# A New Approach to Compliance and Enforcement of the Heavy Vehicle Industry

David Allen



Roads and Traffic Authority of New South Wales

# Introduction

- Context
  - Set Strategy and Policy for Compliance and Enforcement in New South Wales (NSW), Australia
  - Compliance and Enforcement in NSW consists of:
    - $51m per year
    - 320 Inspectors
    - 6 Major Checking Stations - 3 with WIM
    - Network of cameras monitoring speed and fatigue along major highways
    - 400 locations at which periodic inspections carried out
    - 60,000 defects issued

# Introduction

- Purpose of presentation?
  - To describe an approach to a compliance and enforcement for heavy vehicles
  - Approach based on applying systems and processes
  - Link to practical application as to what we are doing in New South Wales

**Goal**: ***Reduce level of non-compliance and improve road safety in the road transport industry***

# Introduction

- Key Elements of the Presentation:
  - Risk Management (the basis)
  - Measurement Processes (determine effectiveness)
  - Strategic Framework (governing decisions)
    - Data Capture Systems
    - Targeting Processes
    - Remedial Actions
  - Summary
  - Conclusion

# Risk Management

- Why Risk Management?
  - Enforcement generally consists of a number of traditional activities and practices - question effectiveness
  - Need to recognise finite resources exist
  - Need to demonstrate value for money - competing for scarce resources
- Impact from this approach
  - Forces regulator to understand business - maximise benefits
  - Look for new initiatives - use technology
  - Look for a method of measuring and monitoring

# Risk Management

- Process?
  - Adopt same terminology and approach from TQM
  - Consider Heavy Vehicle Industry to be a “system”
  - Essentially two simple principles apply

Principle 1:Monitor the entire population of heavy vehicles - Monitor the “system”

Principle 2: Identify and capture high-risk offenders - Beyond the “system” limits



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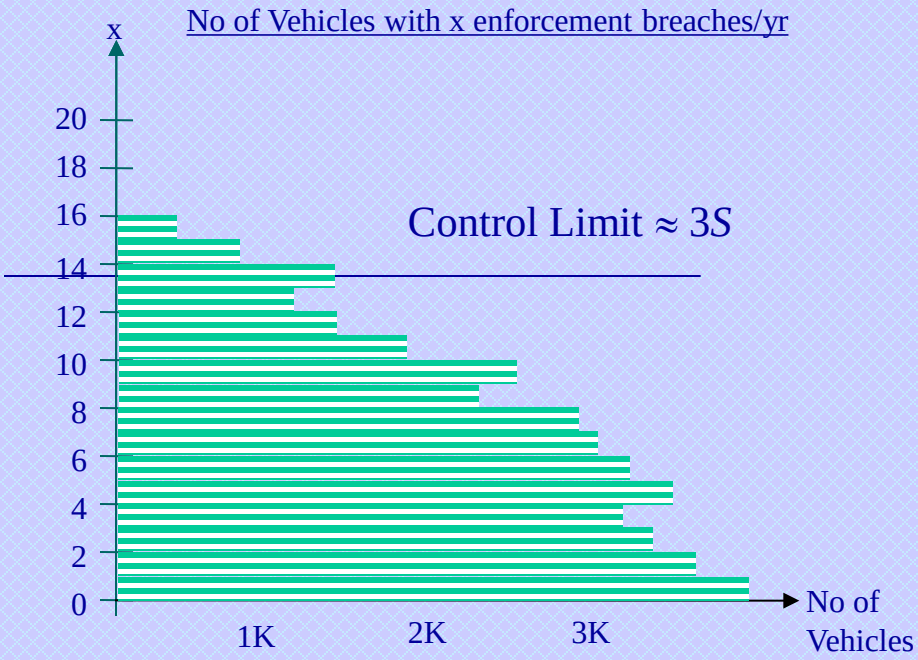
# Measurement Processes

- How does this work?
  - For any enforcement parameter
  - Take all vehicles and determine number of breaches per vehicle



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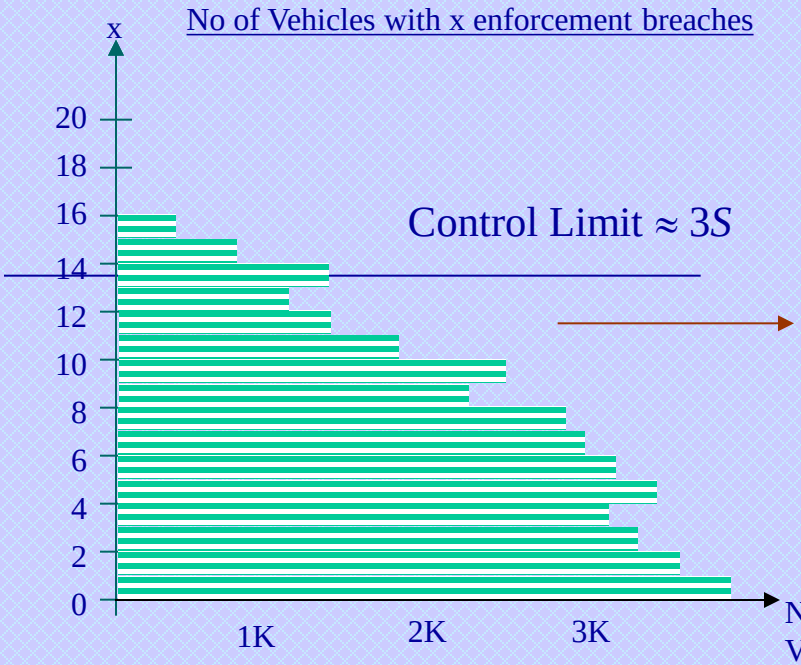
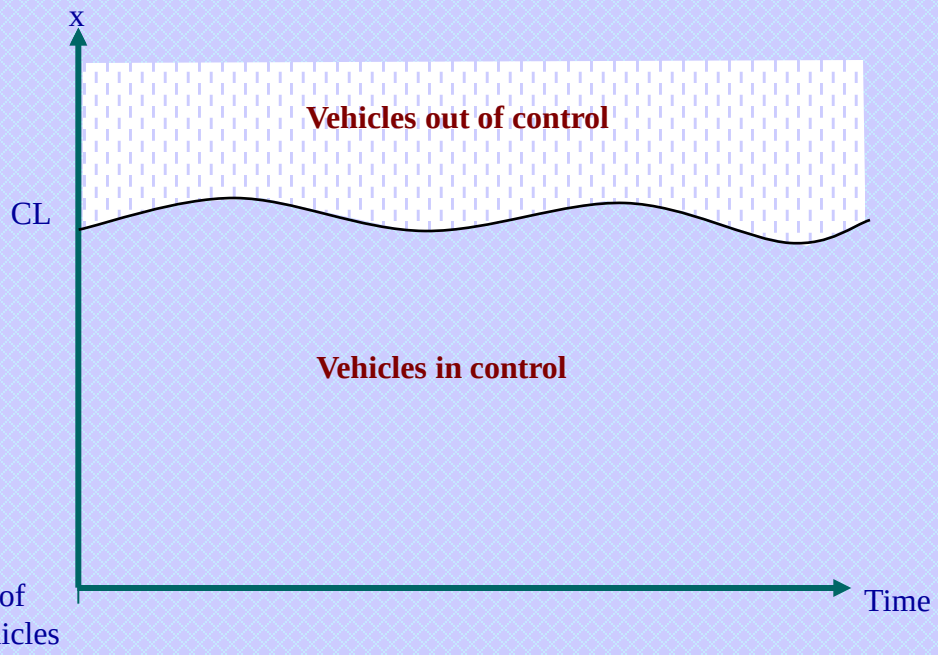
# Measurement Processes

