



SEMAFOUR

Self-Management for Unified Heterogeneous Radio Access Networks

Objectives and Goals

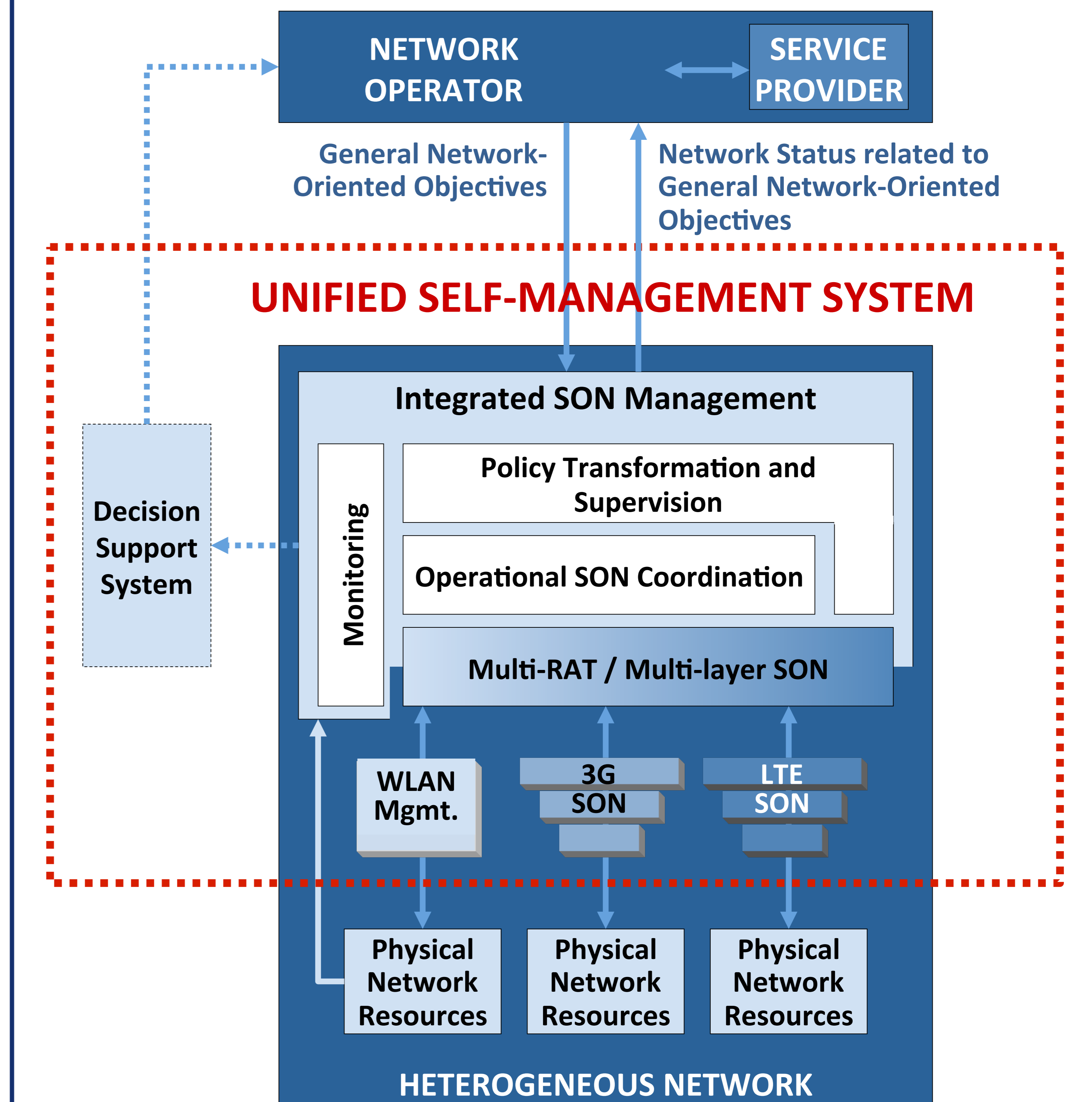
Holistically manage heterogeneous radio access networks with multiple RATs / layers:

- Develop concepts, methods and algorithms for a selected set of **multi-RAT / multi-layer SON functions**
- Develop concepts, methods and algorithms for an **integrated SON management**, to control and coordinate individual SON functions according to high-level operator objectives
- Proof-of-concept through extensive **simulations** and a **demonstrator**

Simplify the operation of heterogeneous radio access networks:

