

REPLACEMENT OF THE ROMAN PAVEMENT MANAGEMENT SOFTWARE SYSTEM

APPLYING PPP PRINCIPLES TO SOFTWARE PROCUREMENT

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Abstract

The ROMAN Pavement Management Software System was originally Developed around 1983 by Western Australian Local Government engineers as a cooperative effort between Main Roads Western Australia (MRWA) and the IPWEA Foundation. ROMAN has two objectives; to foster the development of Asset Management skills, and to establish a State-wide data collection framework. The ROMAN software is currently still utilised by 90% of Western Australian Local Governments, this combined with the length of time in service of the basic software design, (over twenty years and counting), indicates that the product was outstandingly successful in meeting its intended objectives to the Local Government Sector.

By 2005 it was apparent that ROMAN was being overtaken by the cumulative effects of changes in the industry and the computer systems on which it was running. A process of review was entered into by MRWA and the IPWEA Foundation, overseen by the managers of ROMAN, the Western Australia Local Government Association (WALGA).

This paper outlines the process undertaken and the intent and outcomes of one of the options considered by that review, the Commercial Replacement Option.

Opus International Consultants Ltd, (Opus), were engaged in late 2006 to review user needs, develop a specification of requirements and test the market for existing software to determine its ability to meet the needs of WA Local Government. This option has now become the preferred option, with funding being allocated by the State Government to undertake the investigation, tender process and refinement of the recommended proposal.

The recommended proposal is structured around an innovative Partnering arrangement developed by Opus and WALGA with a view to ensuring a high level of buy-in to ROMAN by the prospective software suppliers and software users, and to provide Local Government with an effective mechanism for controlling where the software and systems are heading. Once implemented, this will become one of the largest Commercial "Off the Shelf" software systems in operation in Australian Local Government and will usher in a new and exciting phase in the ongoing ROMAN story.

Key Words: Systems Procurement, Public/Private Partnership, Software Development

Introduction

This paper outlines the impact of the global issue of aging software systems on the Local Authorities in one Australian State, and the local solution being implemented to provide a more sustainable and secure software platform for the development of Asset Management of roads in the State.

The ROMAN Pavement Management Software System was originally introduced to Western Australian Local Government as a cooperative effort between Main Roads

Western Australia, (MRWA), and the IPWEA Foundation. ROMAN was introduced to meet two primary objectives; to foster the development of Asset Management skills, and to establish a State-wide data collection framework for local road assets.

In order to permit use by all Local Authorities in the State, ROMAN was built on the philosophy of being able to deliver high level capacity with widely available, low-cost tools. ROMAN was therefore originally developed in Visual Basic for MS DOS, and later updated

across several Microsoft Access™ variants to meet changes in the Microsoft Windows environment.

The original ROMAN system, developed in 1983, was based on two existing software systems; an MRWA mainframe based system, (“ROMUS”), and a personal Computer based unclassified inventory system, (“PC-UIS”).

ROMAN has been well supported by State Government, Local Government and the Private sector. Both Main Roads WA and the Institute of Public Works Engineers (IPWEA) have continued to actively support and develop the product.

The active involvement of key industry personalities such as Frank Bryant of, (then), BSD Pty Ltd, aided in ensuring a high level of adoption of the product throughout the State. The importance of Frank’s contribution, (in this and other areas of Local Government), was later recognised by the IPWEA (WA) Foundation with the creation of an award for outstanding achievement in his name.

The service life of the basic software design, (over twenty five years and counting), combined with the level of current usage, (129 of 139 Western Australian Local Governments still use it), indicates that the product was outstandingly successful in meeting its objectives. This level of success is almost directly attributable to the high level of support afforded to the product and the degree of intellectual effort invested in its development and maintenance over time. By 2005 it was apparent that ROMAN was being overtaken by the cumulative effects of changes in the industry and the computer systems on which it was running. A process of review was therefore initiated by the ROMAN Management Committee, overseen by the managers of ROMAN, the Western Australia Local Government Association, (WALGA), with a view to securing the future of the project.

