

Autonomous driving & Co-operative ITS in Flanders

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Vlaanderen

is mobiliteit &
openbare werken

Outline

- **Autonomous driving**
 - *Code of practice*
- **Co-operative ITS**
 - > *CEF (2015) Call:*
 - CITRUS
 - InterCor
 - C-Roads Belgium/ Flanders

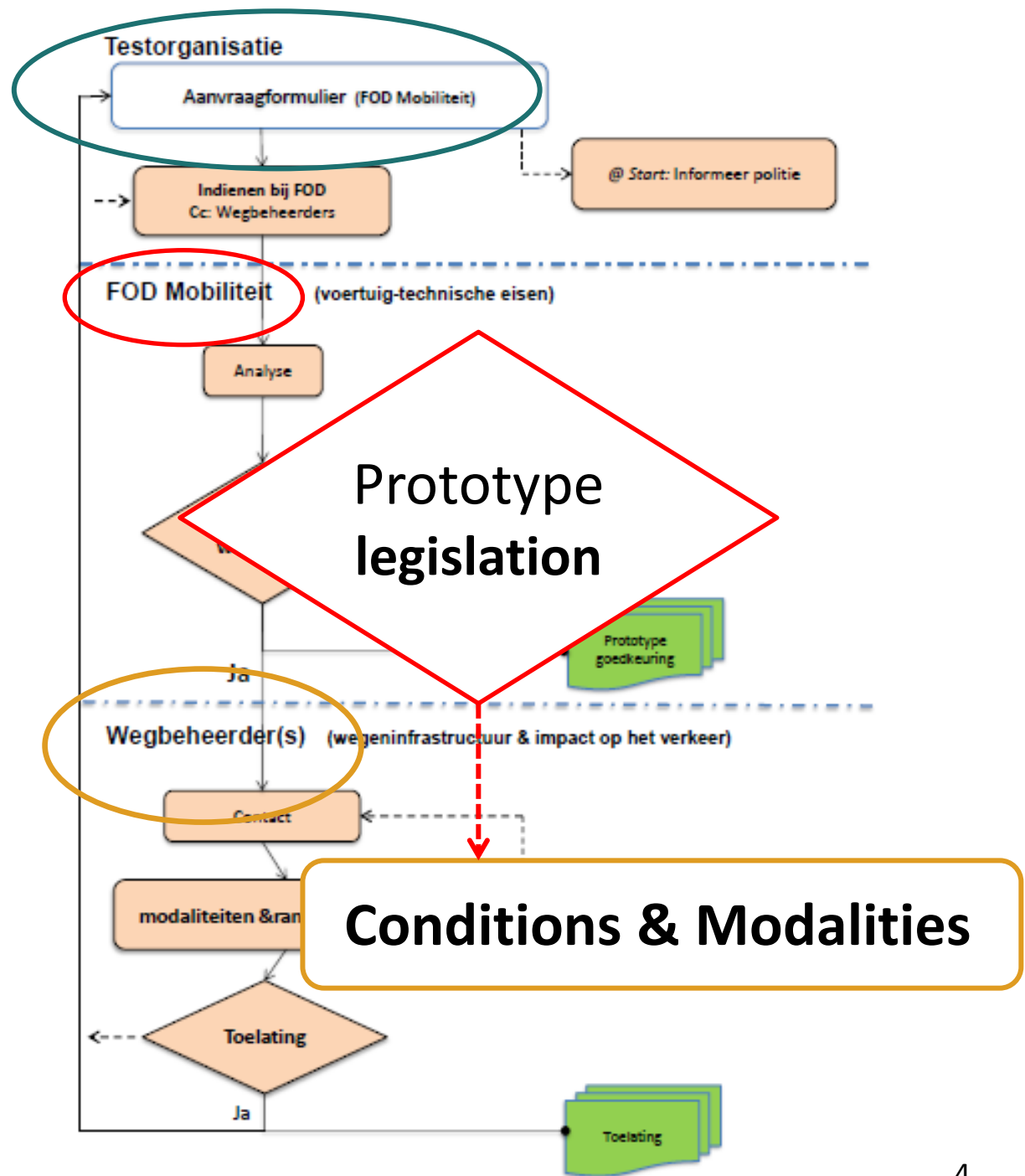


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Facility of the European Union

