



Average Speed Enforcement – Share the Benefit, Spread the Cost

# Average speed enforcement

SPECS: Safer, Smoother, Greener, Fairer

**300+ SPECS installations to date**

60+ routes with permanent equipment:

|                 |                                     |
|-----------------|-------------------------------------|
| <b>Safer</b>    | >70% KSI reductions*                |
| <b>Smoother</b> | Traffic flows improve               |
| <b>Greener</b>  | Lower emissions, improved economy   |
| <b>Fairer</b>   | High acceptance, low offence levels |

When designed and used properly, it really does work.

\*where installed as part of a road safety improvement scheme

Safer



Smoother



Greener




Fairer



# Safer > 70% KSI reductions on average

| Location                                    | KSI (per 1km) |              | PIC (per 1km) |              | KSI % change | PIC % change | Annual casualty saving |
|---|---------------|--------------|---------------|--------------|--------------|--------------|------------------------|
|   | before placed | after placed | before placed | after placed |              |              |                        |
| <b>PERMANENT SITES</b>                      |               |              |               |              |              |              |                        |
| A127 Arterial Road, Essex                   | 2.45          | 0.36         | 16            | 2.36         | 85%          | 85%          | £3,207,762             |
| A130 Canvey Way, Essex                      | 2.16          | 0            | 6.21          | 0.54         | 100%         | 91%          | £966,699               |
| A14 Huntingdon to Girton, Cambridgeshire HA | 2.41          | 1.18         | 18.81         | 13.16        | 60%          | 30%          | £3,526,686             |
| A14 Girton to Fen Ditton, Cambridgeshire HA | 1.73          | 0.23         | 12.27         | 7.9          | 87%          | 36%          | £1,376,222             |
| A2 Belfast, PSNI                            | 2             | 0.33         | 7             | 6.67         | 84%          | 5%           | £1,644,341             |
| A228 Isle of Grain, Kent                    | 1.91          | 0.48         | 9.36          | 2.87         | 75%          | 69%          | £874,176               |
| A38 Shenstone to Bassetts Pole              | 0.40          | 0.00         | 3.69          | 2.13         | 100%         | 42%          | £352,480               |
| A428 Northamptonshire                       | 2.88          | 0.39         | 2.88          | 1.17         | 86%          | 59%          | £1,864,029             |
| A43 Northamptonshire HA                     | 1.7           | 0.6          | 8.3           | 7.1          | 65%          | 14%          | £437,576               |
| A46 Cotgrave, Nottinghamshire HA            | 2.97          | 1.05         | 15.9          | 6.73         | 65%          | 58%          | £932,026               |
| A46 Fosse Road, Nottinghamshire HA          | 3.49          | 1.36         | 13.02         | 9.55         | 61%          | 27%          | £779,764               |
| A52 Bingham, Nottinghamshire HA             | 6.10          | 1.52         | 15.59         | 6.33         | 75%          | 59%          | £1,596,065             |
| A52 Radcliffe Road, Nottinghamshire         | 2.01          | 0.48         | 18.10         | 10.71        | 76%          | 41%          | £700,537               |
| A52 Saxondale, Nottinghamshire              | 4.15          | 0.64         | 16.23         | 5.54         | 85%          | 66%          | £1,143,941             |
| A537 Cat and Fiddle, Cheshire               | 2.35          | 0.71         | 5.92          | 3.28         | 70%          | 45%          | £2,666,248             |
| A60 London Road, Nottinghamshire            | 12.5          | 7            | 77.5          | 48.5         | 44%          | 37%          | £293,835               |
| A60 Mansfield Road, Nottinghamshire         | 3.12          | 0.00         | 21.87         | 12.13        | 100%         | 45%          | £615,629               |
| A610 Bobbers Mill, Nottinghamshire          | 7.89          | 3.37         | 43.21         | 16.00        | 57%          | 63%          | £1,178,547             |
| A611 Annesley, Nottingham                   | 3.33          | 2.58         | 31.66         | 16.92        | 23%          | 47%          | £181,812               |
| A616 Stocksbridge, South Yorkshire HA       | 1.89          | 0.35         | 6.60          | 4.52         | 81%          | 32%          | £1,875,504             |
| A631 Beckingham Bypass, Nottinghamshire     | 5.00          | 0.00         | 11.25         | 10.50        | 100%         | 7%           | £436,709               |
| A631 Gringley on the Hill, Nottinghamshire  | 2.00          | 0.13         | 4.00          | 0.90         | 94%          | 78%          | £652,747               |
| A631 Scaftworth, Nottinghamshire            | 8.57          | 0.00         | 14.28         | 1.14         | 100%         | 92%          | £694,562               |
| A6514 Ring Road, Nottinghamshire            | 4.86          | 2.11         | 37.42         | 20.35        | 57%          | 46%          | £2,812,298             |
| A77 Ayr to Stranraer, Transport Scotland    | 1.18          | 0.64         | 4.2           | 2.96         | 46%          | 30%          | £3,545,993             |
| B1096 Ramsey Forty Foot, Cambridgeshire     | 0.43          | 0.14         | 1.41          | 0.72         | 67%          | 49%          | £319,597               |
| B6004 Oxclose Lane, Nottinghamshire         | 4.44          | 0.00         | 13.33         | 6.55         | 100%         | 51%          | £462,913               |