Drivers for Change

ROMAN was primarily impacted by a combination of:

- **Paradigm Shift.** The maturation of Asset Management in Australia led to changes in the levels of expectation and need within Local Government. While some of these changes were incorporated into the software during

progressive updates, the tool could not keep pace with the overall rate of change.

- **Changing Client Requirements.** A primary client of ROMAN, (in data terms), is MRWA. With respect to Local Government roads, MRWA acts as a centralised repository and clearing house of information gathered from the ROMAN database, and utilised by various Government agencies, including Local Governments.

As network data has progressively become more spatially oriented, (culminating with the introduction by MRWA of a fully spatial EXOR based system in early 2000/2001), the process of gathering, cleansing and integrating the ROMAN data has also become more difficult and time consuming.

- **Changing User Expectations.** ROMAN was originally developed for a market based on specialist users, with a complex understanding of the data, its structure and use. For these personnel, ROMAN’s use of data intensive forms was a practical solution to the need for rapid presentation of large amounts of information. Over time, use of the tool migrated out through the Local Authority organisations into the hands of less specialised personnel whose main function was data entry or access rather than interpretation. For these users, the interface became a stumbling block to productivity, and a reason to actively avoid involvement with ROMAN.
- **Loss of Vendor / Operating System Support.** In its final form, ROMAN was delivered as a Microsoft Access 95 application. With the introduction of Microsoft Windows Vista™, and the ending of official support for Access 95, it became increasingly likely that ROMAN would cease to be able to be maintained without a complete rewrite for the new operating system.
- **Progressive Loss of System Impetus.** Over time, as personnel moved in and out of ROMAN management roles

both in Local Government and within the ROMAN Governance arrangements, the level of engagement with and enthusiasm for the project began to wane.

In the early days of the system the User Group was active and vocal in seeking improvements to, and adoption of, the product. By 2005 however, this support network was almost defunct and had not formally met for some time. Training and support arrangements, while still actively maintained, had also fallen away somewhat, with management reports progressively more focussed on numbers of bodies trained rather than opportunities for improvement.

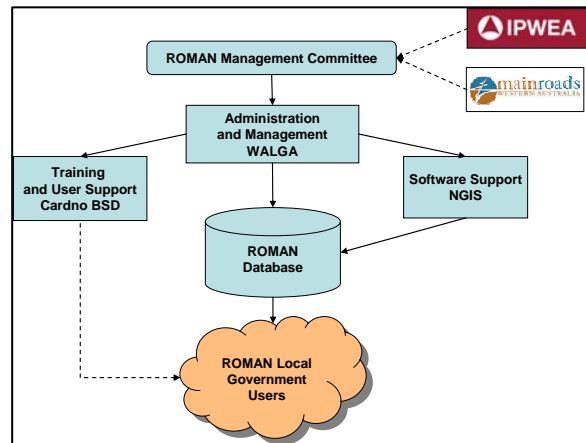
Finding a Way Forward

A report was commissioned by the ROMAN Management Committee to investigate the costs and opportunities of undertaking a complete rewrite of the ROMAN software. Completed in early 2005, the outcome of this exercise indicated that the rewrite option would be expensive, could give no guarantee of successful delivery and may not address the longevity and usage requirements. The very high cost factor emerged due to the need to review and reverse engineer twenty five years worth of development and coding within the relatively short lifetime of the rewrite project. Given also that the source code for many of the ROMAN modules were documented either poorly or not at all, this made it impractical to pursue this action. Opus International Consultants, (Opus) were therefore engaged by WALGA on behalf of the software owners, (MRWA and the IPWEA Foundation), to investigate alternative solutions. The principal aim of this phase of the investigation was to determine the viability of procuring existing Common "Off The Shelf", (CoTS), software as a replacement for the ROMAN database.

A Holistic View of ROMAN

In looking at the problem, Opus took the view that ROMAN is more than just a piece of software, and that in order to secure its future, any solution needed to take into consideration the totality of the process, along with addressing the specific problems of the database.