- Over time therefore (assume equal effort)…….
- Allow regulator to benchmark



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# Measurement Process

- Practical approach?
  - Need to collect data to establish the system - the enforcement parameter
  - Need a process to take data and “measure” the system, and target
  - Need remedial actions to deal with vehicles “out of control”



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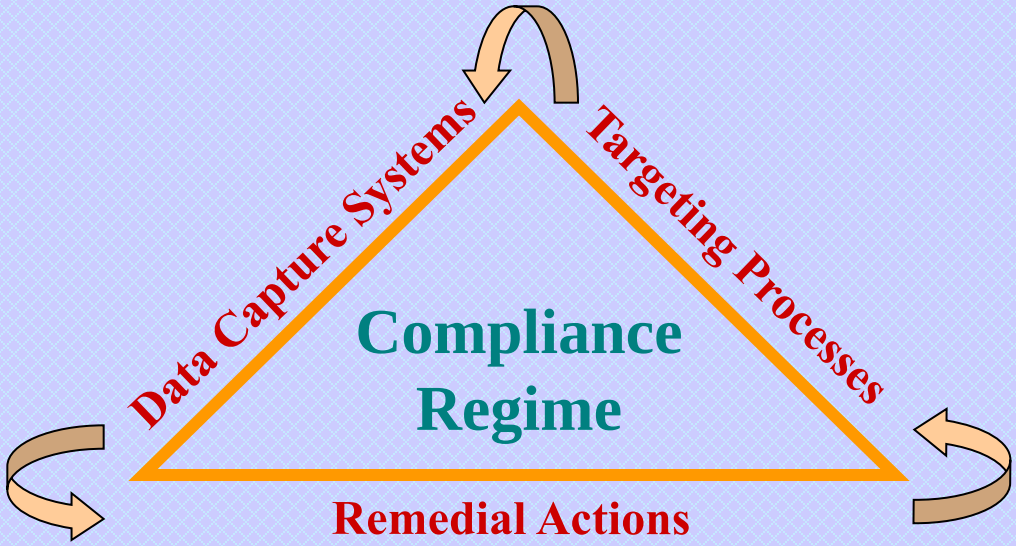
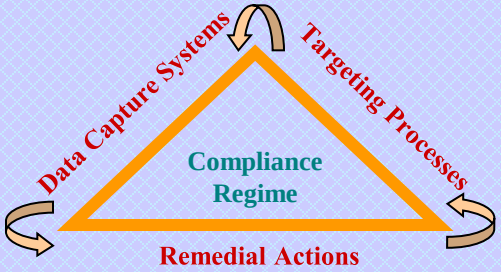
# Measurement Process

