



Document Information

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Document History

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0. Preamble

This Chapter is intended to assist a local authority to prepare a business case for investing in UKPMS and sets out the potential benefits and likely costs associated with setting up and operating UKPMS. Advice is also given on effective data management practices and considerations to be made when selecting a UKPMS-accredited pavement management system.

1. Introduction

As described in Chapter 2, UKPMS is the national standard for management systems for the assessment of local road network conditions and for the planning of investment and maintenance on paved areas of roads, kerbs, footways and cycle tracks on local roads within the UK. The use of UKPMS is promoted as best practice by the UK Roads Board in Well Maintained Highways – the Code of Practice for Highway Maintenance (2005) and its use is mandatory for the production of the Best Value Performance Indicators (BVPIs) relating to the condition of local roads.

The recently completed UKPMS Strategic Development Study has recommended that UKPMS should comprise the key mechanism for encouraging the delivery and support of consistent practice in Highway Pavement Maintenance Management and Asset Management. The study also recommends that UKPMS be promoted as the cornerstone of a national strategy for providing data at a local level and for monitoring local authority roads.

This Chapter describes the benefits that UKPMS can deliver and sets out the likely costs required to realise these benefits. Advice on data management considerations and selecting a UKPMS-accredited pavement management system is also included.

2. Implementing UKPMS – Benefits and Costs

Although UKPMS provides improved management of pavement maintenance, since the use of UKPMS has been mandated for the production of local road condition BVPIs, the majority of local authorities use UKPMS only for this purpose; for various reasons, not realising its full potential.

2.1 Benefits of implementing UKPMS

Although the ease with which the benefits can be realised will depend on the individual circumstances of the local authority, in principle the following benefits are possible:

- UKPMS provides a single repository of pavement data, all located to common network representation, including pavement inventory data to support Asset Valuation requirements
- UKPMS enables the quality of data to be controlled and provides effective management of information (e.g. it is relatively easy to select and



analyse the most recent condition data relating to a sections, even if that data has been collected by a number of surveys at different times)

- A common data file format enables data to be shared and transferred between survey contractors and different UKPMS-accredited systems
- The ability to develop prioritised, costed, indicative maintenance programmes and to analyse different maintenance policies and funding scenarios will support better, more transparent investment decision making which is a core component of effective Asset Management
- UKPMS can be tailored to satisfy specific local requirements, such as the development of local performance indicators to reflect local priorities
- Direct access to pavement data will encourage users to take greater ownership of their systems and data leading to continuous improvement in the quality of information and consequently more effective decision making
- UKPMS will provide greater availability of information to assist in establishing budget requirements and future network trends for input to policy making activities
- Prioritisation of potential maintenance schemes using econometric principles will lead to better economic management of maintenance work and better value for money
- Integration between UKPMS and other systems will improve the quality of management decisions in general
- Users can have confidence that UKPMS is supported by a centrally funded support contract that provides support to users, manages changes to core functionality and ensures compliance through initial comparability testing and the ongoing Annual Health Check regime being introduced in 2005
- UKPMS users join the UKPMS Owners Forum community which enables members to share experience and discuss common issues

2.2 COSTS

In order to realise the benefits outlined above, it must be recognised that the local authority will be required to invest money, time and resources – both in the short and long term. The precise costs involved in implementing and supporting UKPMS will of course depend on the specific circumstances of the local authority, but the most likely costs are given below.

2.2.1 Implementation – One-off Costs

There are a number of one-off costs associated with implementing UKPMS, these include:

- Procurement of appropriate infrastructure (including hardware, system software and software licences)
- Software set-up and configuration
- Data cleansing and transfer from other existing systems (e.g. PANDEF)
- Establishment of network representation in database and possible reconciliation between existing networks in different existing systems



- Inventory collection and recording where none currently exists – it should be noted that the ‘do minimum’ inventory will be that required for Asset Valuation purposes (see *CSS Asset Valuation Guidance, 2005*)
- Identification of business needs and developing these into business objectives and business strategy
- Staff training

2.2.2 System Operation – Recurring Costs

There are also a number on ongoing costs associated with the operation of UKPMS:

- Procurement of condition surveys
- Support Costs – both internal to local authority and external support from survey contractors and UKPMS supplier
- From time to time there will be a need for hardware and software upgrades and consequent system configuration
- Evaluation of business requirements and corresponding evolution of PMS to meet these changing requirements
- Engineering staff costs including:
 - Procurement and management of condition surveys
 - Resolving data issues
 - Analysing data and producing output reports etc.
 - Training (new staff, changing systems and requirements)
- Updating network, inventory, works and construction data – it is recommended that, where possible, this should be part of the normal maintenance management process
- Developing local rule sets if appropriate
- Development and maintenance of other information and material to ensure resilience within the organisation

3. Other Implementation Issues

3.1 Data Management

It is recommended that as part of the implementation of UKPMS, consideration is given to the management of pavement related data to ensure that:

- The data held meets the specific business needs of the local authority
- Redundant and duplicate data is minimised
- Opportunities are identified to share and reuse existing data
- Appropriate processes are put in place to collect, maintain and update data
- Appropriate processes are put in place to ensure the quality of data

Further information about good practice in data management is available from *Data Management for Road Administrations: A Best Practice Guide* published by the Conference of European Directors of Roads (CEDR) in 2003. The Guide can be downloaded from the European Road Data website (www.roaddata.org).

3.2 Choosing a UKPMS-accredited PMS

As described in Chapter 2, there are currently five UKPMS-accredited pavement management systems. As well as the core UKPMS functionality which is subject to comparability testing and the Annual Health Check, the systems each have their own flavour and, to a greater or lesser degree, provide additional pavement management functionality; often in the form of additional modules. This is illustrated in the figure below.

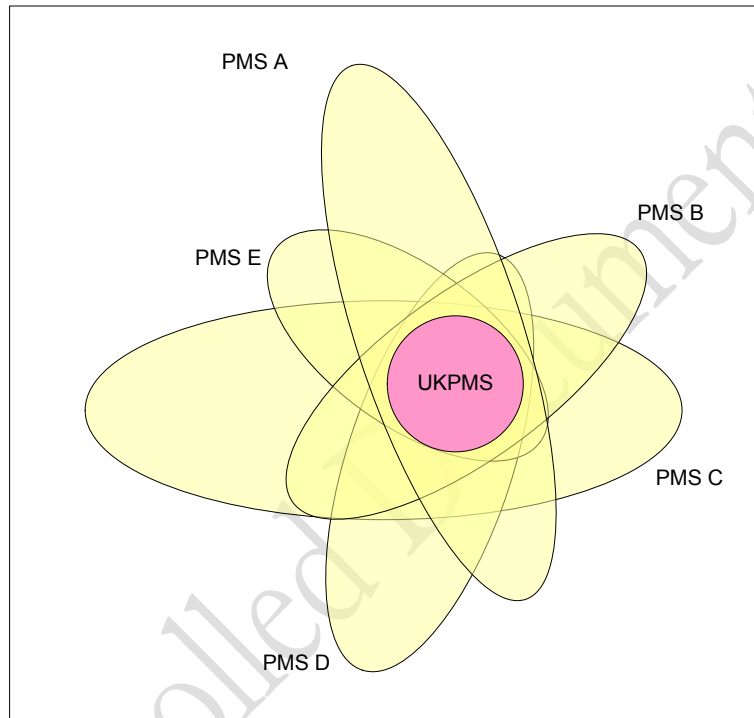


Figure 1. Relationship between UKPMS and PMS functionality

Local authorities are therefore advised to identify the system that best meets their own requirements both in the short term and within their longer term asset management strategy.

In particular, consideration should be given to:

- How the PMS is intended to be used (i.e. what role will it play in highway maintenance management both now and in the future)?
- What existing systems and data are there? Will data be transferred to the PMS? Will the existing systems continue to be used? How will the location of the data be referenced?
- To what extent will the PMS share data or integrate with other management systems?
- Does a corporate standard exist that stipulates a particular database, which may then influence the selection of the UKPMS system, even if no data sharing or integration is required?
- What skills and resources are available within the organisation to support both the implementation and ongoing operation of the system?



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- What is an appropriate strategy for collecting inventory and condition data?
- How much local functionality is likely to be needed?
- What are the start-up and ongoing costs of the system?
- What support and training is offered by the UKPMS supplier?
- How does the UKPMS supplier manage changes to the system (roll-out of new versions, new Rules & Parameters)?

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