 The casualty case is well proven – £1.6m saving **per site annually**.

Recently published DfT data demonstrates this – no 'bad sites'.

# SPECS3: widely implemented & understood

- Since HOTA in 1999, >200 temporary and 30 permanent SPECS1 projects
- Since HOTA in 2009, >50 temporary and 33 permanent SPECS3 projects with 20 Police forces
- Operated with **20**, 30, 40, 50, 60 and 70mph schemes
- Not a new concept and not just in roadworks!**



## SPECS3 Location

## SCP

M3 / M25 junction

Surrey

A60 Mansfield Road

Nottingham

M25 QEII Bridge

Essex

A282 & M25 J2 - Dartford tolls

Kent

Blackwall Tunnel

London

Aspley Lane

Nottingham

A374 Plymouth

Devon & Cornwall

B1096 Forty Foot Drain

Cambridgeshire

A66 Bass Lake

Cumbria

A149 Sutton

Norfolk

A631 Beckingham

Nottinghamshire

A6097 Epperstone Bypass

Nottinghamshire

M4 J40-41a Port Talbot

Wales

## SPECS3 Location

## SCP

A611 Annesley

Nottinghamshire

A3 Hindhead Tunnel

Surrey

A130 Canvey Way

Essex

A14 Girton to Fen Ditton

Cambridgeshire