Autonomous driving

- the Code of practice

...in practice:



Autonomous driving: *testbed Flanders*

- ***Platooning***



Nationale Platoontest

Evaluatie van de testrit met semi-zelfrijdende auto's op de A2



- **De Lijn**
shuttle by 2019



Outline

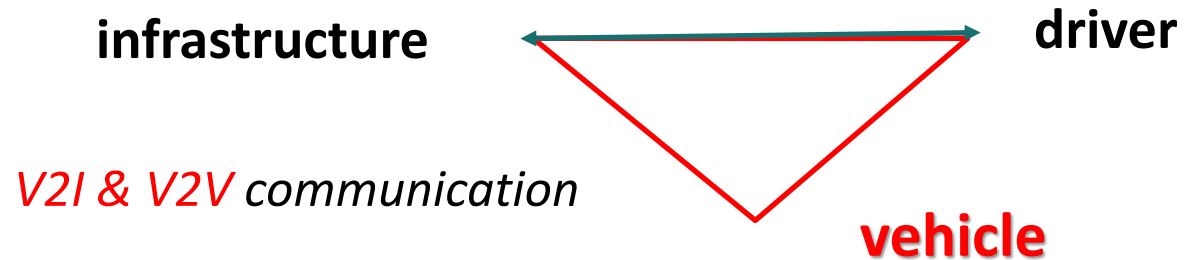
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 - Code of practice
- **Co-operative ITS**
 - > ***CEF (2015) Call:***
 - **CITRUS**
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Co-operative ITS

- **Evolution in ICT**
 - > *“always connected”*
 - > *dynamic traffic management*



