Background: The European Perspective

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Background: Europe

- Europe
- The European Union
- 15 countries
  soon to be 25…

With a wide array of
cultures, languages
and approaches
to ITS and ITS evaluation

Major Areas of ITS Investment in Europe

- Urban on-road applications
- Inter-urban on-road applications
- Monitoring and enforcement applications
- Trip planning systems
- Driver information
- Freight and fleet management
- Automated vehicle applications
- Vulnerable road user applications

ITS Timeline in Europe

- 1980's – 90's

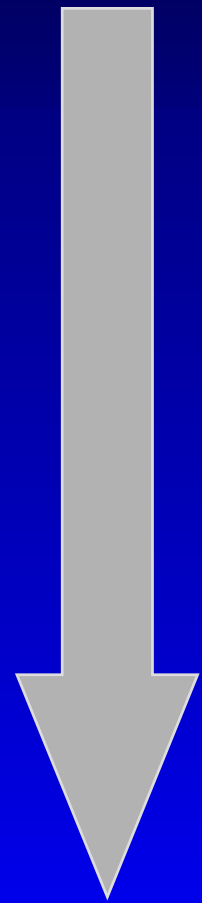
  Experimentation (DRIVE)

- 1990's – 2000

  Demonstrations (TABASCO, CHAUFFEUR, IN-RESPONSE, … / FP4)

- Today

  Implementation (TEMPO – Trans-European Network ITS projects / DG-TREN)



Current Status of ITS in Europe

- 10-15 years in ITS research and development
- Some applications are now ‘mature’
- Each nation state has its own ITS applications
- The EU is encouraging standardisation, especially in the delivery of seamless services

Definition of ITS Evaluation in Europe

- It is the same as in the US!
- Evaluation is the reasoned consideration of how well project goals and objectives are being achieved

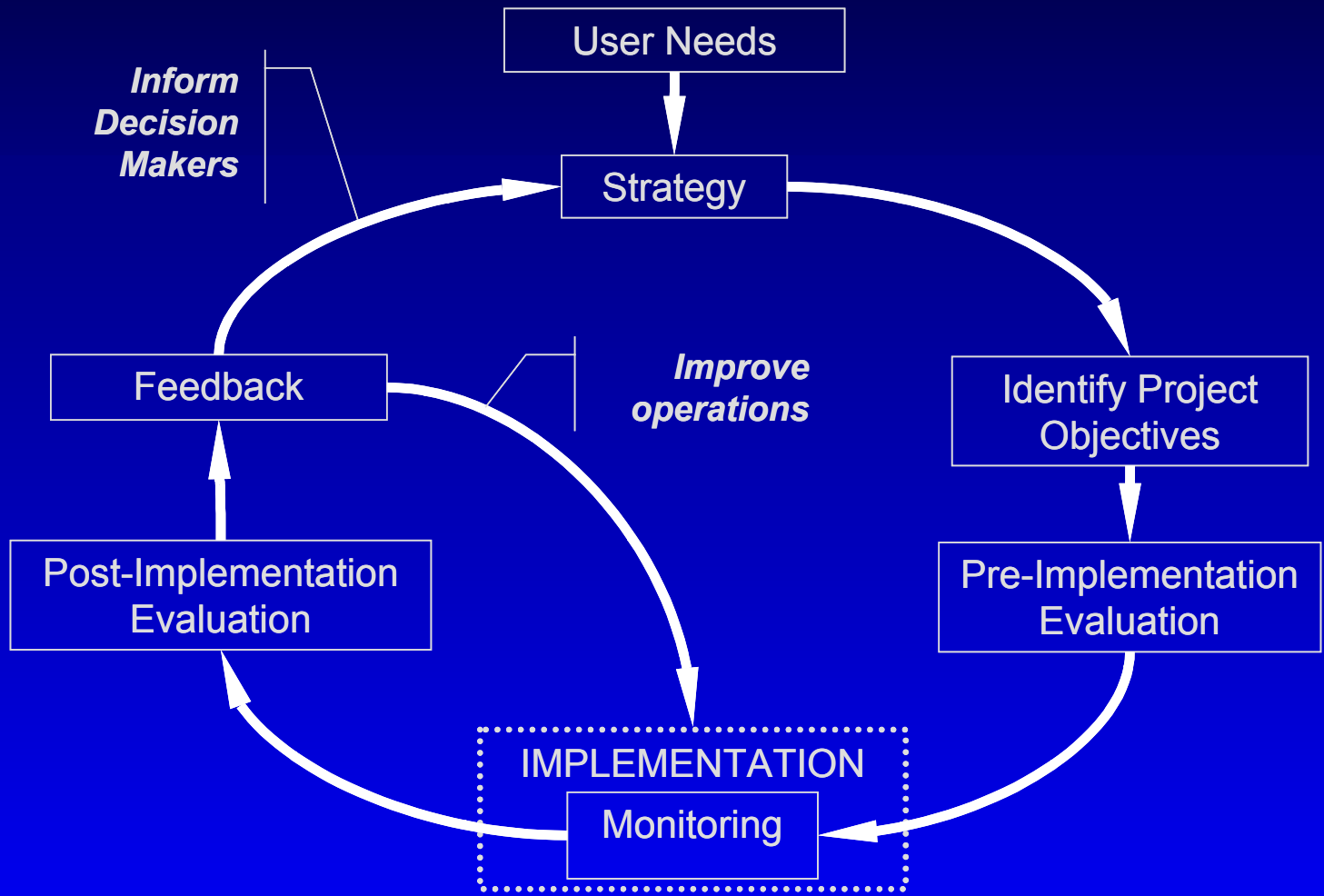
Why Do We Evaluate ITS in Europe?

