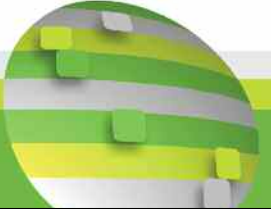


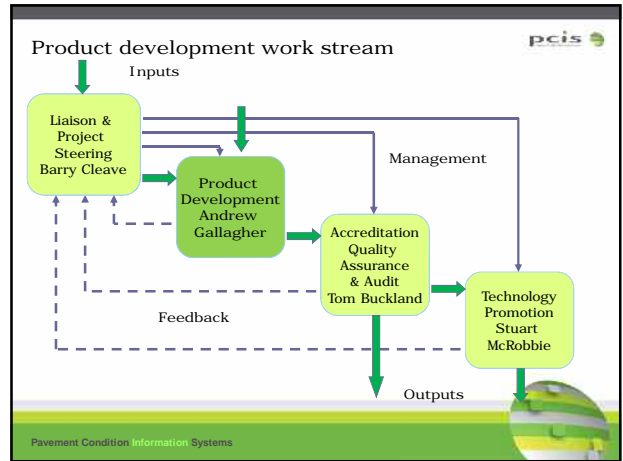
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Product Development

Presented by Andrew Gallagher
1st year review – 31st July 2009



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Deliverables

Product development

- 8** Update UKPMS core specification (annually)
- 9** Update SCANNER core specification (annually)
- 10** Detailed plan to implement UKPMS core specification
- 11** Ensure PMS suppliers deliver core functionality
- 12** Ensure PMS suppliers deliver desirable functionality




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Other requirements

- Keep pace with developments in engineering practice, local government organisation and information technology capability and advise where enhancements to UKPMS or SCANNER might be considered
- Some elements of highways management need engineering research before PMS or survey functionality can be developed to support them
 - Liaise with the research contractors to ensure that their output can be used effectively as an input to PMS or SCANNER functionality development
 - Work with PMS and SCANNER providers and auditors to implement the results of research and development




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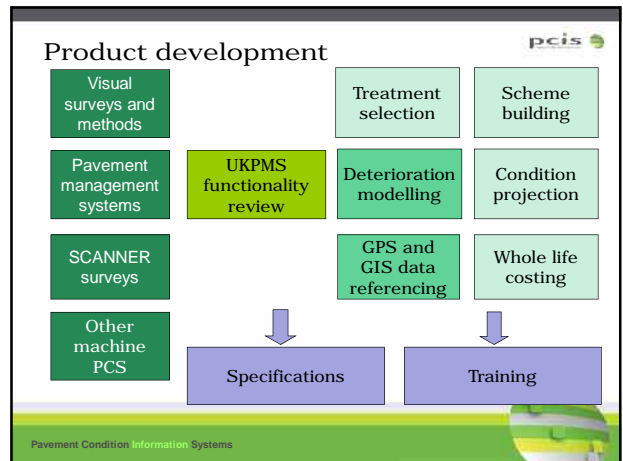
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Other requirements

- Liaise with local authorities, PMS developers, SCANNER survey companies and others to ensure changes are understood and adopted in a consistent and timely way
 - Links with technology promotion
- Keep abreast of the NRMCS programme to use SCANNER data to report the condition of the classified network at a national level as it develops and (if required) undertake specific items of work to support the Department's developments



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Three phases



- **Transition**
 - Gather reference material
 - Establish reference library
- **Evolution**
 - Identify requirements for improving UKPMS, SCANNER and other machine surveys
- **Transformation**
 - Develop and implement a fully defined and priced plan to drive through the changes identified from the UKPMS functionality review

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TRANSITION

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Transition phase



- **Reference material**
 - UKPMS handover material (✓)
 - UKPMS issues log (✓)
 - SCANNER handover material (✓)
- **Reference library**
 - Available within TRL (✓)
 - To be based within the new website (in hand)
- UKPMS RP8.01 retained for 2008 AHC
- SCANNER 2007 User Guide retained for 2008
- Inspector accreditation re-established for 2008

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EVOLUTION

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Evolution phase



- **UKPMS 2009 – RP 9.01 (in hand)**
 - HAMFIG Carriageway Condition Indicator
 - FCMG Footway Coarse Network Survey
 - SCANNER Edge treatment rules
- **Visual surveys**
 - Complete outstanding amendments (in hand)
 - Incorporate FCMG CNS requirements (in hand)
 - Develop DCD software accreditation test (in hand)
- **SCANNER**
 - Edit User Guide and Specification (in hand)
 - Technical amendments, briefer advice (in hand)

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Extending and enhancing UKPMS



- Drawing on Atkins' knowledge, experience and expertise as a
 - service provider to local authorities throughout the country,
 - leading exponent of asset management,
- to investigate
 - the ways in which local authorities use UKPMS and
 - what more they would like to be able to do with the information they currently have,
- so that we can identify opportunities for extending and enhancing UKPMS

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Encouraging PMS development



- Compare and contrast the functionality provided by
 - the different systems that are accredited to UKPMS, and
 - by other commercial pavement management systems,to identify opportunities to “raise the game” of each of the different systems

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Improving UKPMS



- Use the knowledge, experience and expertise of TRL and Atkins in developing and supporting the Highways Agency’s HAPMS to identify any opportunities for improving UKPMS.
- In particular, we will investigate the extent to which UKPMS enables local authorities to use other sources of information about pavement condition, such as
 - SCRIM and Griptest (friction),
 - FWD and Deflectograph (stiffness and strength) and
 - GPR (subsurface condition).