A537 Macclesfield to Buxton

Cheshire

A52 Ropsley

Lincolnshire

Marine Parade, Southend

Essex

A38 Shenstone to Bassetts Pole

Staffordshire

A614 Old Rufford Road

Nottinghamshire

A465 Head of the Valleys

Wales

A55 Britannia Bridge

Wales

A61 Sheffield

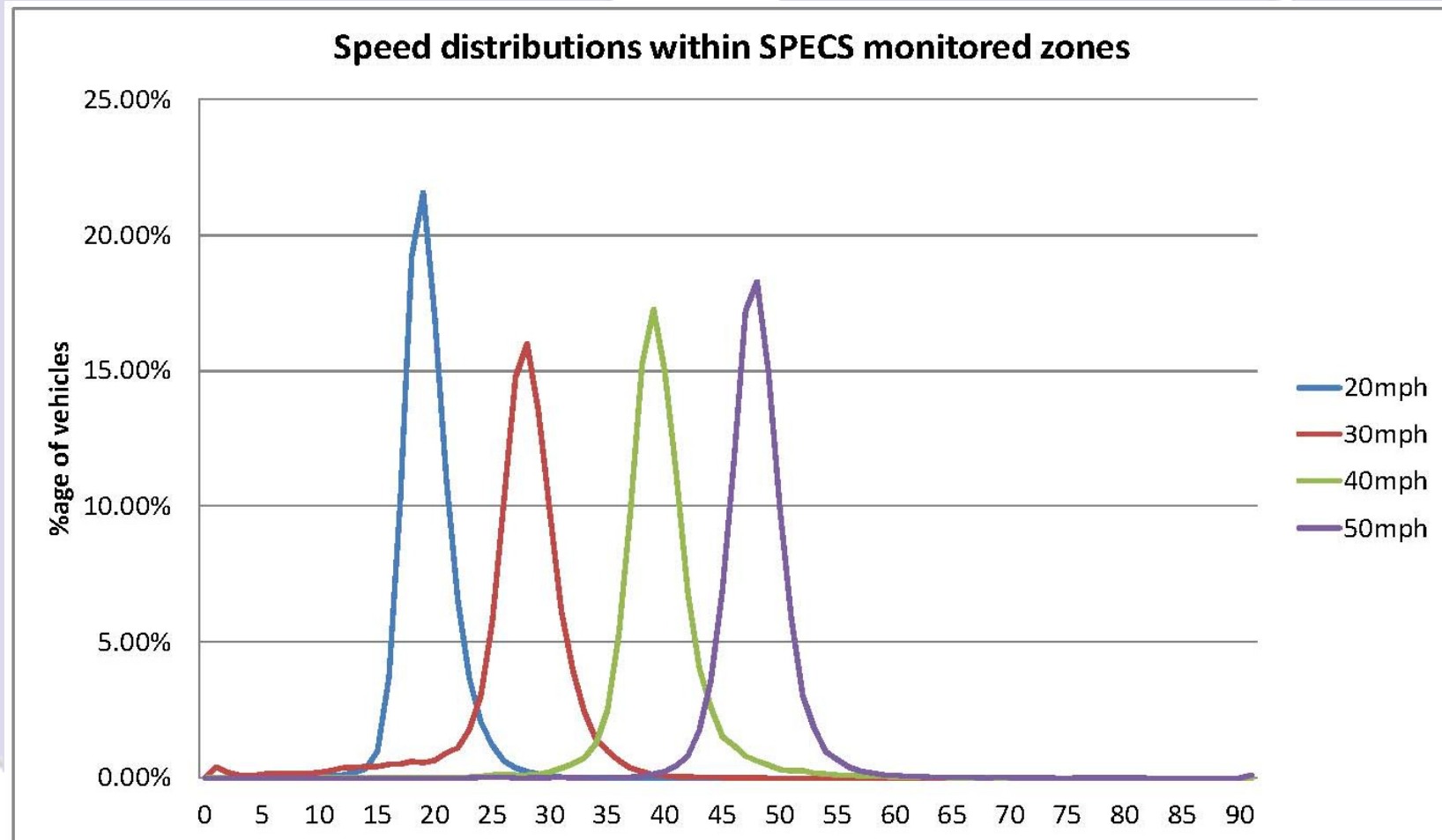
South Yorkshire

A120 Pellens Corner

Essex

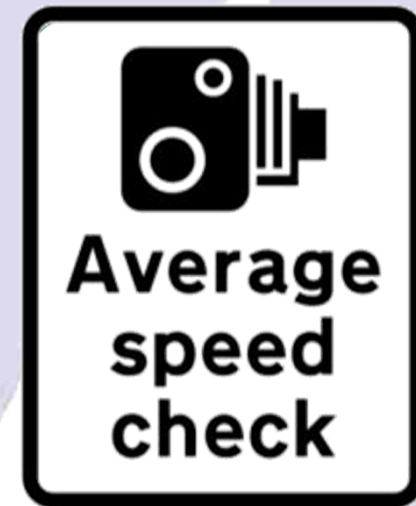
# Average speed enforcement

Behaviour at overt SPECS enforced locations is predictable:



# Where is the money?

- Average speed clearly delivers significant benefits
- **BUT** the up front capital cost can be significant
- How can we spread the benefit further?
- Need to understand why it works:
  - Is it the signage?
  - Is it the street furniture?
  - Is it the number of tickets?
  - Is it knowing a system has been live?
- “The Observer Effect”
  - People or processes are changed, simply through the perception that monitoring is taking place
- Once the system is installed and effective, is the expensive enforcement equipment therefore redundant?