- **Co-operative ITS:**

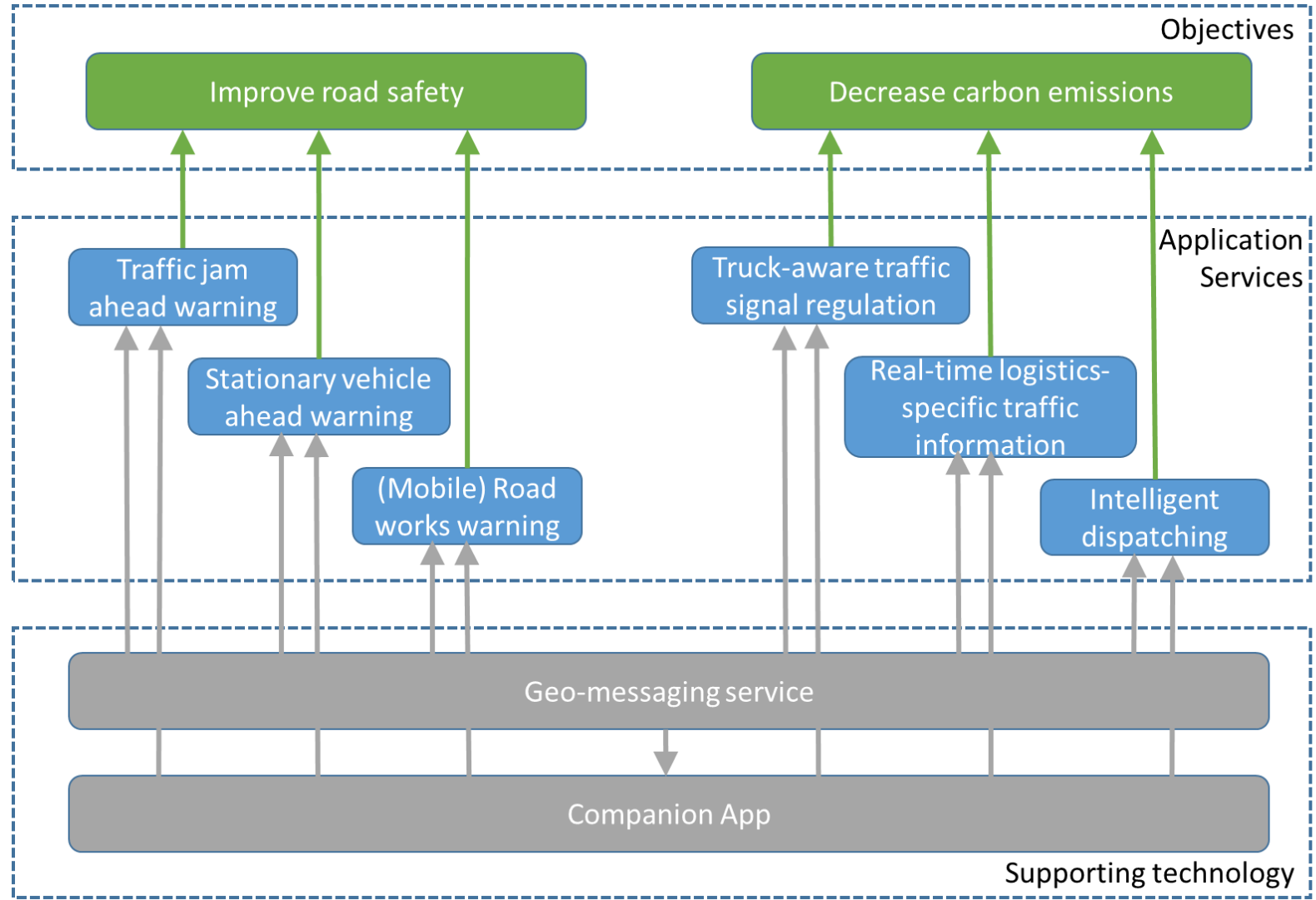


- EC **C-ITS platform**: *‘Connected and automated driving’*
http://ec.europa.eu/transport/themes/its/c-its_en.htm
- CEF (2015) Call - projects