Opus considered that purchase of a replacement database without attempting to identify any weaknesses in the remainder of the system would merely delay the overall obsolescence of the product. In this context the "system" was seen to be inclusive of the software, the business practices relating to use of the software, the user and technical support and most critically the understanding, capability and needs of the users of the



software.

When examined at a very high level of abstraction, the overall ROMAN management model could be described as shown above. It can be seen that, while there is a strong emphasis on Governance as represented by the ROMAN Management Committee with its support from MRWA and the IPWEA Foundation, there are relatively few paths for direct engagement with the practitioners and users of the system. This limited the opportunity for feedback on system performance to impact future directions. The separation of responsibility for Software support and User support had a similar impact, in that the division of responsibility also divided the authority to initiate change. If the Trainers heard complaints from the field, their only path to the Developers was through the ROMAN Manager, who had to first seek authorisation from the relatively slow moving medium of the Committee before any corrective action could be implemented. While such a structure is appropriate and effective at managing a short lived project which needs strong regulation, it is not such an effective model for delivering an ongoing service with a focus on user needs, innovation and development. Several of the respondents to the User Feedback requests

noted frustration and difficulties in 'getting their voices heard'.

If ROMAN was to be successfully maintained into the long term future, it would require a management structure focussed on the Users as the primary customers, empowering them to influence the direction of the product – even more so since the Committee were considering the potential use of a commercial product as a replacement database, thereby giving most of the development control over to a third party.

Client Needs Assessment

A multi-layered Client Needs Assessment for ROMAN was conducted, seeking input by way of formal questionnaires, interactive workshops and a panel presentation / discussion at IPWEA WA State Conference, run in conjunction with Cardno BSD and CT Management Consultants, (responsible for the Western Australian Asset Management Improvement, (WAAMI), Programme).

In general, the outcomes of these activities indicated that, were it not for the underlying loss of support at the operating system level, the existing ROMAN product could continue to deliver good service into the foreseeable future. In essence, the basic product was doing its job very well and, (in the short term), needed only relatively minor amendments to cope with changes in data required to support external systems.

This included support for the new Western Australian Asset Management Initiative, (WAAMI), which is a joint initiative of WALGA, IPWEA (WA division), Department of Local Government and Regional Development, Local Government Managers Association and Local Government Insurance Services.

WAAMI is aimed at improving the understanding, expertise, tools and knowledge of Asset Management throughout Western Australian Local Governments. Principally, the Users concerns were centred on:

- The Interface. The dense presentation of data led to a steep learning curve and an uninviting environment for operation. Improvements to the User experience were considered of high importance in order to make participation in the ROMAN project more attractive to Local Government staff.

- Accessibility to Data. Information on road management was increasingly needed in departments outside of the Road Asset Management sector, and gaining access to their 'corporate knowledge' had been troublesome for some organisations.
- Need for Expanded Spatial Data Management Capabilities. ROMAN was equipped with basic GIS functionality, however the increased reliance of Local Government on this type of information in ever more complex scenarios meant that ROMAN was being left behind.
- Future Maintainability / Sustainability including ongoing software development needs, (this was considered only a minor issue at the User level but critical at Management Committee level)
- Preservation of the State-Wide Consistency of Road Data. As noted above, one of the primary drivers for creation of the ROMAN system was as a means of delivery of road network information to MRWA in a single data structure. MRWA is charged with the preparation of annual Valuations of the road network, and these are subsequently used for calculation of road maintenance grants by State Government.
- Not specifically noted at the time, but arising out of the project subsequently was a concern relating to the accuracy of financial valuation and depreciation reporting by the ROMAN system

The Main Roads Interface

An identified critical need was to continue the consolidated road network reporting of all roads within the State via a central agency, Main Roads WA. This need was strongly endorsed by State Government, the State Government Grants Commission, the Local Government Association, IPWEA and individual Local Governments.

State Government's interest in a consolidated reporting system relates to the need to ensure that the entire road network is functioning effectively, to provide unified mapping and reporting for such matters as

land administration and coordination of Government agencies and to promote the interests of the State, its residents and businesses generally.