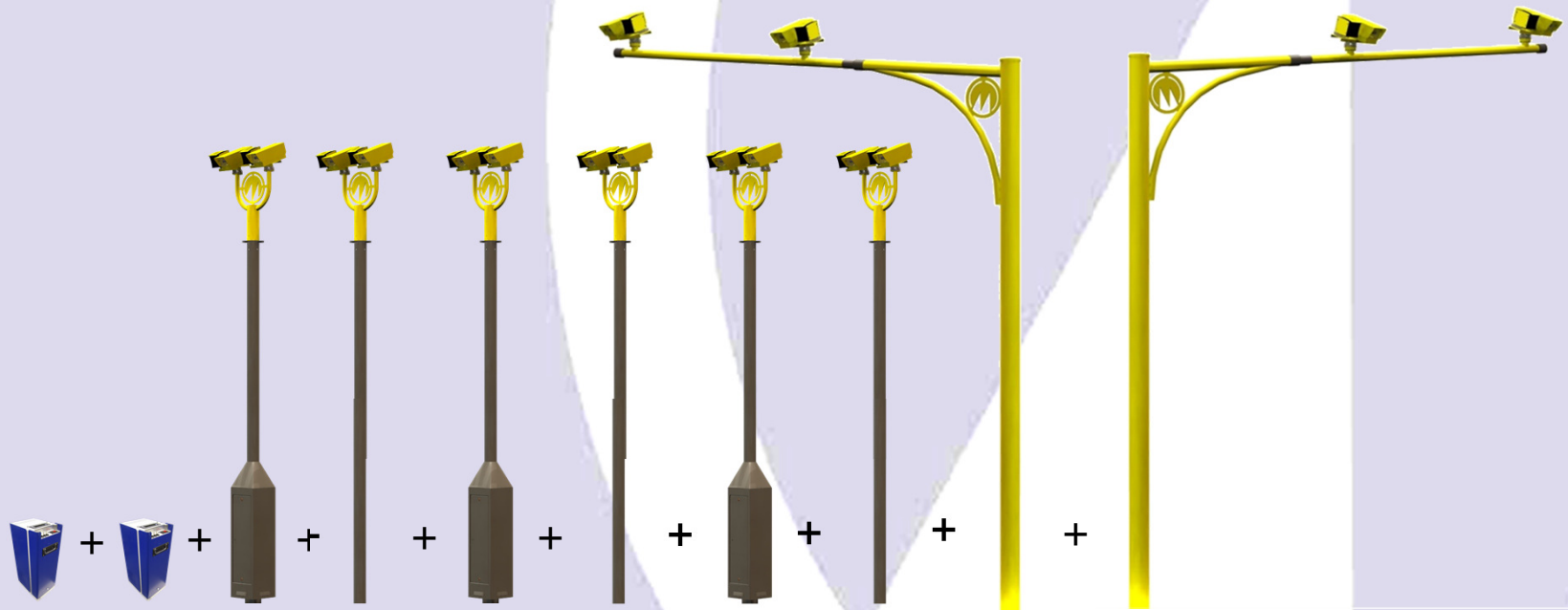




# SPECS3 POD

Portable Outstation Device

- 👁 Share the expensive bit
- 👁 Use lots of the cheap bits
- 👁 Result = effective coverage of a large area.