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Improving visual surveys



- Explore the possibility of developing and applying a method of measuring or estimating the consistency of defects reported from visual surveys,
 - and the implications for the results produced by UKPMS
 - through the rating method and the condition indices,
 - in terms of treatment selection and prioritisation.
- ensure that the specification for the DCD software accreditation test remains up to date in line with the recommendations and requirements of the FCMG, HAMFIG & URCDG

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Improving machine surveys



- The medium term focus on the development of SCANNER should concentrate on improving the
 - precision,
 - consistency and
 - reliabilityof the measurements made by the different machines

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Resolving current issues



- Many of the current issues with SCANNER survey data are associated with a relatively small number of lengths displaying unusual or apparently inconsistent measurements
- Two aspects
 - Getting surveyors to conform to the existing specification to eliminate silly mistakes (e.g. reporting results over block paving) through SCANNER QA processes
 - Developing and improving the algorithms to trap data that appears to be “out of range” (existing algorithms are mainly in the data gathering parts of the system, also need algorithms in the results reporting parts of the system, i.e. just before the HMDIF delivery)

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Benefitting from HA research



- The HA has supported an extensive programme of research and development of TRACS, mainly carried out by TRL.
- Many of the developments for trunk roads could be immediately transferred to local roads.
- With the HA’s agreement, we will draw ideas and opportunities to improve the SCANNER specification from their R&D programme, with an emphasis on relating the measurements to the decisions engineers and asset managers have to make.

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Drawing from LA experience

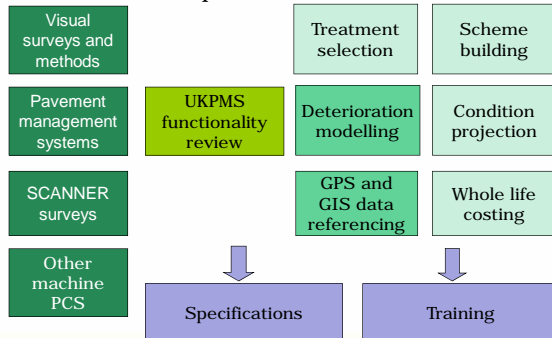


- Write up and publish the work carried out under the Halcrow implementation project and subsequently:
 - Ride quality (Surrey CC and Derby)
 - Priority scoring (Harrow)
 - Deterioration rates (Essex and Worcestershire)
 - Edge condition (Hertfordshire and Worcestershire)
 - Surface deterioration (South Gloucestershire and Birmingham)

TRANSFORMATION



Product development



UKPMS transformation



- Review of UKPMS core functionality
 - Draft report completed
 - Summarise comments and present to UK Roads Board for approval (approval by post?)
 - Develop the detailed implementation plan
 - FUNDING for implementation plan?
- Further research and development
 - Deterioration modelling and condition projection?
 - GPS and GIS data referencing?
 - FUNDING for research and development?

Visual survey transformation



- Visual condition surveys are likely to remain important in three main areas.
 - Detailed investigation of potential schemes (or other short lengths where problems have been reported that need to be investigated).
 - On roads where the footways and cycle tracks require more detailed investigation, and
 - On minor local roads where machine surveys remain impractical, typically minor residential roads.

Visual survey transformation



- Visual surveys may be used as the basis for measuring levels of service which may not be attainable from a machine survey.
- This may lead to changes in the data which are collected using visual surveys and defining "new" aspects of service condition (and deficiencies in service condition) reflecting customers' needs and expectations from an asset management approach.

Visual survey transformation



- Local authorities will want to be able to use the results from visual condition surveys and machine condition surveys together seamlessly.
 - Better integration of data from visual inspections and machine surveys depends on the decisions following the review of UKPMS functionality.
- It would require:
 - additional research and development, followed by implementation within UKPMS.
 - changes in the way that defects are defined, identified and reported, as well as changes in the way that they are rated within UKPMS and used within the system to obtain condition indices and in indicative treatment selection.

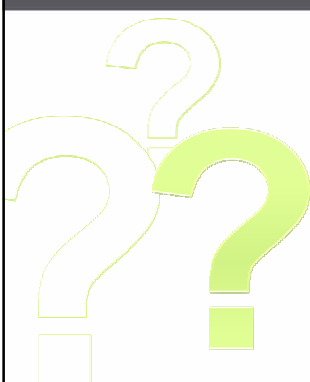
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Machine survey development




- Survey contractors have been encouraged to innovate and improve the performance of systems each year through "improvement action plans"
- But could SCANNER surveys be improved through a radically different approach, or by measuring different parameters?
- Need investment in development in two areas
 - making better use of SCANNER data through pavement and asset management systems, and
 - developing SCANNER system capabilities, above and beyond machine developers' commercial activities

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Do You Have Any Questions?



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Thank you Product Development

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PCIS color palette



Main PCIS PowerPoint colour swatches



Additional colors: dark






Diagram colors



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