However, in order to process the sheer volume of information from Local Government, MRWA had resorted to employment of external contractors essentially full-time to import, validate, clean and report on the annual returns from Local Governments. Significant delays were experienced due to the difficulty of integration of, (primarily), the GIS related information - even though most Local Governments were delivering the data in a consistent format. These delays meant that, in practical terms, many Local Governments did not get annual Valuations at all, the timeframe being more like every eighteen months.

It was clear from the Opus investigation that, should MRWA be faced with having to support multiple, often incompatible, data formats, then the timeframes for delivery, aggregation and alignment of the information would extend beyond even where they were. These delays would have real and significant cost implications to Local Governments in that, for example, road's funds allocations cannot effectively be completed by the Commonwealth Grants Commission without access to reliable data.

In addition to the expressed concerns of the ROMAN Community, Opus also noted a distinct lack of product knowledge in the field. Many Users were unaware of the full extent of capability available to them via the existing tool. Most were using ROMAN purely as a reporting tool to MRWA, rather than as an aid to better Asset Management for which it had been developed.

This implied the need for a significant education program to accompany any replacement database to maximise the benefit of the undertaking.

Delivery Model Adopted

From its earliest days, the ROMAN database was heavily subsidised by the State Government. The initial purchase and annual licensing fee structure for ROMAN meant that fees collected from Local Government were extremely low by comparison to commercial equivalents.

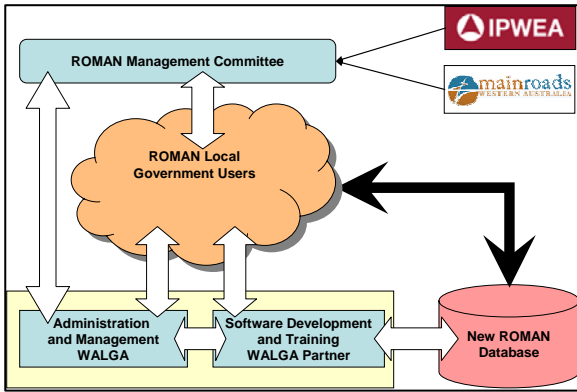
Fees for licences were calculated according to a multi-variant sliding scale, with the result that some Local Governments paid only a few hundred dollars per year, and none paid more than two thousand dollars per year. These fees were intended to cover the delivery of both the contracted services, (training and development), and a share of the salary of the WALGA ROMAN project manager. In reality, even when supplemented with funding from State Funds, this level of revenue barely covered the costs of management and administration of the program and support services, with very little left over for anything more than minor research and development or software development projects.

This had both positive and negative impacts in the market:

1. It helped to ensure 100% take-up of the product leading to a very high level of data consistency State-wide. This is unique within Australian Local Government and is probably the most valuable legacy of the ROMAN project.
2. It engendered a false economy in the collective minds of the market in that it made road asset management appear to be a low value exercise.
3. Since ROMAN was so cheap to implement, many users appeared to believe that it must be inferior to the more expensive commercial products. This 'low-cost' mindset would also make it more painful for Local Government to adopt a full-priced commercial equivalent if reduced or altered levels of subsidy were contemplated.

These considerations were central to the development of a new Delivery Model for ROMAN proposed by Opus. Under this Delivery Model, ROMAN would be presented to the market as a hybrid Public/Private Partnership or PPP type service.

The proposed new Governance model is very User Focused with multiple opportunities for communication and feedback from the community. This process also differs significantly in the vestment of authority to act, and the level of integration of the various roles within the system.



Under this model, WALGA's role would change from being a passive manager of licenses to an active participant in the delivery of the product, in partnership with an experienced software developer. The existing ROMAN Governance model would be maintained as a control mechanism ensuring that Local Government interests are preserved.

WALGA and its development Partner would effectively operate as a single business; supplying, servicing and supporting the ROMAN product. They would be answerable to the ROMAN Management Committee in terms of funding and strategic direction, but operate in all other respects as a fully commercial entity.

MRWA and IPWEA involvement in the ROMAN Management Committee would continue and Local Government Users would have direct representation in the management process.