# Spot the difference?

 With a POD present



 Without a POD present

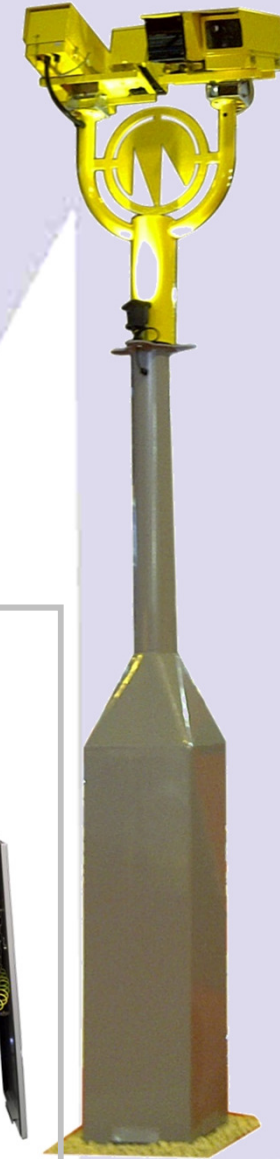




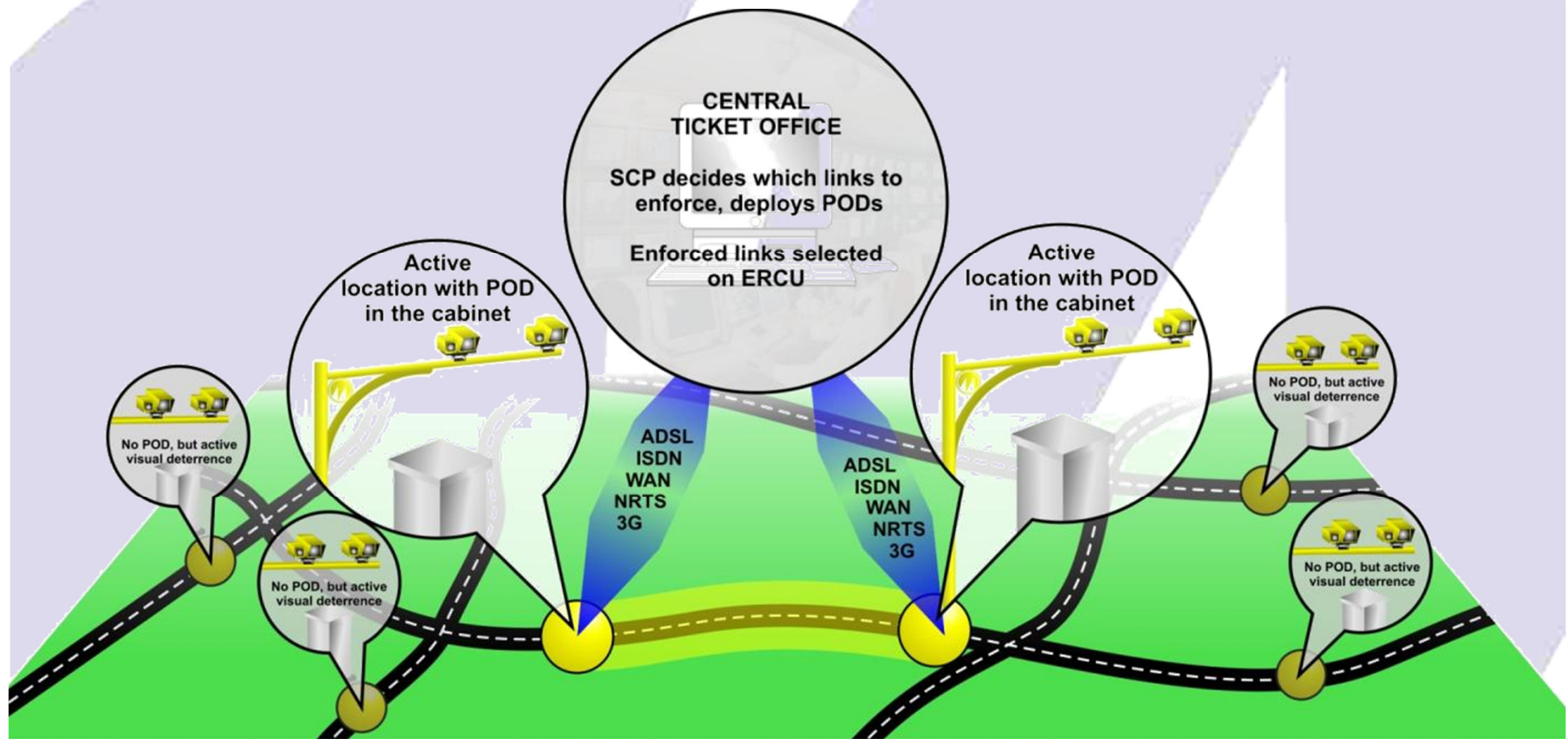
# SPECS3 POD

## POD: Portable Outstation Device

- Approved for use (HOTA agreement)
- Complete outstation in a single transportable unit
- Can be moved between multiple locations
- Significantly lower equipment cost
- Benefits of 'visual deterrent' still high