– Encapsulated in simple three pronged integrated strategy



# Compliance Regime in NSW




**Data Capture Systems**

- **Inspectors**
- **Police**
- **Speed Cameras**
- **Safe-T-Cam**

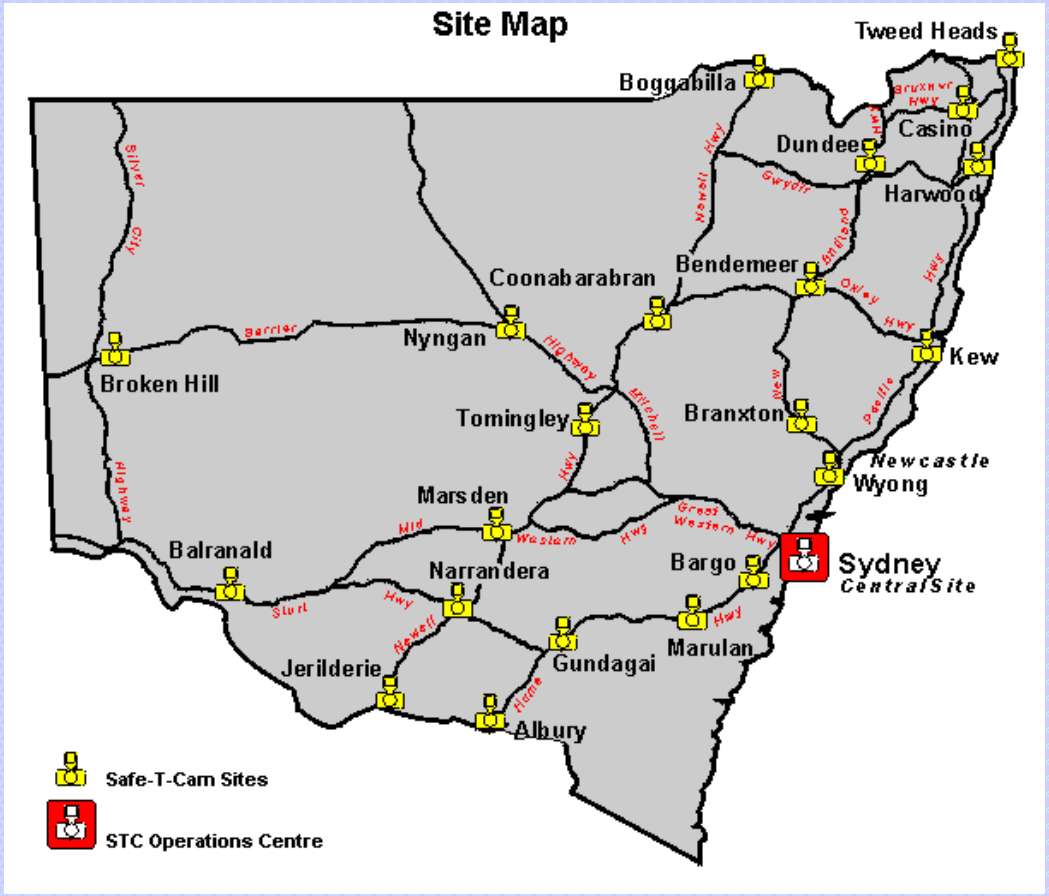
Speed, weight, driving hours, registration, licensing, load restraint, avoidance, etc

Targeting Processes

Remedial Actions

# Safe-T-Cam

- Network of Cameras Monitoring Heavy Vehicles
- Optical Character Recognition System



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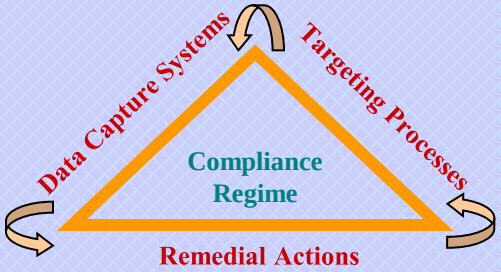
# Compliance Regime in NSW




Data Capture Systems

**Targeting Processes**

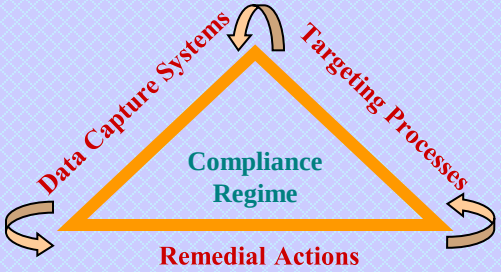
Remedial Actions

***Off-Road*: Heavy Vehicle Ratings System**
**(enforcement parameter)**

***On-Road*: Vehicle Selection Matrix**

- Provide a systematic approach to risk management
- Improve effectiveness
- Reduce inspectors discretion

