7 Future software development

The CBA tool, as with any software, will need to adapt to changes in business rules and the system environment (Microsoft Windows), in order to stay current. CBA6 is developed with a programming language version which is outdated. The Microsoft database management system used by CBA6 is also outdated.

Another TMR software tool, SCENARIO, depends on the same database management system. At some stage during 2011-2014, CBA6 will need to migrate to a newer version of database (sql express), together with SCENARIO, an example of internal changes that will be required in a changing Microsoft Windows environment.

Functionally, developments are also likely to arise from federal and state issues. The project evaluation team monitors such developments and related research. The team has an ongoing liaison role in discussing these developments with counterparts in other states.

CBA6 has been extensively tested, but some very specific user scenarios could still highlight errors or opportunity for improvements. There are also known limitations of the tool which are under consideration to be addressed.

7.1 CBA6 Evaluation framework

The design of CBA6 allows for the evaluation of road projects located on isolated or discreet sections of the network. As such, the tool does not cater for the evaluation of those projects with network effects. In addition, the CBA6 tool is not suitable for evaluation of projects located on roads/links suffering from congestion, or stop/start traffic conditions.

7.2 Future CBA6 releases

Future releases are likely to have to address:

- many of the CBA6 limitations

- enhancements and errors reported by users, such as better support for externalities, wider economic benefits and traffic network effects

- changes required by changing business requirements and standardisations, state and federal

- internal system performance and windows standards.

The CBA Team regularly investigates methods for improving and updating the CBA6 tool. An example is trying to find a suitable method that will allow for hourly capacity flows so the tool can cater for the effects of a stop-start traffic environment.

The CBA Team communicates directly with system users for feedback, and to improve the functionality and useability of the CBA6 system. Enhancement suggestions, as well as any errors reported by users, will be incorporated in future CBA maintenance releases.

Some enhancements have already been identified (October 2009). such as improving how we specify vertical alignment and use this to calculate tyre wear. There are also parts of the CBA6 reporting that can be improved; these changes and other similar changes are logged in the tracker program change requests system which is the major single source register of future software releases.

Depending on departmental priorities, the tool would benefit from some major updates. Performance can be vastly improved through some re-factoring of the program code. CBA6 could be made into a web service, so that it can be installed and run from the intranet. Currently, having CBA6 distributed, licensed, installed and supported on individual user workstations throughout the network is very costly.

Requests for change to be included in future releases will be driven and documented through our program change request procedures.