# SPECS3 POD

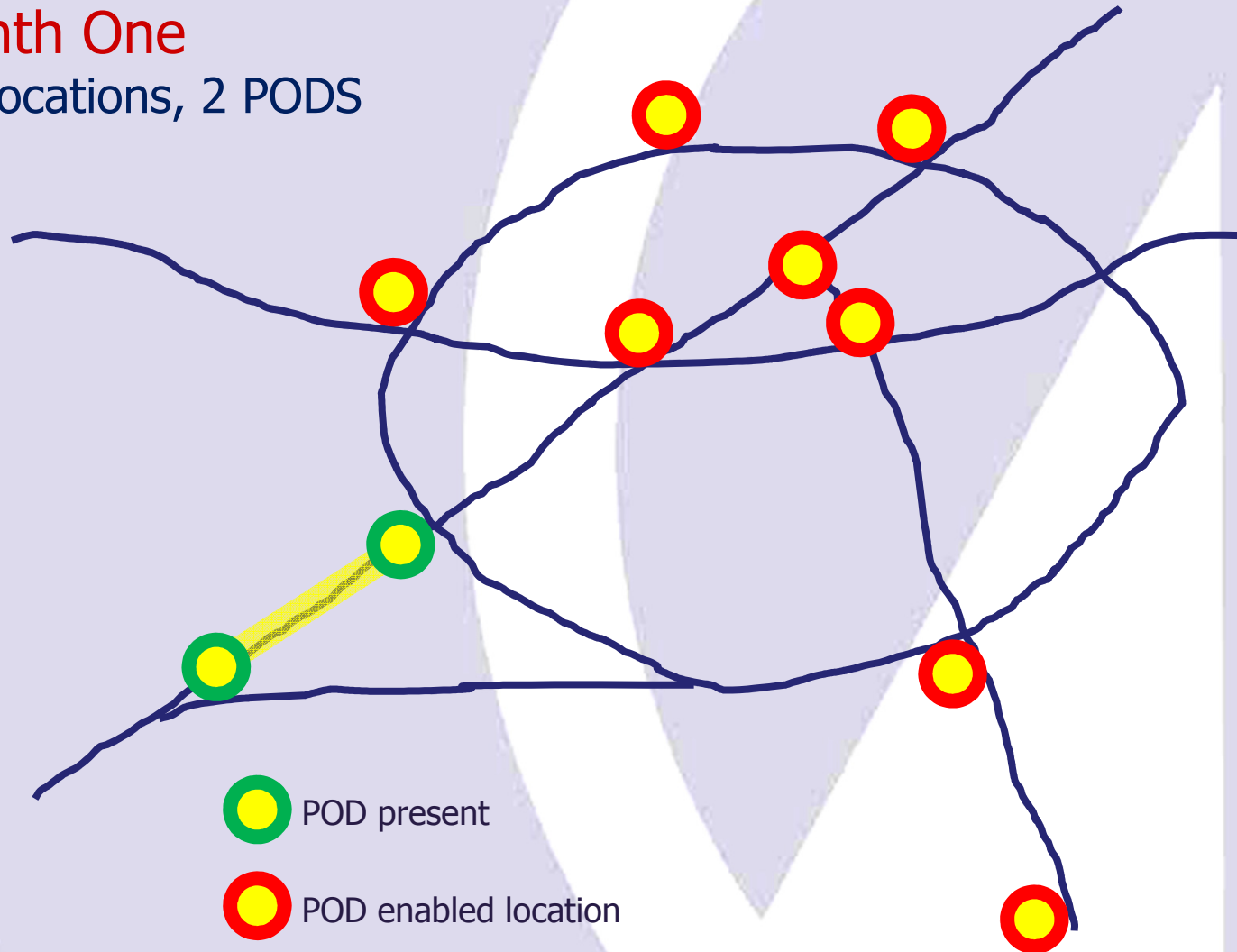


 Simple to redeploy at pre-configured sites.