# Compliance Regime in NSW



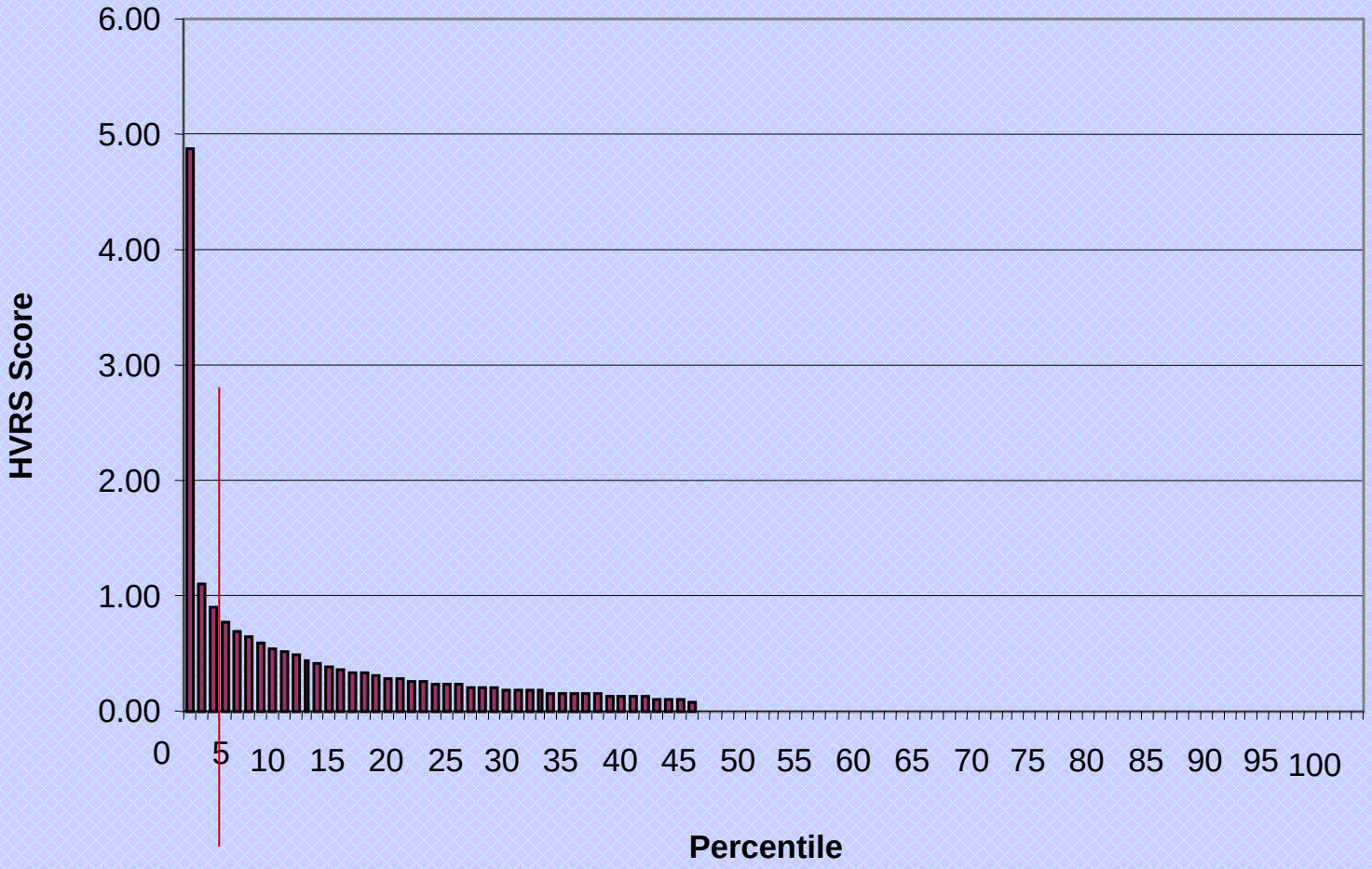

***Off-Road*: Heavy Vehicle Ratings System**

- **Consolidation of Offence Data**
- **Apply severity ratings**
- **Moderate for fleet size and age of offence**
- **Produce a score for each vehicle/ operator**

*On-Road*: Vehicle Selection Matrix

# Heavy Vehicle Ratings System

- **5% of Operators have 50% of all incidents**



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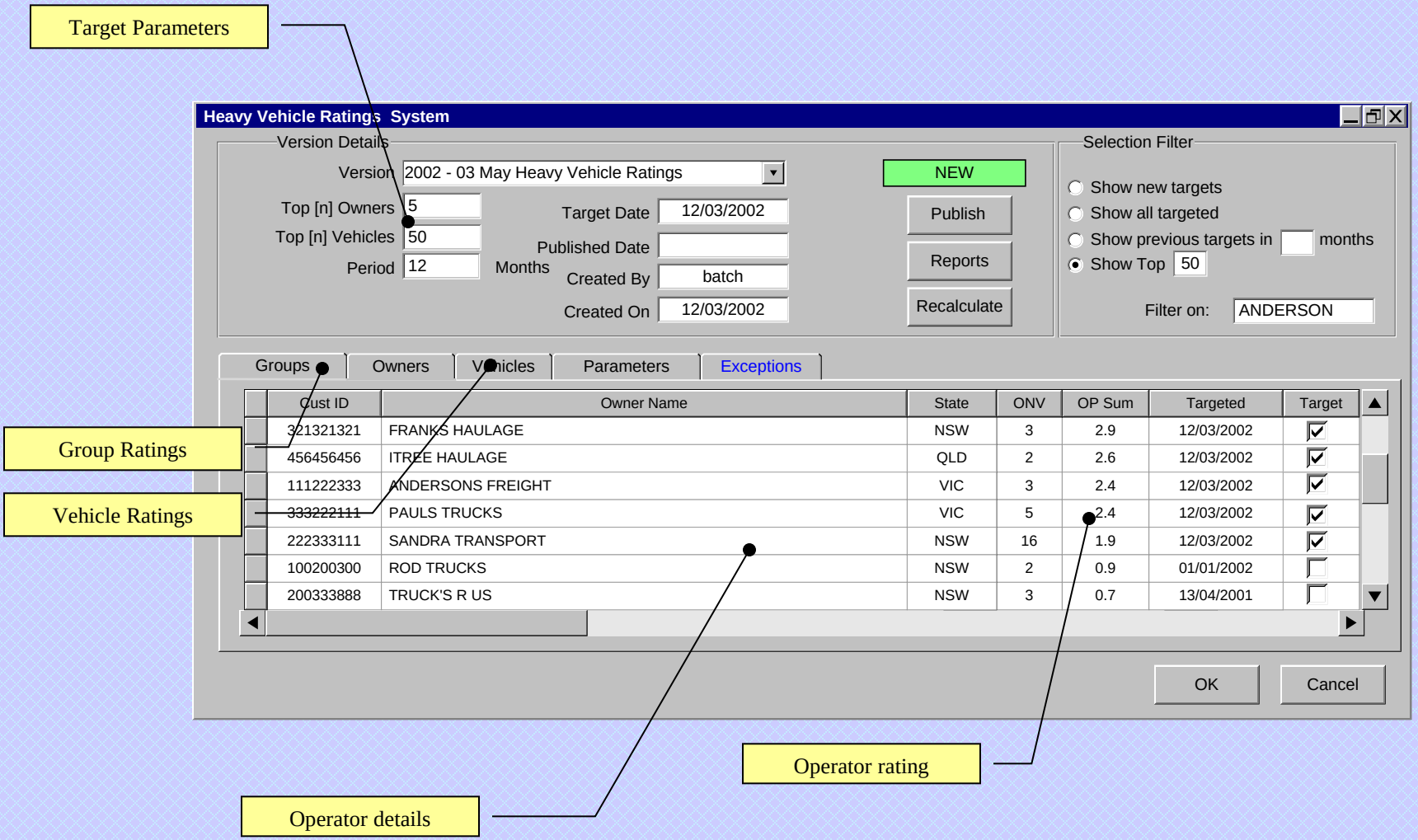
# Heavy Vehicle Ratings System



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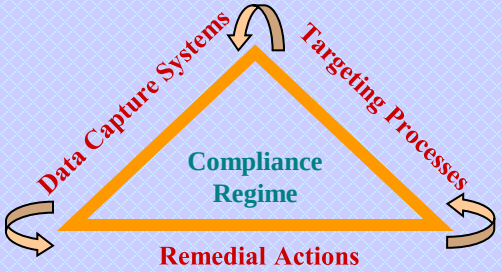
# Compliance Regime in NSW