- Evaluation:
  - enables the optimisation of applications
  - justifies EU and National Government expenditure and represents good value
  - demonstrates the benefits (technical, financial and socio-economic) of individual applications and systems as a whole
  - enables lessons to be learned for the future

European Evaluation

- EU approaches to evaluation
  - EVA – Early 1990's
  - CONVERGE – Mid to Late 1990's (for demonstration projects)
  - MAESTRO – Late 1990's (for pilot projects)
  - TEMPO framework 2003 (for implementation projects)
- National approaches in several countries

Generic Evaluation Lifecycle

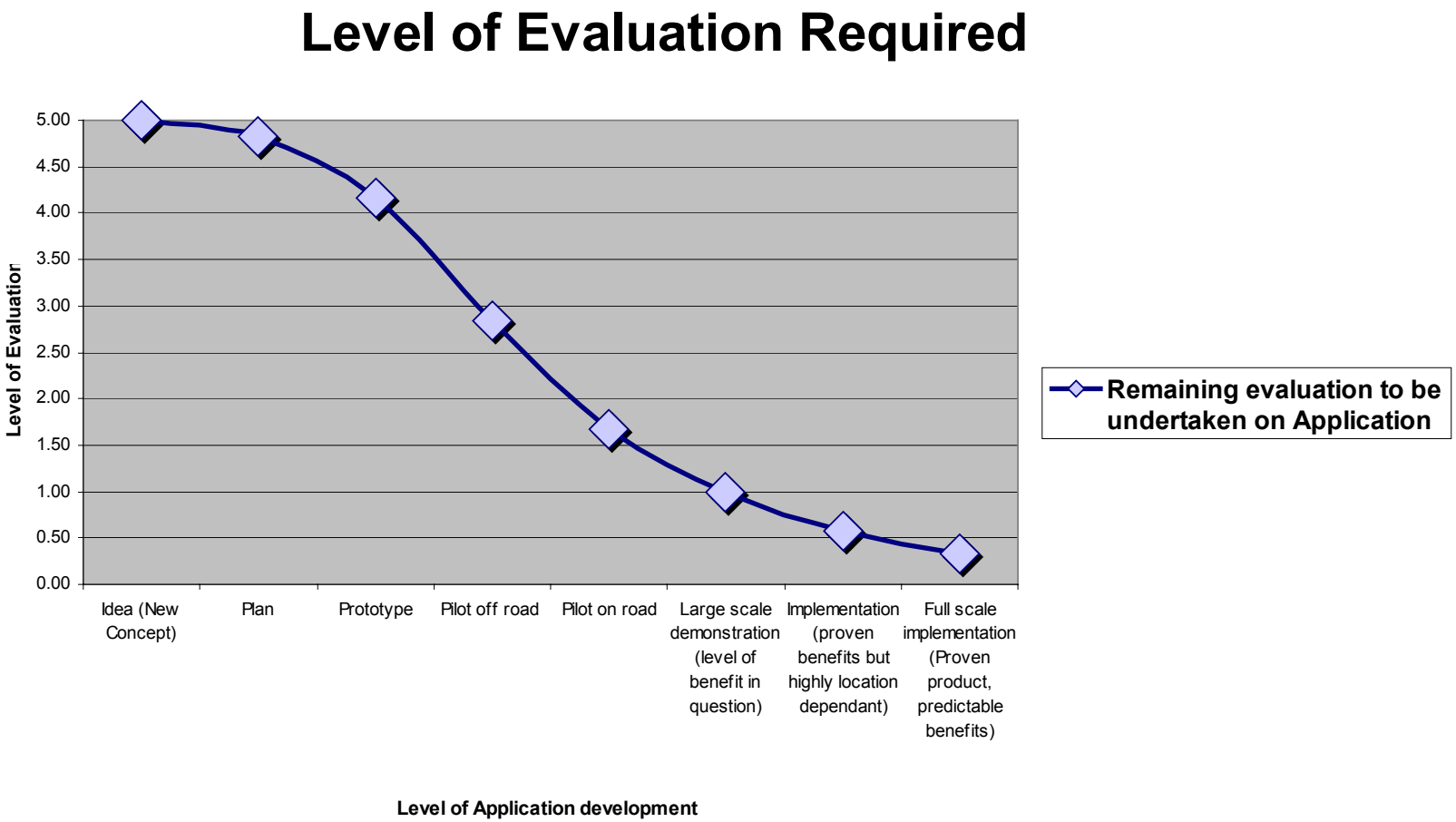


Level of Evaluation Required

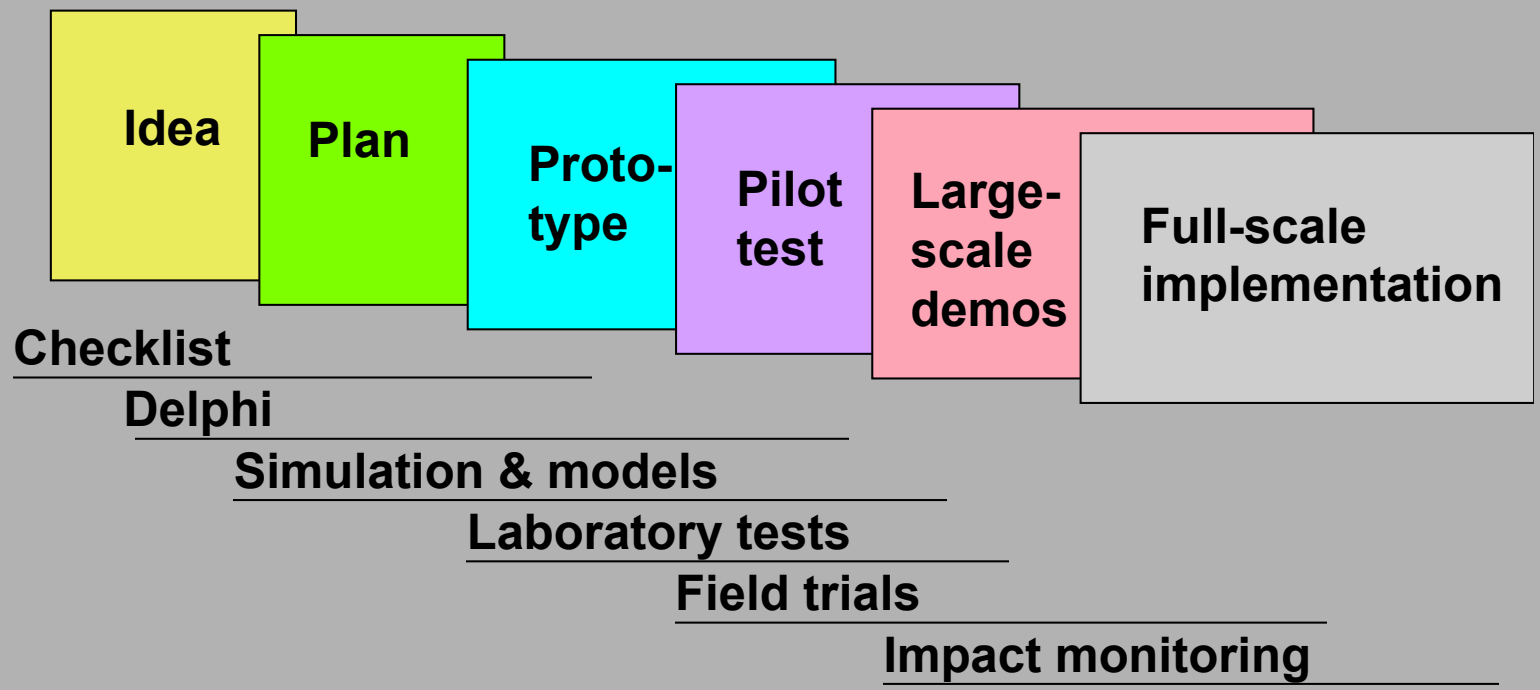
Level of evaluation required dependant on:

- Maturity of technology
- Objectives of the evaluation
- Scale of the project
- Requirements of the country and the EU

Maturity of Technology