The software users would have direct interfaces with the software and support services provider, and also with their primary management agency, (WALGA), thus providing them with the best opportunity to influence the software and support delivery, and future software development.

This model would:

- create an organisation with a vested interest in the long term development and enhancement of ROMAN, and lock that organisation into place for sufficient time to safeguard WA Local Government's investment.
- ensure that the delivery of the product would continue to be undertaken by an organisation whose main aim was the advancement and development of Asset Management within WA Local

Government, rather than being left to a vendor who may have been solely profit motivated.

- leave direct control and commercial opportunity of the software in the hands of a commercial operation with the opportunity, need and incentive to promote, develop and support the software (or risk losing the business to another product).
- give WA Local Government sufficient control of the system so as to ensure that implementation of the revised product would retain the most important aspects of the original ROMAN system. The software developer would also have an incentive to develop and maintain specific functionality for transfer of data to MRWA, as it would serve a much wider client base, rather than being a one-off development for a small-scale purpose.
- streamline responsibilities and communication paths, with a single point of contact for delivery of both product and training
- create a 'best of both worlds' scenario, bringing commercial grade software development in-house within a Governmental organisation. Having direct access to the software developer would provide WA Local Government with the opportunity to influence the future course of the underlying product as an active participant, rather than being a passive consumer of third party Intellectual Property.
- establish a mechanism for collective purchasing from a single supplier, through which individual WA Local Governments would gain to access to world class software and training at a cost much lower than if individual Councils were to purchase their software alone.
- provide a mechanism by which State funds could continue to be accessed to support the system, (albeit with the understanding that no matter how the product was delivered there would have to be an increase in

base costs to allow ongoing development of the product.)

In developing the proposed Public/Private Partnership (PPP) delivery vehicle, Opus promoted WALGA as the appropriate organisation to take the central management role on behalf of WA Local Government because:

- It had the legal and organisational frameworks in place to accept the role – should it choose to do so.
- It was already effectively carrying out many of the duties of that role on behalf of MRWA and IPWEA.
- It was a recognised representative of WA Local Government with sufficient standing to be accepted and trusted in the role by Councils.
- No other Governmental party to the original ROMAN project was either willing or in a position to take on the task.

It was understood that delivery of ROMAN via a PPP would involve significant risks:

- Offering the ROMAN project to a single vendor could effectively close the Western Australian market for Road Asset Management Software to competition.

While this was a concern, it was felt that this was not significantly different to the existing situation, with the original ROMAN product already acting as a barrier to entry. Since competing vendors were currently active in the market, this indicated that the barrier to entry was sufficiently low as to be negligible.

- If the product selected failed to deliver, or was not sufficiently advanced or attractive to Local Government, take-up might be poor, potentially leaving WALGA and the ROMAN Management Committee contractually bound to a product that was unsupported by the community. (i.e. a financial loss situation)

This risk was complicated by the diverse nature and needs of the market at the time of specification, in that some Local Governments were well advanced in asset management and others were of a view that asset

management was an unnecessary luxury.

This was a significant and real risk to the proposal, and only able to be mitigated somewhat through careful preparation of the RFP and subsequent robust evaluation and negotiation with the proponents.

- The drivers and incentives for use of asset management software may change again in the future. Primarily, the role of WALGA and the ROMAN Management Committee under the PPP delivery model would be to monitor the changing needs of the ROMAN community and to ensure that these are driven into new revisions of the product by the software development partner. A review and revision cycle sufficiently rapid to keep pace with the market would need to be established in order to ensure that the ROMAN database product did not fall behind the times once again. A secondary role for WALGA would be to maintain a balance between a reasonable downward pressure on the development partner's expectations in terms of fees from the product so that ROMAN remains economically attractive to WA Local Government, while still providing the commercial partner a sufficient level of profit to sustain their participation.
- The Development Partner may fail as a business, and therefore be unable to meet its obligations under the Partnership. While there can never be any guarantees that such a circumstance may occur, careful vetting and selection of potential candidate Partners can reduce this risk.
- Subsequent to the initial evaluations, Local Government reform became a serious probability in Western Australia with potential effects on service delivery requirements and potential numbers of customers.