***Off-Road*: Heavy Vehicle Ratings System**

- **Prototype completed**
- **Production version being built**
- **Completed by December 2002**

*On-Road*: Vehicle Selection Matrix



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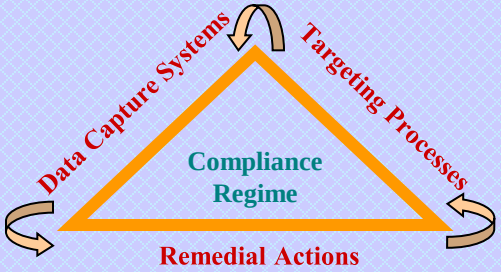
# Compliance Regime in NSW




*Off-Road*: Heavy Vehicle Ratings System

***On-Road*: Vehicle Selection Matrix**

**Consolidate HVRS and Inspection Data**

- HVRS Score
- Last time inspected
- Level of inspection
- Audit focus
- Random

**Two pieces of info for inspectors:**

- Inspect (Y/N)
- Level of Inspection (I-VI)

# Vehicle Selection Matrix

**Vehicle Selection Matrix**

Number Plate: abc123

VSM Score Set at 0.70

| | | | |
|---|---|---|---|
| VSM Score | 0.76 | Registration | Valid |
| Inspect (Y/N) | Y | Safe-T-Cam Sightings | |
| Level of Inspection | IV | Inspection Outcomes | |



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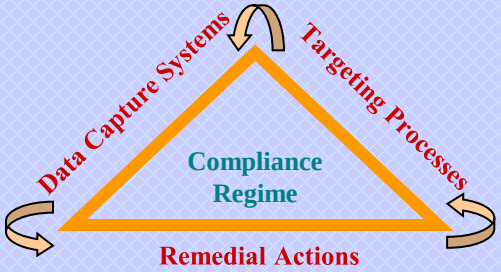
# Compliance Regime in NSW




Data Capture Systems

Targeting Processes

**Remedial Actions**

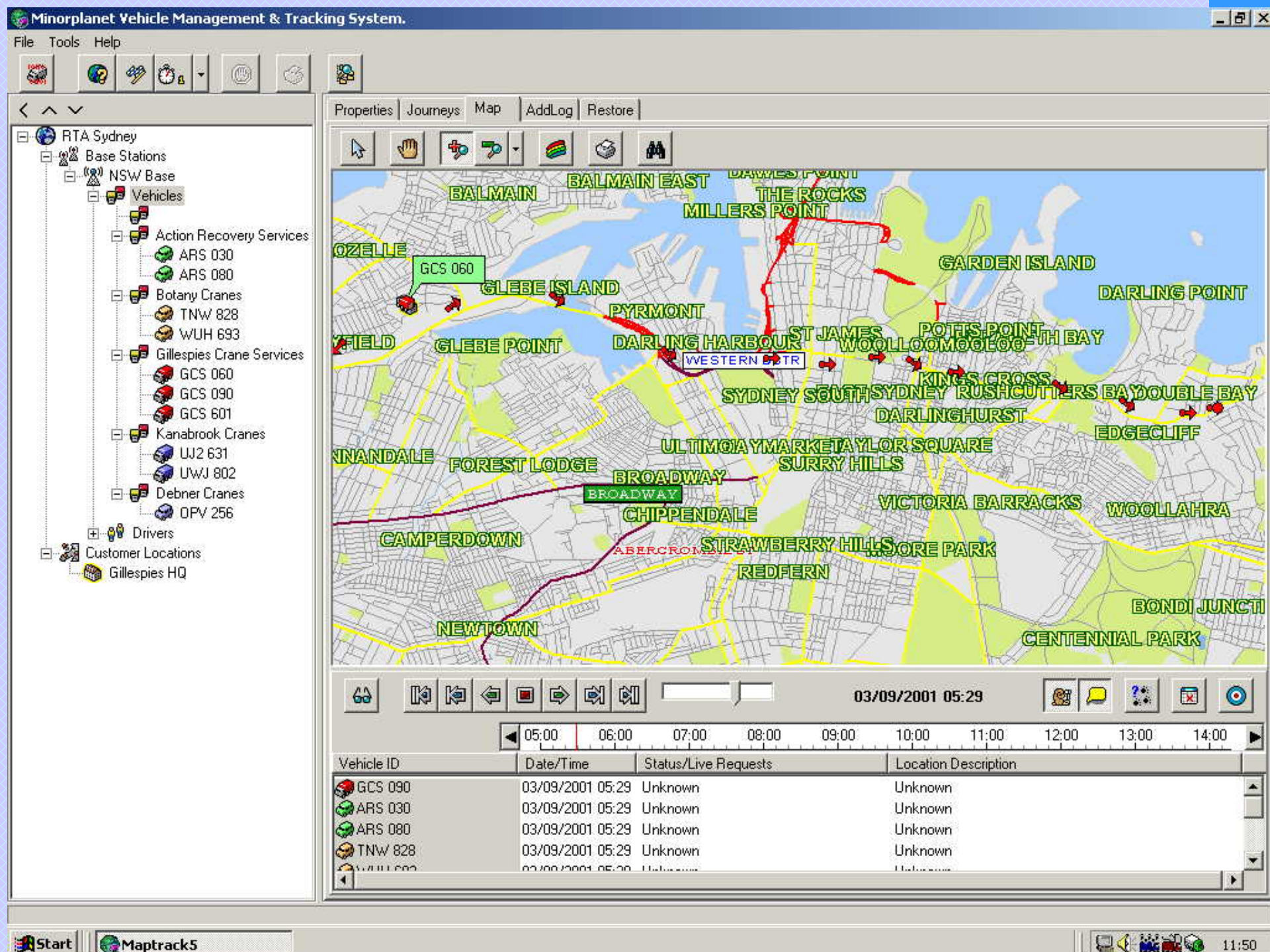
***On-Road*: Infringement Notices/ Breaches/ Defects**