Techniques for Evaluation



Pre-implementation Stages of Evaluation

- Identify Problem
- Identify Aims and Objectives for the application
- Assess expected impacts

DECISION TO PROCEED

- Select performance indicators
- Define and commence before monitoring

Post-implementation Stages of Evaluation

- Implement project
- Post implementation monitoring
- Present results

Evaluation: Guiding Principles - 1/3

- Be clear about the reasons for undertaking evaluation
- Use and build on national approaches to ex ante appraisal and ex post evaluation
- Ensure national objectives are adopted within the evaluation framework
- Clearly state the objectives of the application

Evaluation: Guiding Principles - 2/3

- Clearly describe the environment in which the ITS application resides
- Clearly describe the measurement approach taken
- Determine the spatial and temporal perspective of the evaluation
- Use well-established indicators in measuring the impacts

Evaluation: Guiding Principles - 3/3

- Express the results in real and not just relative numbers
- Clearly indicate the level of statistical significance of the result, if appropriate
- Provide supporting information

Current Status of ITS Evaluation in Europe

- Technology is maturing
- The need for evaluation remains especially for effects of ITS implementation
- Europe has a number of different approaches to evaluation, reflecting national priorities; but
- The EU seeks to present results in a common format and make them more widely available

Remainder of Presentations/Discussion

- Synthesis of U.S. and European approaches to evaluating the benefits and costs of ITS …

Agenda

- Introductions and Overview
- Background – US perspective
- Background – European perspective
- **The Evaluation Process**
- Evaluation Techniques & Performance Measures
- Real Evaluations
- Wrap-up and Conclusions