# True Network Coverage

Month One

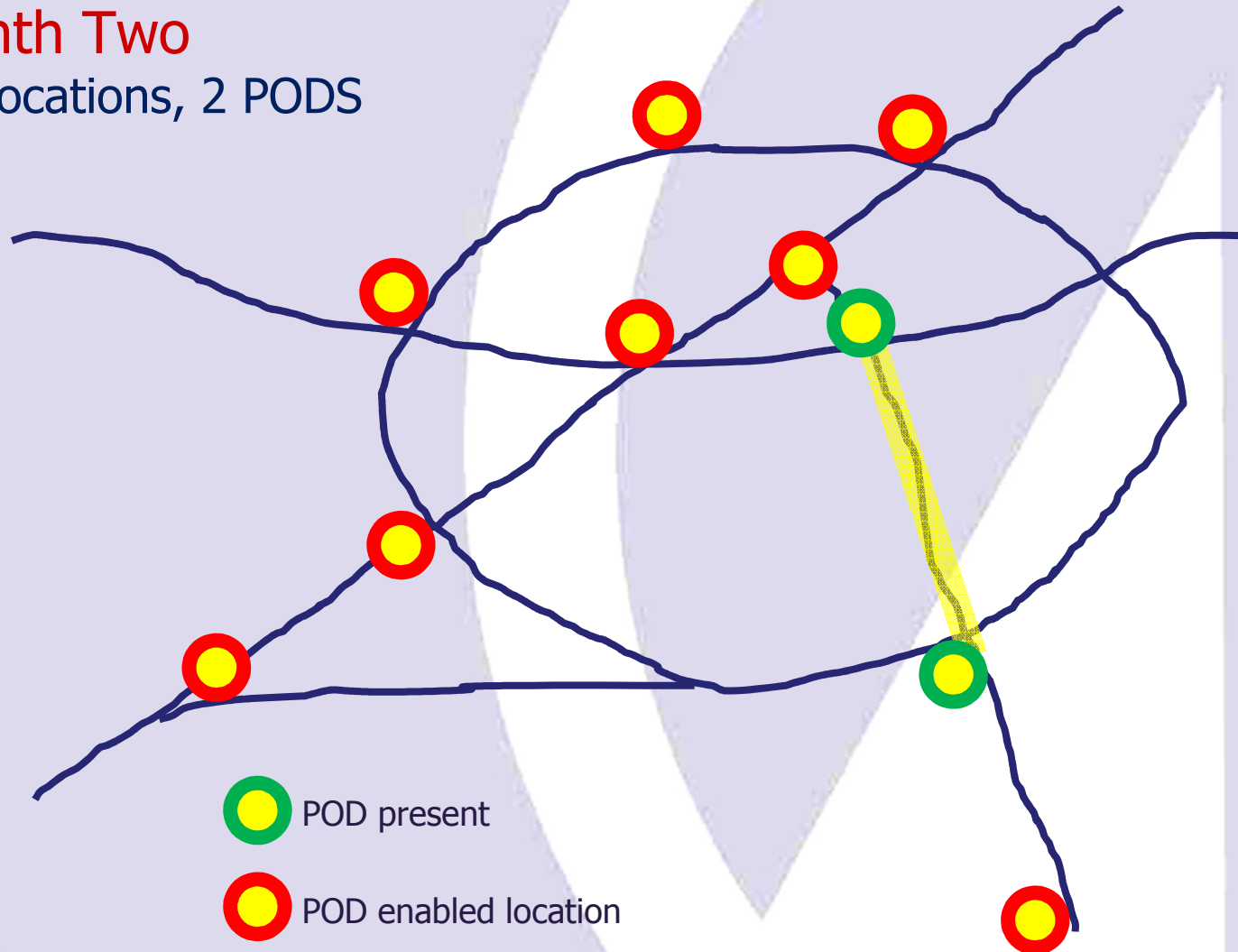
10 Locations, 2 PODS



# True Network Coverage

Month Two

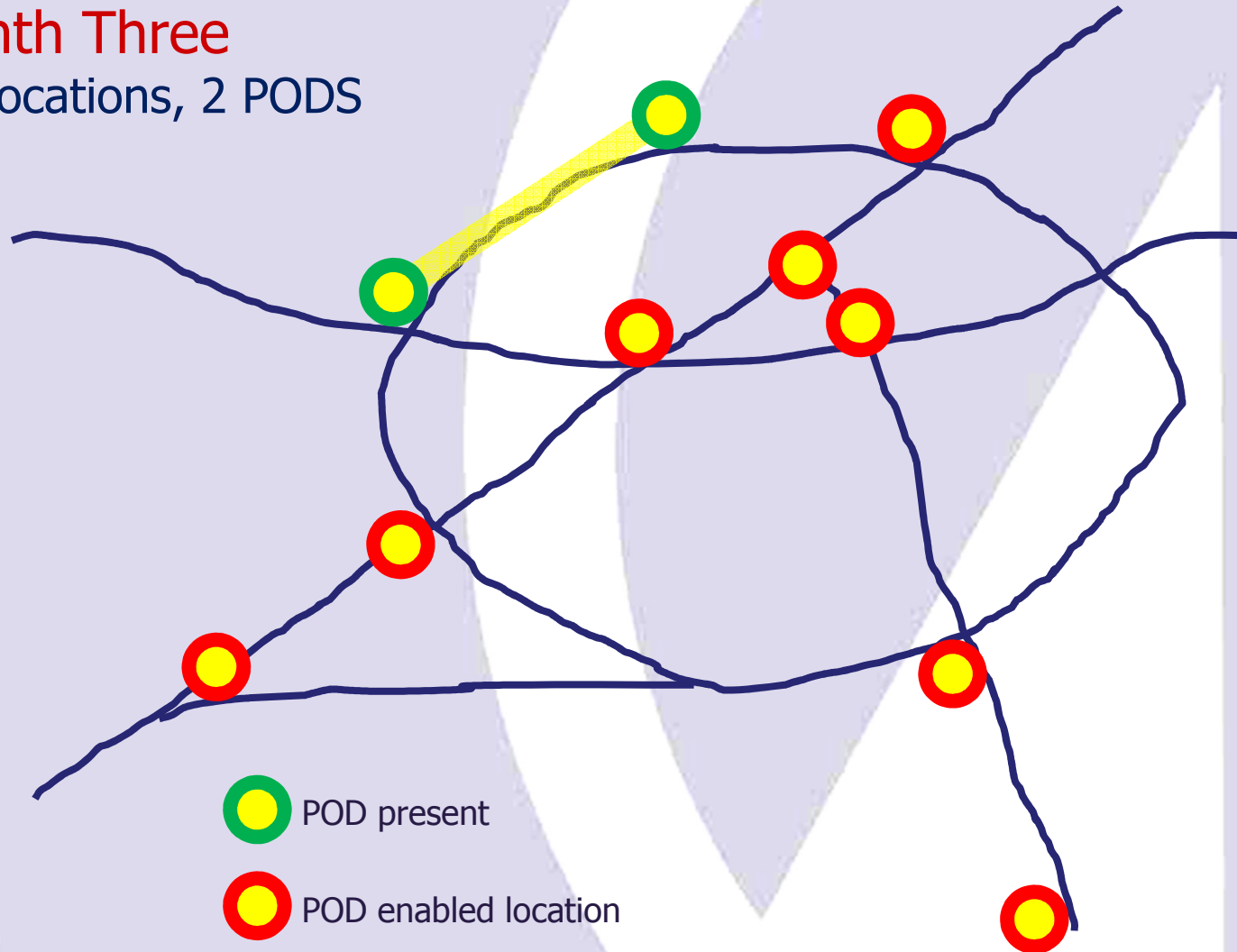
10 Locations, 2 PODS



# True Network Coverage

Month Three

10 Locations, 2 PODS





# Summary

- Enforcement solutions prove that monitoring does change behaviour
- The visible street furniture (low cost) has the biggest impact on driver behaviour
- Backed up by the knowledge that tickets are issued (the more costly part)
- By changing driver behaviour, re-locatable systems deliver casualty reduction.
- Offers an adaptable, manageable network strategy approach
- Cost effective for wide area coverage
- Talk to the experts and see the benefits.



# The latest technology...**SPECS3** VECTOR

- **A new generation of SPECS3 is now in volume production**
- Reduced installation cost
- Compact and Lightweight
- Lower power requirement
- High resolution – dual lane
- IP67 rated – anodised aluminium casing
- **Fully compatible with all existing SPECS3 systems**
- Revised approval – a new platform, not a new device.
- Testing completed and recommended as an approved platform for SPECS3.