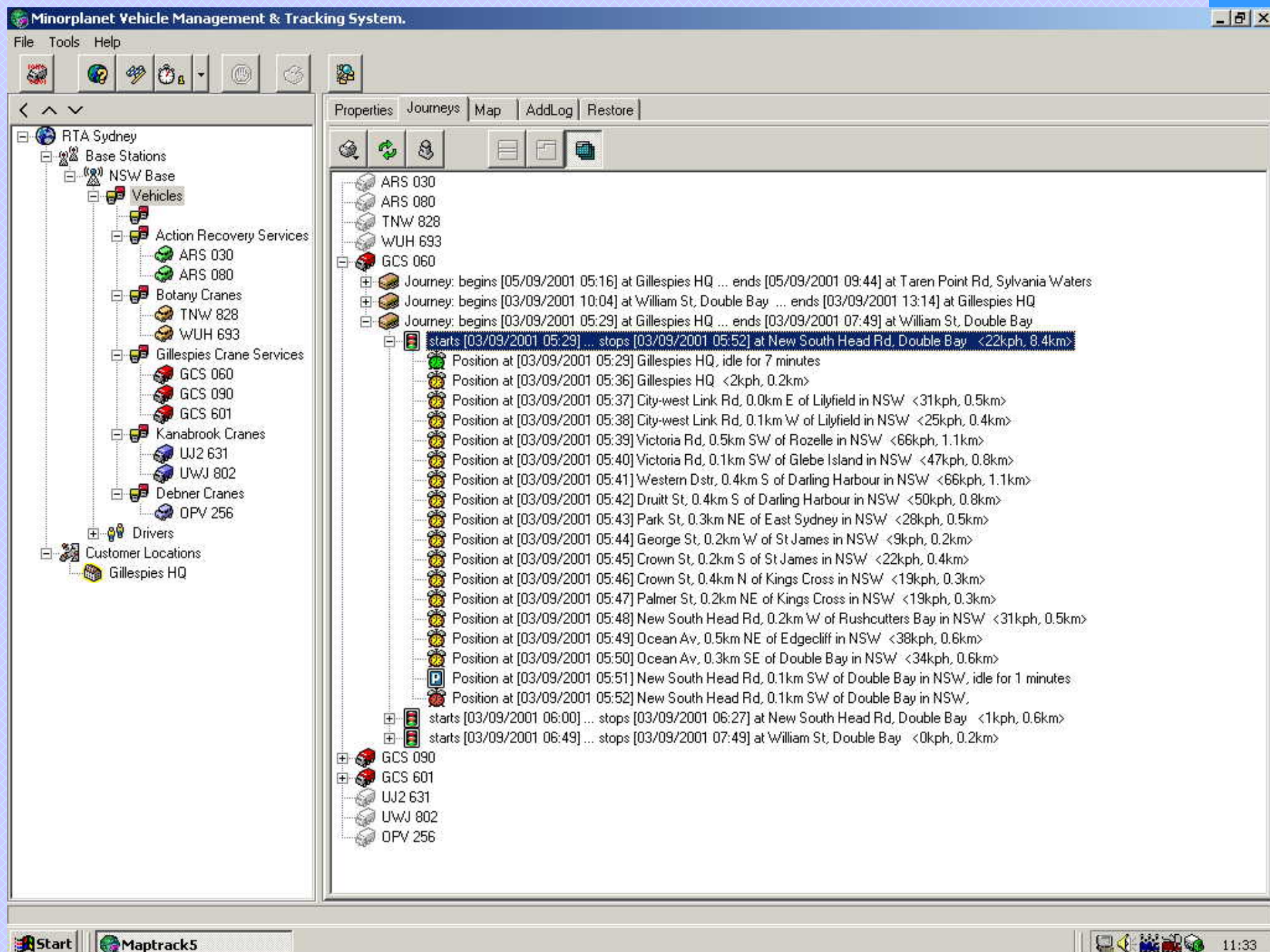
***Off-Road*: National Road Transport Commission: Compliance & Enforcement Bill**

- Focus on operators - chain of responsibility
- Range of penalties
  - Prohibitions
  - Commercial benefits
  - Supervisory Intervention Orders*
    - GPS Tracking System

# GPS Tracking

- Trial of over-dimensional mobile cranes in NSW
- Began September 2001 - 28 Cranes in


