

Moving towards an integrated facilities management tool to evaluate facilities for service performance in local government

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Abstract

Appraisal of facility performance has of late concentrated heavily on the strategic evaluation of facility performance - that is the alignment of the real estate function with the organization's overall strategic aims. This paper presents a refined model for the measurement, management and benchmarking of facilities in relation to their ability to enable service delivery. Developed specifically for the context of local government, the Logometrix model is the outcome of a collaborative research project with eight local government authorities (LGAs) in Victoria (Australia), with research by Swinburne University (Australia) and UNITEC Institute of Technology (New Zealand). Logometrix allows LGAs to measure the performance of their community facilities strategically and to benchmark with like councils over the Internet using a browser interface. The model incorporates financial and non-financial indicators, and balances the demands of service delivery with those of maintenance, preservation of asset value, and financial performance. This is essential to support the view of the facility as the nexus of service provision, physical building substance and the community using the facility.

Keywords: Integrated facility management, benchmarking, service delivery, public sector

Introduction

At the CIB W70 2000 conference in Brisbane a model for a balanced approach of measuring facility performance that incorporated financial as well as non-financial measures was presented – the Service Balanced Scorecard (SBS) (Brackertz & Kenley 2000). At that time the research was in its pilot phase.¹ Now, almost two years later the authors report the results of the ongoing pilot study and also to present a refined version of the original SBS. Since its humble beginnings as a performance measurement tool implemented with only one Victorian Local Government Authority (LGA) the project has expanded significantly. It is now a collaborative project with eight local government partners, a software developer, a law firm, the Institute for Social Research (Swinburne University of Technology, Hawthorn, Victoria Australia) and UNITEC Institute of Technology, Auckland, NZ.²

¹ The City of Port Phillip, Melbourne, Australia began using the SBS pilot in 1999 and continues to do so.

² Refer to Appendix I for a history of the project.

This collaborative project, known as Logometrix (Local Government Facilities – Strategic Performance Measurement) also has significantly expanded the project brief of the original SBS.

Research question

The general question underlying the research for both, the SBS and Logometrix, is “How do facilities support the processes that allow an organisation to fulfil its strategic aims?” And more specifically, in the case of local government, “In a non-profit driven environment, how can facilities be evaluated in relation to the strategic aim of service delivery?”

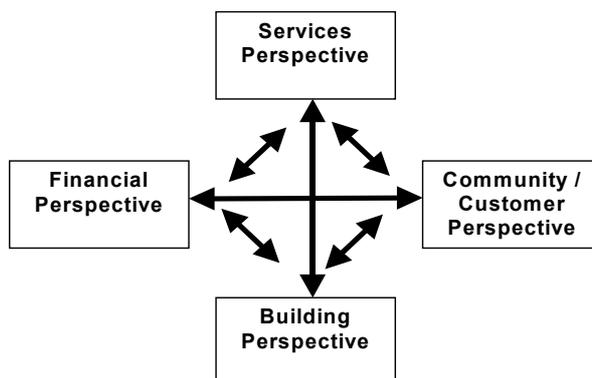


Figure 1: The Service Balanced Scorecard

In answering these questions, the initial project, the SBS, took a stakeholder approach and balanced four perspectives of facility performance, namely community, services, building and financial performance (Fig. 1), collecting tangible and intangible data. Crucial to the concept of the SBS was that data was not provided by facilities management only, but that other stakeholders (service managers and the community) also contributed information. The focus of performance evaluation was on service provision as a return on investment, with particular regard to the LGA’s key result areas (Brackertz & Kenley 2002a).

Aims

Logometrix builds on the insights gained from the SBS pilot study and provides a tool that can be used by multiple councils, thereby enabling them to benchmark facilities performance. Using a balanced approach,³ Logometrix allows a number of council stakeholders (asset and facility managers as well as service managers) to provide tangible and intangible data about facilities. Logometrix has three distinct desired outcomes.

³ Refer Kaplan & Norton (1992). Applications of the Balanced Scorecard have also been variously discussed in the literature on facility performance e.g. (Amaratunga, Baldry & Sarshar 2000; Apgar & Bellew 1995; Apgar 1995a; Apgar 1995b).

