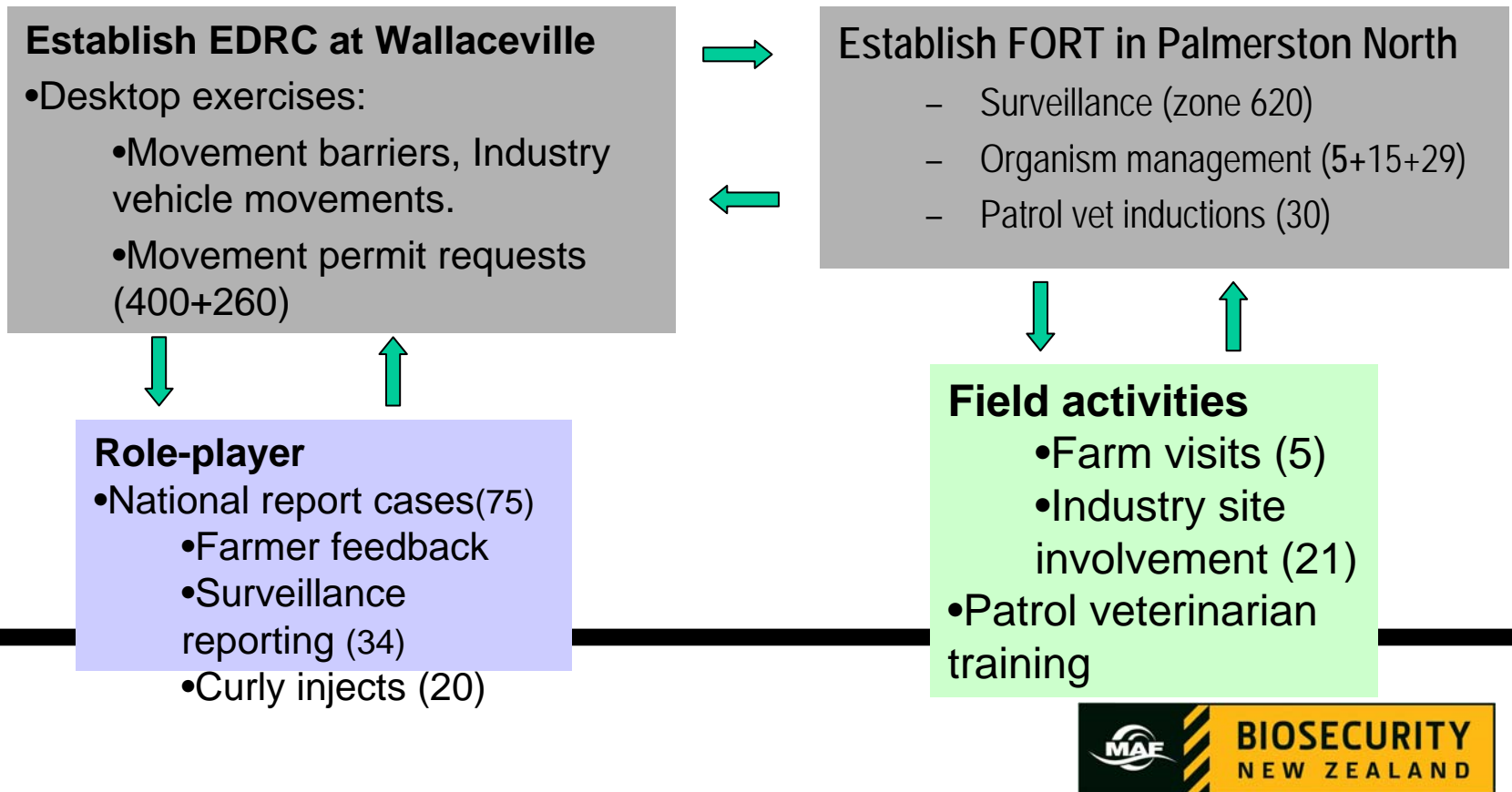
AND

Feedback – real time!



Results:

- Multiple pieces of data (>400) and desktop exercises during 5 days to simulate external environment
- 140 people involved
- Data on 109 farms pre-loaded and 34 farms added during 5 days.



Conclusion

- Planning and implementing EDR simulations requires:
- Good project management skills
- Plenty of planning time
- Competent experienced EDR people – the planning team
- Ideally ‘planners should not be doers’

Conclusion

Although the simulation is scenario driven: Address the following what's:

- What for?
- What disease?
- What resources?
- What groups?
- What type of exercise?
- What size?
- What stage of the epidemic
- What location(s)?
- What times?