Minorplanet Vehicle Management & Tracking System.
File
Tools
Help
RTA Sydney
Base Stations
NSW Base
Vehicles
Action Recovery Services
ARS 030
ARS 080
Botany Cranes
TNW 828
WUH 693
Gillespies Crane Services
GCS 060
GCS 090
GCS 601
Kanabrook Cranes
UJ2 631
UWJ 802
Debner Cranes
OPV 256
Drivers
Customer Locations
Gillespies HQ
Properties
Journeys
Map
AddLog
Restore
BALMAIN
BALMAIN EAST
THE ROCKS
MILLERS POINT
GCS 060
GLEBE ISLAND
PYRMONT
GLEBE POINT
DARLING HARBOUR
WESTERN DISTR
ST JAMES
POTTS POINT
GARDEN ISLAND
DARLING POINT
KINGS CROSS
SYDNEY SOUTH
SYDNEY
DARLINGHURST
EDGECLIFF
FOREST LODGE
BROADWAY
CHIPPENDALE
SURRY HILLS
TAYLOR SQUARE
VICTORIA BARRACKS
WOOLLAHRA
CAMPERDOWN
REDFERN
NEWTOWN
CENTENNIAL PARK
03/09/2001 05:29
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
Vehicle ID
Date/Time
Status/Live Requests
Location Description
GCS 090 03/09/2001 05:29 Unknown Unknown
ARS 030 03/09/2001 05:29 Unknown Unknown
ARS 080 03/09/2001 05:29 Unknown Unknown
TNW 828 03/09/2001 05:29 Unknown Unknown
Start
Maptrack5
11:50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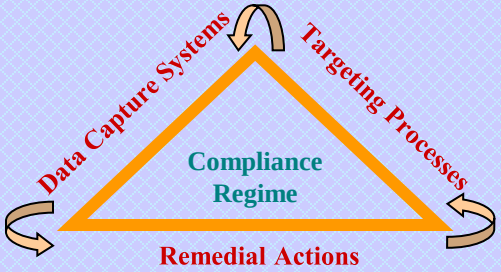
Drivers
Customer Locations
Gillespies HQ
Properties
Journeys
Map
AddLog
Restore
ARS 030
ARS 080
TNW 828
WUH 693
GCS 060
Journey: begins [05/09/2001 05:16] at Gillespies HQ ... ends [05/09/2001 09:44] at Taren Point Rd, Sylvania Waters
Journey: begins [03/09/2001 10:04] at William St, Double Bay ... ends [03/09/2001 13:14] at Gillespies HQ
Journey: begins [03/09/2001 05:29] at Gillespies HQ ... ends [03/09/2001 07:49] at William St, Double Bay
starts [03/09/2001 05:29] ... stops [03/09/2001 05:52] at New South Head Rd, Double Bay <22kph, 8.4km>
Position at [03/09/2001 05:29] Gillespies HQ, idle for 7 minutes
Position at [03/09/2001 05:36] Gillespies HQ <2kph, 0.2km>
Position at [03/09/2001 05:37] City-west Link Rd, 0.0km E of Lilyfield in NSW <31kph, 0.5km>
Position at [03/09/2001 05:38] City-west Link Rd, 0.1km W of Lilyfield in NSW <25kph, 0.4km>
Position at [03/09/2001 05:39] Victoria Rd, 0.5km SW of Rozelle in NSW <66kph, 1.1km>
Position at [03/09/2001 05:40] Victoria Rd, 0.1km SW of Glebe Island in NSW <47kph, 0.8km>
Position at [03/09/2001 05:41] Western Dstr, 0.4km S of Darling Harbour in NSW <66kph, 1.1km>
Position at [03/09/2001 05:42] Druitt St, 0.4km S of Darling Harbour in NSW <50kph, 0.8km>
Position at [03/09/2001 05:43] Park St, 0.3km NE of East Sydney in NSW <28kph, 0.5km>
Position at [03/09/2001 05:44] George St, 0.2km W of St James in NSW <9kph, 0.2km>
Position at [03/09/2001 05:45] Crown St, 0.2km S of St James in NSW <22kph, 0.4km>
Position at [03/09/2001 05:46] Crown St, 0.4km N of Kings Cross in NSW <19kph, 0.3km>
Position at [03/09/2001 05:47] Palmer St, 0.2km NE of Kings Cross in NSW <19kph, 0.3km>
Position at [03/09/2001 05:48] New South Head Rd, 0.2km W of Rushcutters Bay in NSW <31kph, 0.5km>
Position at [03/09/2001 05:49] Ocean Av, 0.5km NE of Edgecliff in NSW <38kph, 0.6km>
Position at [03/09/2001 05:50] Ocean Av, 0.3km SE of Double Bay in NSW <34kph, 0.6km>
Position at [03/09/2001 05:51] New South Head Rd, 0.1km SW of Double Bay in NSW, idle for 1 minutes
Position at [03/09/2001 05:52] New South Head Rd, 0.1km SW of Double Bay in NSW,
starts [03/09/2001 06:00] ... stops [03/09/2001 06:27] at New South Head Rd, Double Bay <1kph, 0.6km>
starts [03/09/2001 06:49] ... stops [03/09/2001 07:49] at William St, Double Bay <0kph, 0.2km>
GCS 090
GCS 601
UJ2 631
UWJ 802
OPV 256
Start
Maptrack5
11:33