1. Performance indicators
Develop a uniform set of criteria and performance indicators that are generally applicable to local government facilities; i.e. facility performance indicators that don't have to be customised for either the type of facility to which they are applied, or to the particular council using them.
2. Benchmarking
Facilitate benchmarking within individual councils as well as benchmarking of facilities between councils.
3. Logometrix software application
Develop software solutions for a central database that allows participating councils to enter data and conduct evaluation and benchmarking of facilities over the Internet using a browser-based interface. (Fig.2)

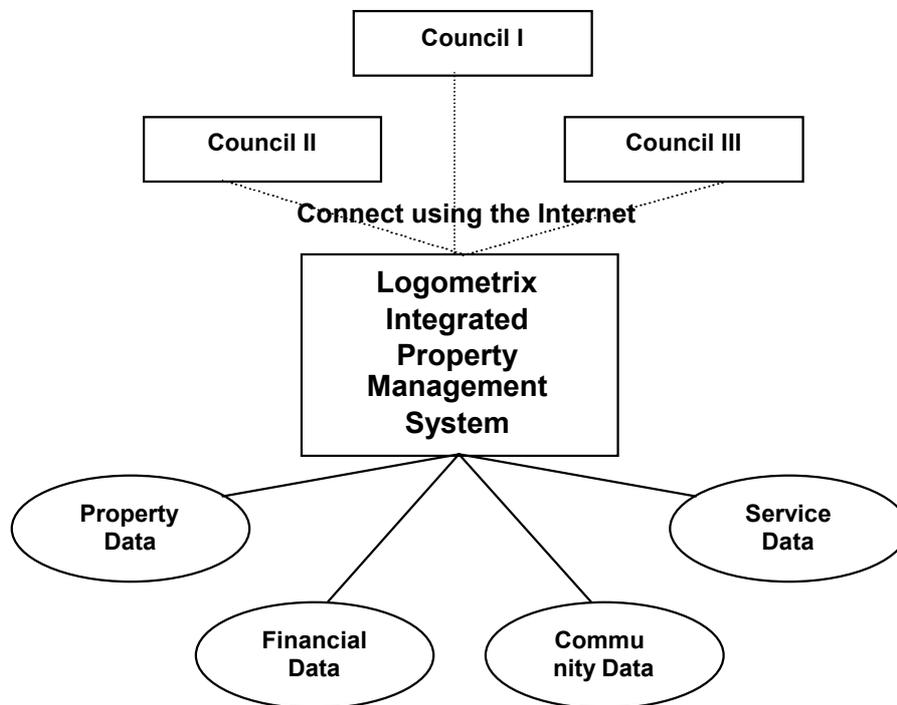


Figure 2: Centralised database with access for multiple councils

This paper provides an overview of the research process and methodology used. In discussing the underlying concepts the measurement of facilities' service performance and benchmarking are emphasised.

Methodology

Logometrix used a collaborative action research approach, which means that the participants in the research are also the main stakeholders. In this 'ground-up' approach, the issues raised during the research process drive the research. An action research methodology was chosen because the study is based around the needs of participating industry partners. Logometrix aims to transform the process of data collection and property values in LGAs through a process of critical inquiry. In doing so the knowledge and expertise of council staff are utilised to inform the

development of the model at every stage of the research. At the same time, the close interaction between researchers and council staff is a way for participants to learn about the Logometrix tool and is also a vehicle to foster cultural change within the organisation.

A combination of focus groups, a modified Delphi technique, face to face interviews and a workshop were used to elicit responses and on the ground knowledge from research participants. In all instances participants were targeted selectively on the basis of their expertise and knowledge about facilities, service delivery and council decision making processes.

Research began with a series of focus groups designed to identify councils' strategic objectives. Focus groups were analysed to identify councils' needs in relation to measuring facility performance. This needs analysis was the basis for the Logometrix model. Because researchers felt that additional information was required about certain aspects, a workshop with facility and asset managers was conducted to collect supplementary data. The Logometrix model was then fed back to councils using a Delphi questionnaire. Responses from the Delphi enabled the construction of the final Logometrix model. Simultaneously, researchers worked with software developer to develop the Logometrix software application.

Identifying strategic needs

The development of Logometrix strategic performance indicators was grounded in a detailed analysis of the information needs of participating LGAs regarding the strategic management of their facilities. Building on the insights from the SBS, a series of focus groups was conducted with stakeholders in council facilities.