1. CITRUS

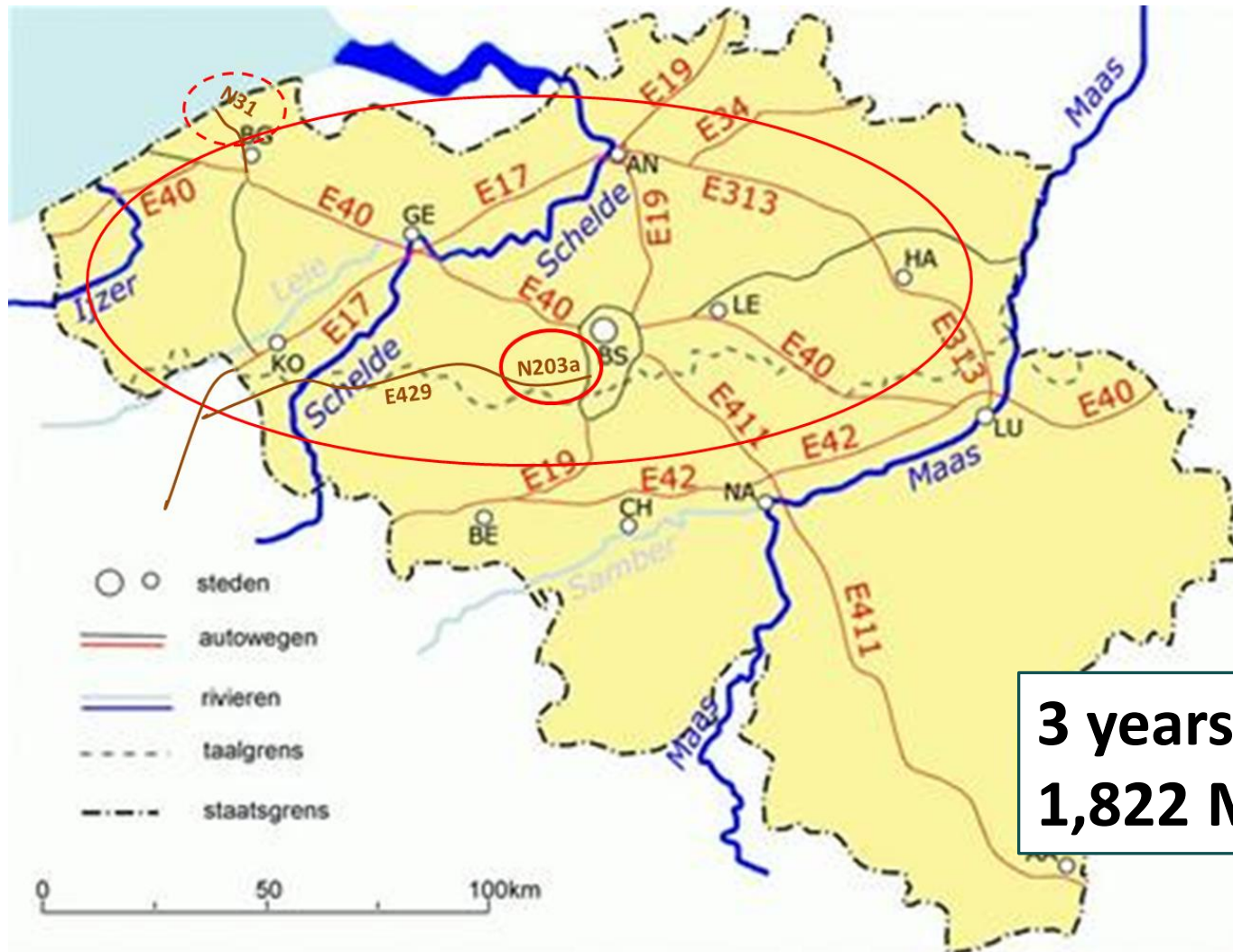
- **Truck ‘in-vehicle application’**
- **Road safety & transport related emissions**
- **3G / 4G existing communication networks**
- **Geo-fenced broadcasting**
- **Partners: Be-Mobile, MOW + AWV, Colruyt, TML, Flow
Port of Antwerpen, Port of Zeebrugge**
- **Technical feasibility + impact assessment**
- **Ecosystem**

CITRUS:



Approx. 300 trucks (Colruyt) – tablets/ smartphone

CITRUS:



3 years
1,822 Mio€

2. InterCor



InterCor

- **Common set of C-ITS specifications**
- **Cross-border testing & concerted deployment**
- **Partners: NL, Fr, UK, Flanders + ERTICO**
- **(ETSI) ITS-G5 Service consistency**
- **Hybrid communication** (÷ architecture)
- **Agreed security mechanism – Public Key Infrastructure**
- **Freight-related services**
- **Cross-border test sites**
- **Functional & technical interoperability – Guidelines**

InterCor

- **‘Day 1 Services’:**
 - **Road Works Warning**
 - **In-vehicle signage**
 - **Probe data**
 - **Green Light Optimization – Speed Advice (GLOSA)**
 - **Truck Parking**
- **3 years**
- **30 Mio€ (Flanders: 5,2 Mio€)**