# Compliance Regime in NSW




Data Capture Systems

Targeting Processes

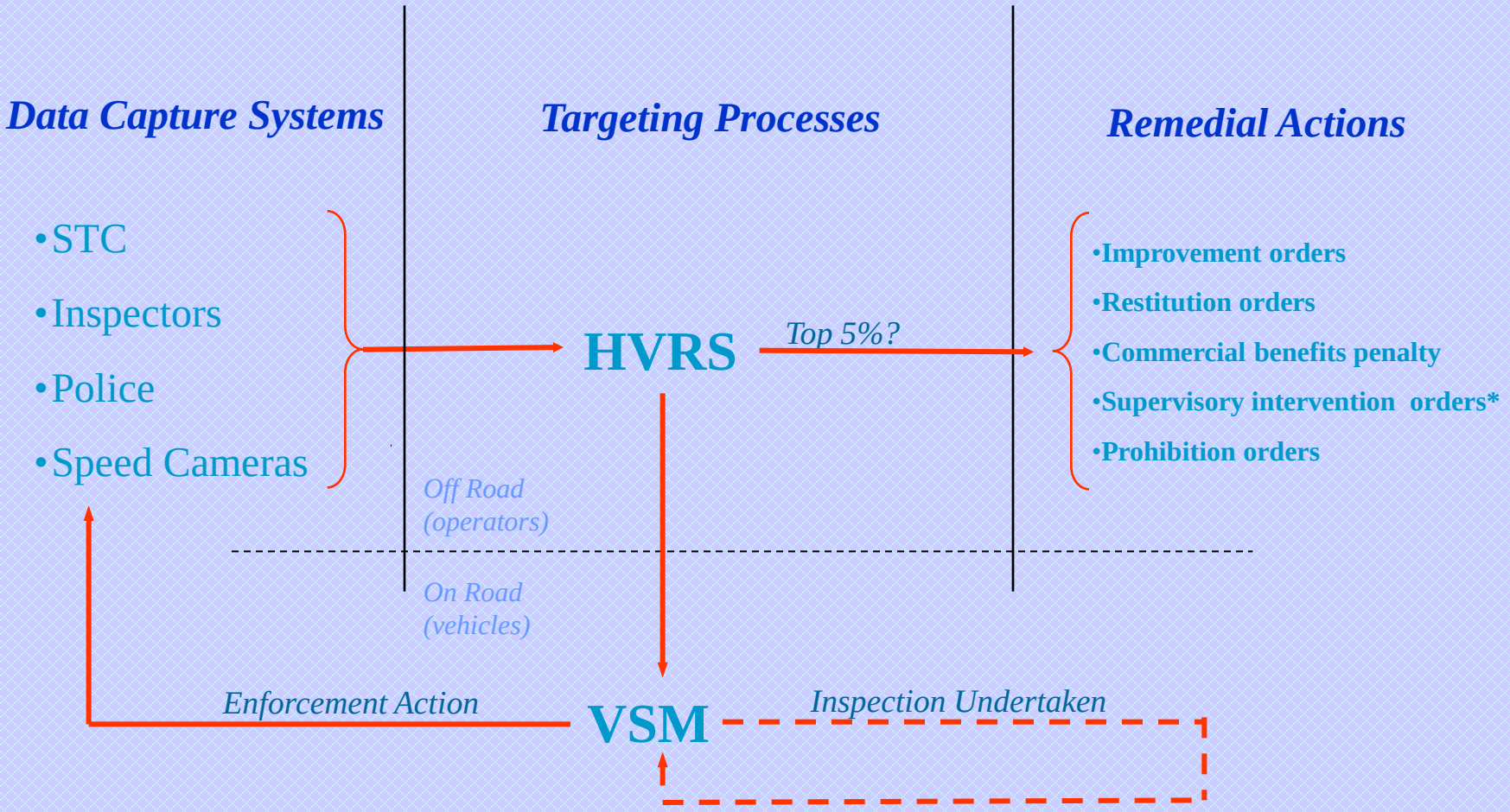
**Remedial Actions**

***On-Road*: Infringement Notices/ Breaches/ Defects**

***Off-Road*: National Road Transport Commission: Compliance & Enforcement Bill**

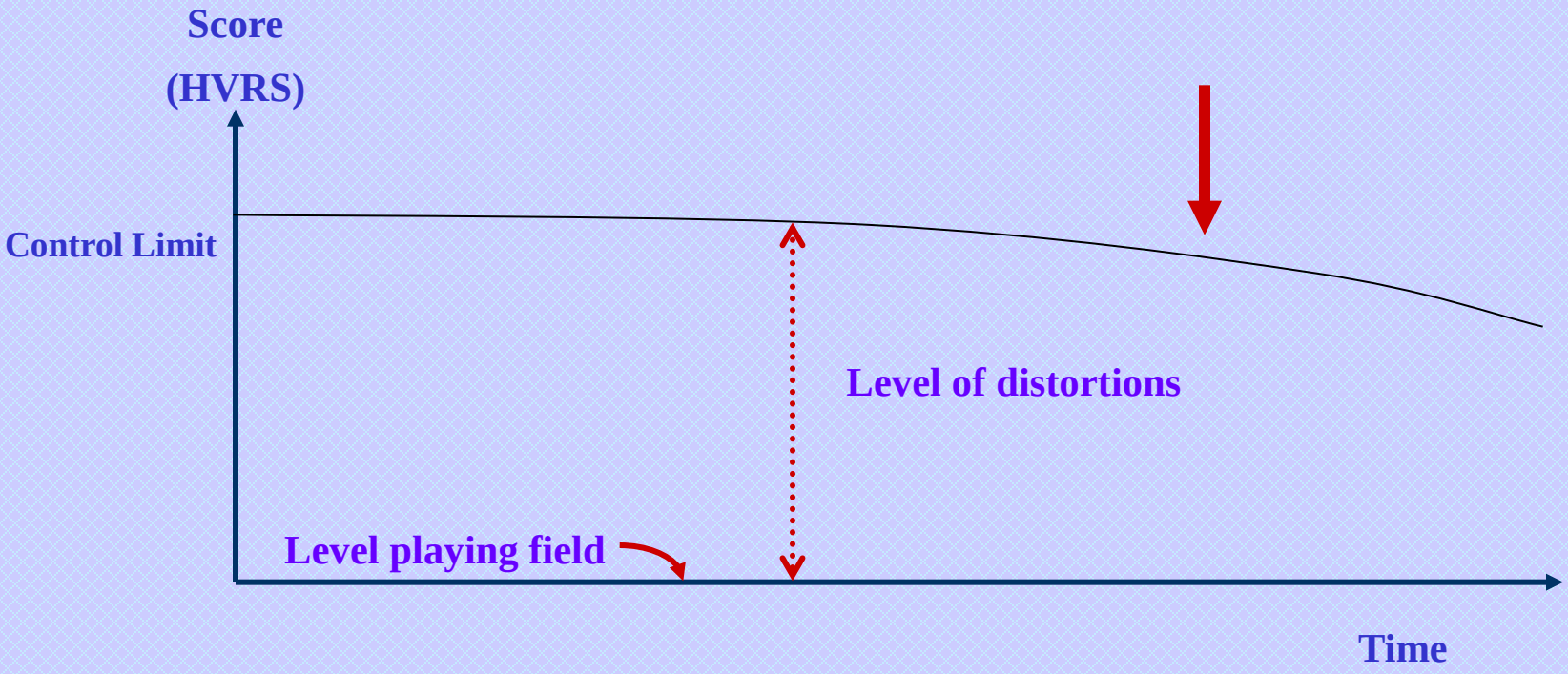
- Currently in Draft form
- Implementation in late 2003

# Summary of Inter-dependence



# Summary of Control and Measurement Processes

- If action is taken then we get steady improvement and reduction in control limit



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# Conclusion

- Presented an approach to a regulatory regime
- Goal to create level playing field with energy put into positive innovation
- Provided a process to measure success or otherwise
- Showed a targeted and systematic approach to both operators and vehicles (On road, Off road)



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# Conclusion.....

- NSW Roads and Traffic Authority in process of implementing the system
- Significant challenges for the organisation as it moves away from traditional enforcement to a systems based approach
- Will require new skills and competencies
- Ultimately will need a national integrated system to maximise benefits