Focus group participants were selected from industry partner councils and were chosen on the basis of their key knowledge about council facilities. Three main stakeholder groups with an interest in facility decision-making were identified: facilities / asset managers, service managers and councillors.⁴ A total of seven focus groups were conducted: two with asset and facilities managers; four with managers of councils services (aged care and disability managers, library managers, community services managers, parks and recreation managers); and one with councillors, who are the elected representatives of the community and decision makers within council.⁵ The intention was that each focus group should be composed of one person from each of the eight councils. However, due to scheduling and participant availability this was not always possible. Where persons with key knowledge about council facilities were unable to attend focus groups, one-on-one interviews were conducted using the focus group questions.

Focus groups identified the strategic objectives and information needs of stakeholders in relation to facility performance, how they interpreted their respective LGAs' strategic missions, priorities, and what they thought should be measured about facility performance. The questioning route was derived according to the process

⁴ For a detailed description and rationale of stakeholder group identification refer Brackertz & Kenley 2002a: 130.

⁵ For a detailed description of the focus group process and its results, refer to Brackertz & Kenley 2002b.

suggested by Morgan and Kruger (1998) to: test existing assumptions; allow discussion to reveal and explore any further assumptions and issues; be general, so as not to limit the input to a narrow area; and elicit responses on the same issues from different perspectives.

The focus group interviews were recorded onto audio tape to ensure comprehensive data capture. Tapes were transcribed verbatim, omitting only participants' names and any identifying characteristics to preserve anonymity. Transcripts were then imported into QSR NUD*IST (a software application that allows for qualitative data analysis using coding techniques) and coded according to emerging themes. In a second coding pass, codes were reviewed and refined to identify major themes relevant to the research brief.

Focus groups provided detailed insights about councils' information needs, as well as contextual insights about facility management and decision making processes. The results of the needs analysis were related back to industry partners by way of a commercial in confidence report that contained detailed findings (Brackertz & Pontikis 2000).

Focus group results

Focus groups confirmed the approach taken for the SBS pilot study: the centrality of facilities in enabling effective service delivery to the community and the necessity of balancing services and facilities data to capture this.

It was found that in line with councils' strategic aims, facility performance can be measured as a combination of effective service delivery, satisfaction of community needs, physical viability and financial sustainability. Each of these four perspectives represents a dimension of facilities' ability to enable effective service delivery. Hence, Logometrix adopts a balanced approach to performance measurement that incorporates each of these four perspectives and uses tangible and intangible data about facility performance. This differs from traditional approaches in facilities management, which are primarily concerned with ratios of space (m²), cost and number of employees.

Focus groups also highlighted the need for a new and commonly understood definition of 'facility'. During the focus group process, participants had used the term 'facility' with varying meanings, sometimes referring to the building, sometimes to the service provided, and sometimes to a combination of the two. In local government, the facility physically represents the place where service provision and the building intersect (Fig.3) and can be defined as follows:

Building refers to the physical structure and fit out of that structure used to house a service;

Service refers to the service or program (human element) provided from the building; and

Facility refers to the combination of the service and building where the two are inextricably linked, as they are in reality

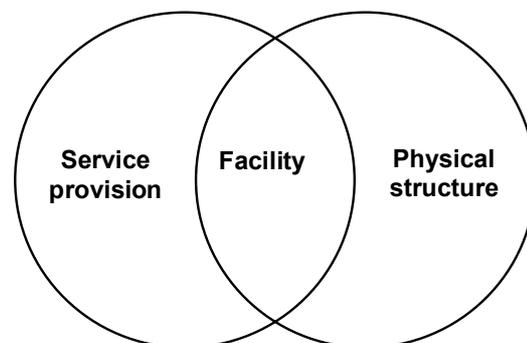


Figure 3: Facility

and includes the land, space, environment and communications that allow a particular service to be delivered from a location.

The strategic objectives identified by the Logometrix needs analysis in the Stage 1 Report (Brackertz & Pontikis 2000) confirmed the concept underlying the SBS. This proved that the SBS model is not restricted to one particular LGA and can be transferred to multiple councils. In addition, focus groups added significant contextual insights about councils' information needs as regards the management of their facilities. These provided the base data for the construction of a refined model of facilities performance measurement with wider applicability and the added ability to benchmark across councils.