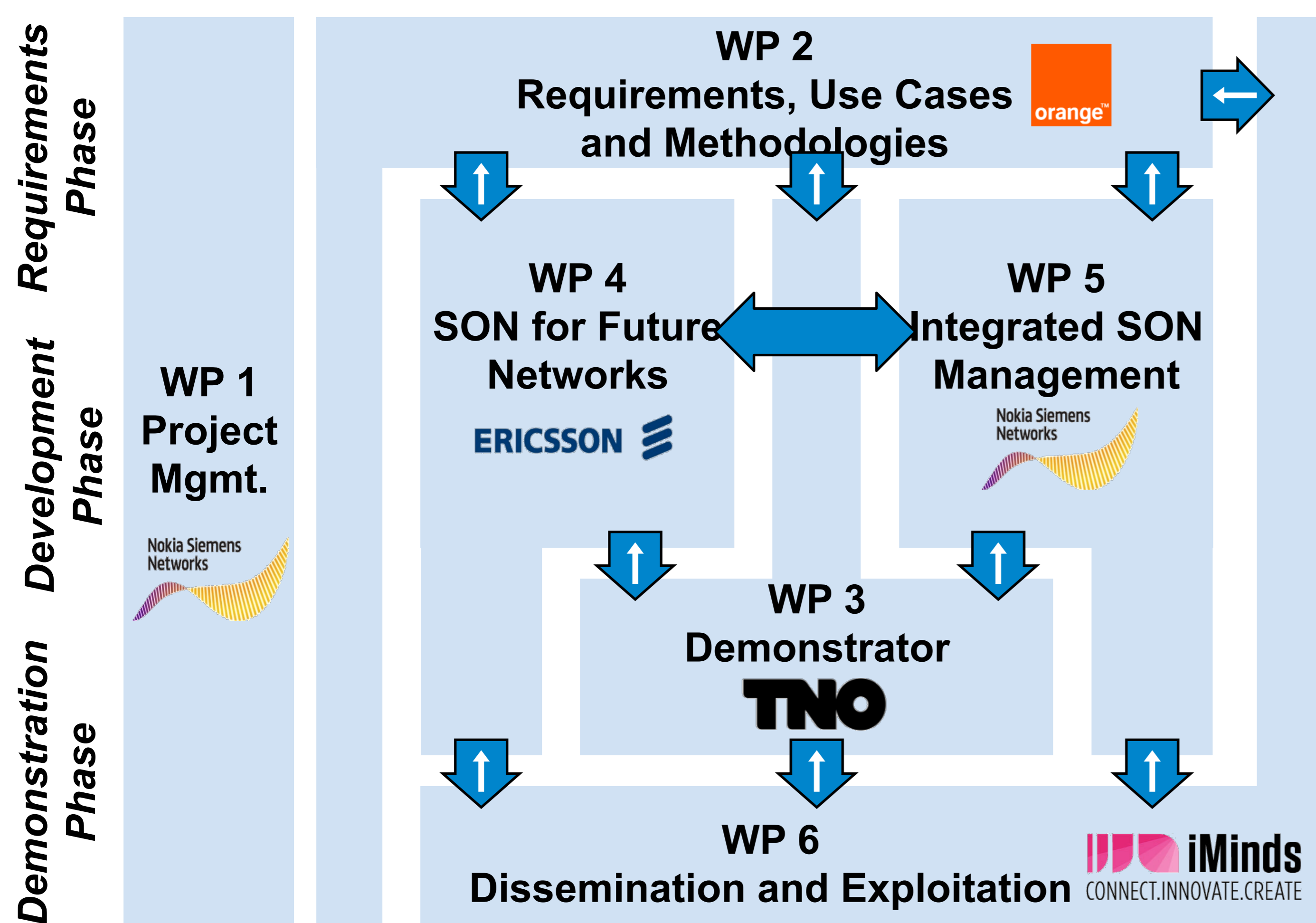
- Considerably **improve the manageability** of the network
- Provide **performance and capacity gains**
- Reduce the **network management costs**

Vision



Facts & Figures

- **Website:** www.fp7-semafour.eu
- **Scheme:** EU FP7 STREP (No. 316384)
- **Duration:** 09/2012 – 08/2015
- **Effort:** 500 Person Months
- **Budget:** 6.1 M€ (total), 3.8 M€ (funding)
- **Coordinator:** Dr. Colin Willcock
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Use Cases

WP4 SON for Future Networks

- Resource Management Supporting Dual Connectivity
- Dynamic Spectrum Allocation and Interference Management
- Multi layer LTE/WiFi Traffic Steering
- Tackling the Problem of High Mobility Users
- Active/Reconfigurable Antenna Systems

WP5 Integrated SON Management

- Operational SON Coordination
 - Policy-based SON Management
 - Monitoring and Diagnosis
 - Decision Support System
- The evaluation of all use cases is performed on simulators using a **common realistic network layout**
- A selection of the developed solutions will be shown with a **common demonstrator**



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SEVENTH FRAMEWORK PROGRAMME