3. C-Roads & C-Roads Belgium/ Flanders



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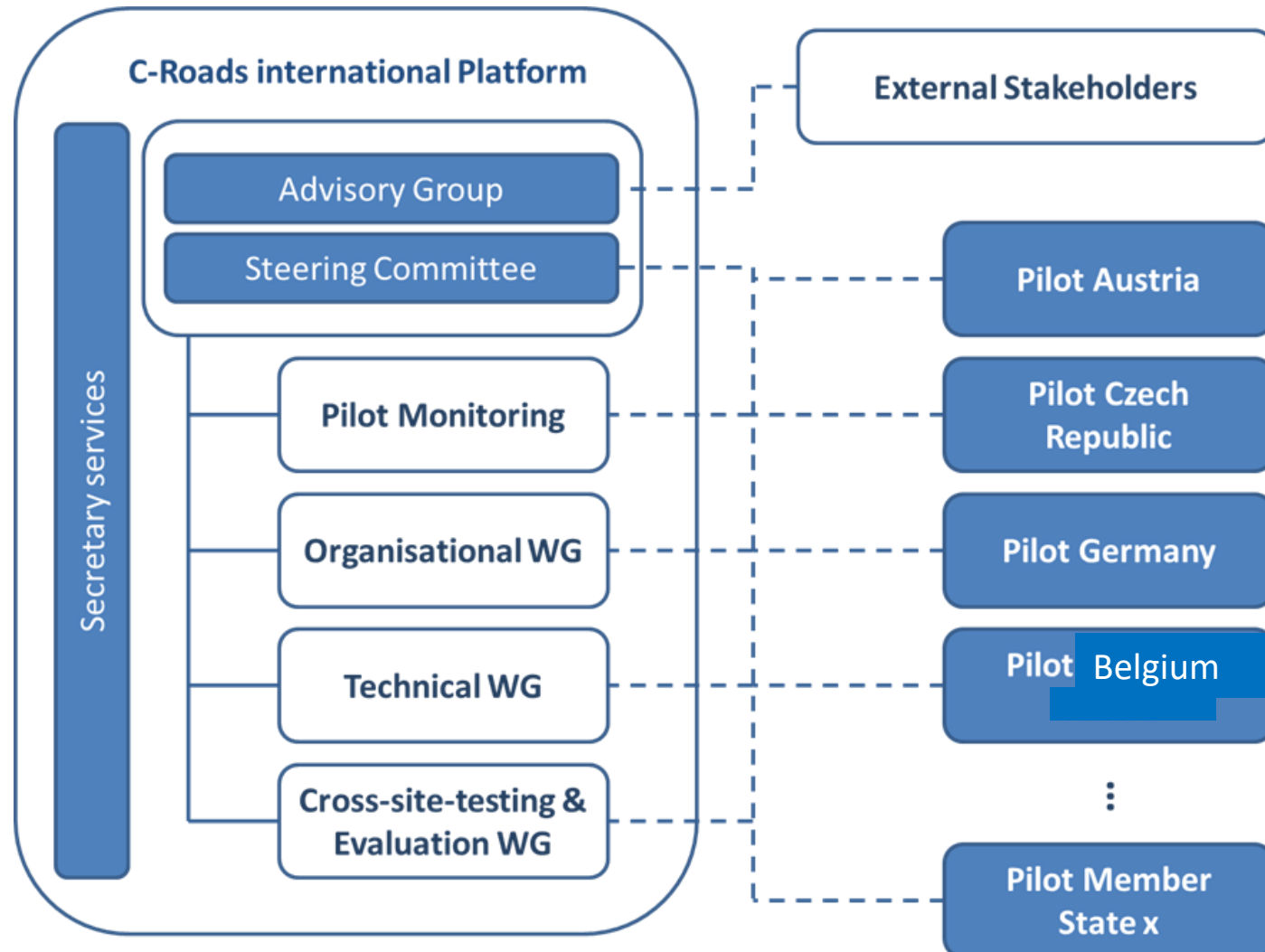
- **Cross-border interoperability & Continuity of C-ITS Services**
- **Harmonisation from a user perspective**

“Member States across Europe will install C-ITS pilot sites needed for the testing of ‘Day-1-Use-Cases’ ;

OEMs and the industry will use that pilot test infrastructure to test systems and services”

- **Platform to agree on Specifications & deployment Guidance**
 - > Focus on (ETSI) ITS-G5 communication (wifi-p)
 - > Hybrid communication + security mechanism
- **Partners: AT, BE/ Flanders, Czech Rep., FR, GE, Slovenia + NI & UK ...**

C-Roads - 'platform' structure



C-Roads & C-Roads Belgium/ Flanders

- **Participation in the platform**
- **‘National’ test site**
 - > **technical assessment**
 - > **impact evaluation (user perspective)**
 - > **organizational & business related aspects**
- **Partners: MOW, Tractebel, ITS Belgium, HERE**
- **5 years**
- **3,176 Mio€ (Incl. 2,27 Mio for testsite)**
- > **‘national’ pilot details**