After establishing councils' strategic objectives and information needs the next step was to develop a framework for data gathering and a set of indicators that would capture strategic outcomes and could be applied to a range of facilities in multiple councils. While the Stage 1 Report included preliminary suggestions for performance indicators (Brackertz & Pontikis 2000: 41-65), these were merely intended as *examples* for readers of the report and did not represent a completed outcome.

The preliminary model of the Logometrix performance measurement tool aimed to marry the theoretical foundations of strategic balanced performance measurement within a stakeholder context and provide a standardised interface for data collection applicable to different types of facilities and across multiple councils.

In order to facilitate this, data from focus groups was restructured and re-evaluated to create a pilot model of the Logometrix integrated facility management tool. A detailed review of the performance management literature was undertaken, as was an analysis of the strengths and weaknesses of other commercially available strategic facility performance measurement and management tools.⁶ In order to gain additional insights on areas which researchers felt had not yet been fully explored, an additional half-day workshop was conducted with representatives from the facility and asset management areas of each participating council. The insights thus gained were used to generate a template for a working model of Logometrix. The model was then tested using a modified Delphi technique before the final version of Logometrix was created for development into a software application.

Modified Delphi

It was decided that the best way to confirm the validity of the Logometrix pilot and to test its useability was to ask the intended end-users to review the model. Ideally, end-users would have been asked to assess the Logometrix model in the form of a software application, as this would be the way the tool will be finally presented to them. However, because of the cost of developing software using incomplete

⁶ Eg. Hinks & McNay (1999), have developed a *management-by-variance* tool that assesses the effectiveness of the facility management function by linking to its (internal) clients' requirements. The Organisation of Higher Education Facilities Officers has developed SAM (*Strategic Assessment Model*) which is built around The Malcolm Baldrige Criteria for Performance Excellence and the *balanced scorecard* (Givens 2000; <http://www.appa.org>). The International Centre for Facilities (<http://www.icf-cebe.com>) has developed a method called *Serviceability Tools & Methods* (ST&M). This works at the macro level, with a method that matches demand (occupant requirements) to supply (serviceability of buildings) in relation to the facility's ability to support/impede the strategy of the business or the functioning of its occupants.

specifications, it was decided to pre-test the Logometrix model using a paper-based questionnaire. In keeping with the principles of action research, a modified Delphi technique seemed appropriate for this purpose.

The Delphi method is a way of structuring group communication so that is effective in allowing a group of individuals, as a whole, to deal with complex problems using written responses. Delphi is an iterative process and is able to accommodate diverging opinions. The success of the Delphi depends of the input of experts, their knowledge and practical engagement with the issues and their capacity and willingness to contribute to the exploration of the problem and along with this assurance that sufficient time will be dedicated to the Delphi exercise (Adler & Ziglio 1996).

Based on these criteria, and to allow for continuity in the research, Delphi experts were selected from focus group participants. Where focus group participants were not willing, or available, or had left their positions within council, persons with similar background to the original focus group participants were recruited.

Delphi participants were provided with a paper-based model of the Logometrix management tool. This was designed to resemble as closely as possible – in form and content – the Logometrix software application that was being developed in parallel. This necessitated that each of the questionnaire pages was designed to visually resemble a data input screen.

Delphi experts were asked to evaluate the Logometrix model in light of two questions, namely the *validity* of the model and the *useability* of the interface.

Delphi experts were encouraged to comment on any aspect of the Logometrix model, to ask for clarifications, or argue in favour or against issues. Experts were also asked to identify items they deemed superfluous or suggest the addition of items they felt had been omitted.

All in all, 37 questionnaires were sent out to 8 councils. Of these, 23 questionnaires were returned (a response of 62.2%), of these 21 were valid replies (56.7%).

It was the intention to conduct a full Delphi process. However, after implementing the first Delphi questionnaire it was found that the time and effort required to set up the Delphi procedure was not warranted by the information gained from the responses. In addition it was considered inappropriate to ask respondents to volunteer a significant amount of their time for the outcomes this provided. However, the responses to the Delphi questionnaire were largely positive and proved to be constructive in the generation of the final Logometrix model. It is intended that the Logometrix model be reviewed and revised if necessary after its implementation with councils in late 2002.

From a methodological point of view the results of the research process are still considered to be valid. Focus groups posed the research question in broad terms and elicited information about facility performance and councils' strategic aims. The Stage 1 Report reported back the complex issues and ideals generated, and structured feedback on the model was gathered using the paper-based questionnaire. This provides a solid foundation and justification for the model presented here.