Testing the Market

Fully apprised of the above risks and benefits, the ROMAN Management Committee authorised Opus to progress the

proposed PPP delivery model to Tender stage, with the development of documentation for a Request for Proposal, (RFP), suitable for testing the market.

The intent of the RFP was to:

- Identify a suitable long term development partner with whom WALGA could work. This aspect of the RFP, although not stated in outright terms, was at least as important in the scheme of things as the quality, effectiveness and future potential of any software product(s) being offered.
- Provide a cost effective means of delivering the services currently offered by ROMAN into the future. The cost to Councils of adopting the replacement system had to be significantly less than if they were to purchase a competing product and implement it themselves.
- Deliver a software and training platform on which future development and enhancements could be based with confidence. The proponent needed to show that their product would be able to provide many years of service to WA Local Government, and that there was a plan and mechanism in place for maintaining it into the future.
- Promote Partnership and Sharing as the basic philosophy for future cooperation. It was recognised that offering any software vendor a measure of exclusivity in the market should have some economic value, and that there must be some reciprocal benefit to WA Local Government in return for that. Fundamentally, the proponents needed to demonstrate that they were willing and able to return some of that benefit to the community, and that their interest lay beyond merely the initial sales of software.
- Satisfy legislative tender requirements in an open and transparent manner, without prejudicing the ability to select and develop the best product for the purpose.

The RFP was therefore structured around Outcomes rather than Specifications with the expectation that the successful proponent

would provide the innovation to ROMAN going forward.

In order to ensure that any commercial player brought into the Partnership would also meet the level of quality and attention to detail necessary to work in a Governmental environment, significant emphasis was placed on presentation of the Proponent's Development, Management and Support capacity and commitment.

Current Status

The RFP was publicly advertised in August 2007, immediately prior to the IPWEA National Conference in Cairns. Many of the vendors that subsequently submitted proposals to the RFP were in attendance at that conference, and some of the joint ventures that emerged were actually kicked off there.

Ten proposals were received at closing, of which nine were conforming. The non-conforming proposal was excluded from further consideration.

Evaluation of the remaining proposals was carried out by a committee comprised of eight members, (Two each from WALGA, MRWA, IPWEA and Opus). The proponent's written responses were scored by each committee member independently. Scores were allocated on a one to five scale against six criterion, (Capability, Methodology, Understanding (Existing), Understanding (Improvements), Gap Analysis and Partnership), these were then averaged to determine the overall rank per criterion. While such a system is prone to some degree of subjectivity, the averaging of the results tended to remove any outlying values and weighted the results towards the majority opinion.

The four highest ranked proposals were taken forward to the formal presentation phase. This included an opportunity for the Proponents to address specific questions or perceived deficiencies of their proposal as expressed by the review panel. At the conclusion of each presentation, the scoring and ranking process was repeated, allowing an opportunity for new information to be incorporated or changes of opinion on the part of any committee member.

Only at the end of the evaluation process was the cost of each proposal taken into consideration with proponents ranked on a

'value for money' basis. The proponent ranked highest of all proposals capable of offering a cost effective replacement for ROMAN was nominated as being the 'Preferred Proponent'.

At this stage, it was expected that an announcement would be made as to the Preferred Proponent who would then go forward into the final Negotiation phase. However, during the protracted review, specification, tender and assessment process significant changes in the sector had occurred. These included

- Perceived moves at a national level towards common asset management frameworks and practices
- Changes in asset management demand and practice in the Western Australian Local Government sector towards more comprehensive reporting of all asset groups (not just roads)
- Concerns about potential Local Government reform and project financial viability and risk

WALGA therefore undertook further investigative work with stake holders in order to confirm that the project objectives as established and reflected in the tender process were in fact still current and appropriate. The outcome of this review validated the original project outcomes and recommended that the process continue. The Preferred Proponent was subsequently announced as ARRB Group. The ARRB solution included three basic components, being the RAMM Road Pavement Management Software by CJN Technologies, the dTIMS asset modelling software by Deighton Associates, and support, customisation, development, training and associated services by the ARRB Group. One of the primary features of the ARRB solution which stood out in the evaluation was the commitment of the company to education of the marketplace. Beyond all else, ROMAN has always been about advancement of Asset Management as an engineering discipline and ARRB's activities in this area over many years was an excellent fit with that philosophy.

