



# HDM-4 Current and Future Developments

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# HDM-4 Version 2 – Responding to users needs

## HDM-4 Version 2 Requirements

- PIARC directed the development of HDM-4 Version 2 following consultation with users and experts
- Following an Acceptance Testing programme HDM-4 Version 2 was approved for release by PIARC
- HDMGlobal took responsibility for the launch of HDM-4 Version 2, its sale and subsequent support

# Technical Developments in Version 2

## New analysis tools:

- **Multi Criteria Analysis (MCA)**
- **Sensitivity Analysis**
- **Budget Scenario Analysis**
- **Asset Valuation**
- **Technical Models:**
  - **Updated to reflect new knowledge**
  - **Improved calibration of RD models**
  - **Improved work effects**

# System Developments in Version 2

- Usability & Data Handling
  - User-interface
  - Data organisation
- Configuration
- Connectivity of HDM-4 to external systems/data
- Reporting



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# Developments Since Initial Release



# HDMGlobal Maintenance & Updates

## Release of HDM-4 Version 2.00 (August 2005)

- Maintenance releases to improve stability, reliability, and correct known faults
- System and Documentation improvements included in releases up to HDM-4 Version 2.05
- System and Technical improvements identified and funded by HDMGlobal in progress

# System & Documentation Improvements

## Documentation

- Volumes 1 – 4 and existing import/export documentation updated in English to reflect changes in HDM-4 Version 2 by HDMGlobal (PIARC funded)
- Preparation of Case Studies workspace to accompany updated documentation
- French versions of the above produced by Pierre Joubert on behalf of PIARC and distributed by HDMGlobal

# System & Documentation Improvements

## System enhancements

- Data Importing
- User-interface improvements
- Vista operating system configuration
- Improved activation to allow:
  - Network licence model
  - Educational licence/Demonstration Version with restricted functionality
  - User-licence transfer between PCs





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# Current and Future Developments



# HDM-4 Version 2 Future Developments

**We have moved from the initial stage of system proving to a position where we wish to respond more actively to our users to make improvements to the technical functionality of the model**

# PIARC Funded HDM-4 Developments

**PIARC have funded some HDM-4 Version 2 Developments:**

- **Current**
  - **Translation of Documentation into French**
- **Future**
  - **Translation of Documentation into Spanish**

**Involved in the selection and approval of other funded projects**

# HDMGlobal Funded HDM-4 Developments

- **Feedback obtained from multiple sources**
  - **HDMGlobal partner experience**
  - **Direct contact with HDM-4 users**
  - **HDM-4 User Group Survey**
- **Funds committed from HDMGlobal income for development projects**
- **Based on above feedback projects identified**



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# HDM-4 Developments



# Improvements in progress for HDM-4 Version 2

## Concrete Models:

- Update the modelling of concrete pavements to use *incremental* models rather than *absolute* models
- Improve the triggering of concrete works to take better advantage of the flexibility of HDM-4 works interventions introduced in HDM-4 Version 2.

# Planned Improvements in HDM-4 Version 2

## Reporting

- further reports for network/strategic level analysis
- improvements to better enable importing of report data into Excel

## Asset Valuation

- Following a review and user feedback enhancements to Asset Valuation within HDM-4 are being planned by ARRB

# Planned Improvements for Users

## HDM-4 Usage Examples

- Examples of HDM-4 usage throughout the world

## Online Technical Support Articles

- Provide online articles for Frequently Asked Questions and common support issues

## HDM-4 User Group

- Encourage users to interact through User Group Forum and seek opportunities for HDM-4 User workshops



# Prioritising Other Identified User Needs

**Recent survey sent out to all registered HDM-4 users**

- **Understand the users and how they are using HDM-4**
- **Understanding the satisfaction with the software and services provided**
- **Seek opinions on future technical and system improvements**

# User Identified Improvements

## User-identified suggestions for future improvements

- Improved Optimisation
- Interactivity with external systems
- Social Benefits
- Calibration
- Accident Modelling
- Work Zone Effects



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# Questions?