Subsequent to endorsement of ARRB as the preferred supplier, WALGA, (supported by Opus), and ARRB entered into a detailed negotiation period to accurately, and in detail,

define all of the project deliverables, customisation requirements, costs and contract terms. This included development of an appropriate, robust, financial structure capable of withstanding Local Government reform, without financial stress to either the software supplier (ARRB) or project principal (WALGA).

Local Government endorsement and "buy in" is seen as essential to success of this project and therefore the opportunity was also taken to use this time to prepare a demonstration version of the RAMM solution for early presentation to Local Governments around the State.

At a meeting of April 2009 the WALGA State Council endorsed the ARRB proposal, now being referred to as "ROMAN II". From feedback received, it appears that some 90% of WA Local Governments will adopt the new ROMAN product, with the remainder intending to pursue their own alternatives. Some Local Governments that had previously purchased alternative systems have indicated that it is likely they will also adopt the new product when it becomes available, after examining the potential strengths of the proposed replacement system.

Software development, customisation, data transfer tools, testing and associated works are expected to proceed from July 2009 with the new system to be implemented from July 2010.

The entire process for the replacement of ROMAN has been actively supported by IPWEA (WA Division), ROMAN users, MRWA, WALGA and the Local Government Managers Association.

Conclusion

The ROMAN Pavement Management Software System is unique in Australia, in that it represents an effort to produce a unified view of road asset inventory and condition across the entire State, including both National, State and Local Roads. This body of shared knowledge is identified by the State Government and Local Governments as an important asset to the State, and is the legacy of more than twenty five years of dedication and hard work by many of Western Australia's most high profile IPWEA members.

This body of knowledge was put at risk by a combination of benign neglect, and multiple

small changes; from seemingly simple changes in the operating systems of the computers upon which ROMAN was dependant, through to changes in the type and quantity of data required for reporting to MRWA.

A means of protecting this investment needed to be found that was both cost-effective and dynamic enough to minimise the risk of such a threat to the asset being faced again in the medium to long term future.

The risk was identified by the ROMAN Management Committee, consisting of IPWEA, Main Roads and WALGA representatives, in sufficient time for them to engage Opus to develop a solution.

Opus' proposal for the creation of a new management and delivery model for ROMAN along the lines of a Private/Public Partnership was highly innovative, as this approach to funding and Governance had never been applied to the supply of software on such a large scale before. By bringing the software developer into the ROMAN Governance structure, it is intended that they will therefore take a greater role, and a greater interest, in helping to insure the longevity of the ROMAN legacy.

PPP has been applied worldwide for the acquisition of physical assets such as roads, bridges, buildings etc. The ROMAN Database replacement process has shown that core system assets such as software products can also be sourced in this manner, given sufficient economies of scale to make the process viable and attractive to the commercial players.

While giving due considerations to the risks involved, WALGA's decision to participate in the PPP model has borne fruit in the form of a delivery and service contract for a replacement software system, including support and training services, between the ARRB Group and WALGA. The proposed solution enjoys the support of the State Government and an estimated 90% of Western Australian Local Governments, While the long term success or failure of this approach is yet to be seen, the prospects for ROMAN appear far more secure today than

they did a few years ago when this process was embarked upon.

This project shows that, especially given the current economic climate, local innovation such as that demonstrated by WA Local Government, can enable the work of Government to progress, despite the negative effects of external global influences.

Biographies

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Kristin has developed software and processes for use in Australia, New Zealand and Papua New Guinea, working with clients such as RTA NSW, ACT Territory and Municipal Services, Western Australia Local Government Association, Main Roads Western Australia, RoadCare Pty Ltd, Transit New Zealand and the World Bank.

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