The Logometrix model

The original SBS comprised four Perspectives of facility performance, namely the services, building, community and financial perspectives (Fig. 1). Focus groups and the workshop with facilities and asset managers showed that *utilisation* was considered a crucial aspect of facility performance and warranted consideration in its own right. Consequently, utilisation was ‘promoted’ from being a subset of the Service Perspective to being a Perspective in its own right. This decision was supported by evidence from the SBS pilot study, which had shown utilisation to be a significant and useful indicator of facility performance. Especially in the not-for-profit context of local government, capital and maintenance expenditure on facilities are considered a worthwhile expenses if they are balanced by high levels of service use, as expressed through utilisation.

Evaluation of the Delphi questionnaire brought about another change to the Logometrix Perspectives. Initially the Building Perspective had included a sub-set of data called Energy Efficiency. However, responses to the Delphi showed that many councils now manage according to the principles of the triple bottom line, which includes economic, social and environmental outcomes. Respondents felt that assessing facilities in relation to energy efficiency was insufficient and that the approach should be broadened to encompass other environmental factors, such as water and waste management, recycling, and the use of environmentally friendly building materials and methods. Consequently, the Environmental Perspective became the sixth perspective and accommodates experts’ suggestions.

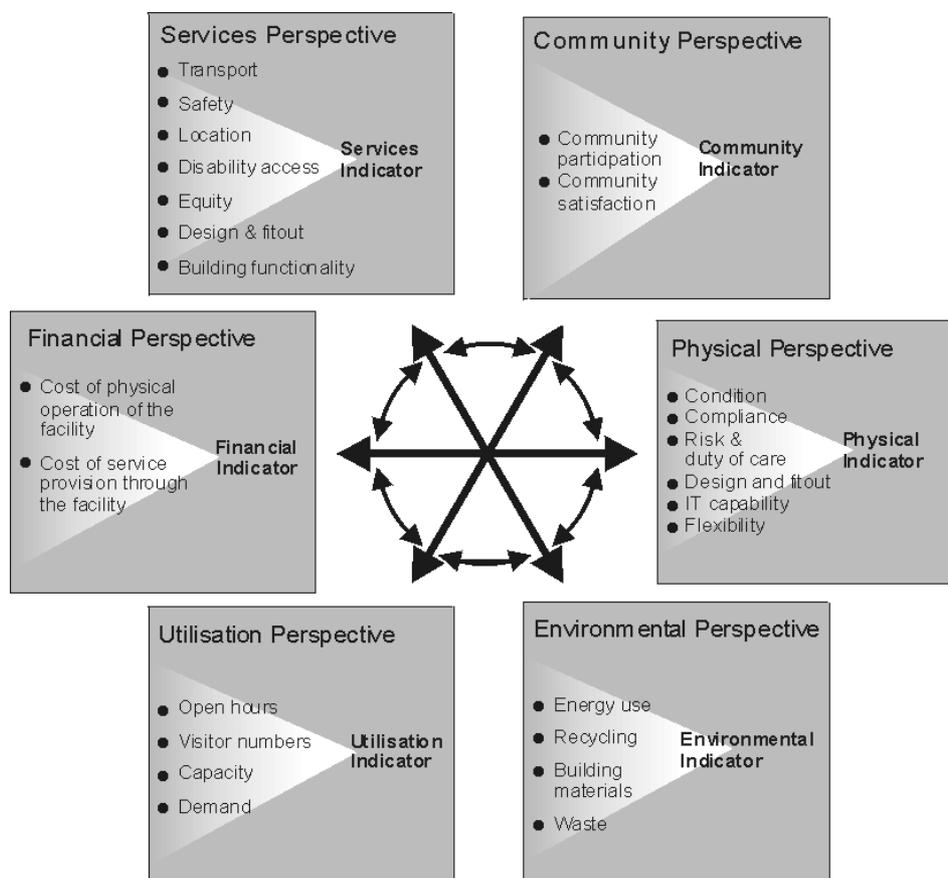


Figure 4: The six Logometrix Perspectives

The final Logometrix model balances the following six Perspectives, each of which is made up of an number of elements:

- **Service Perspective**
Objective: Council aims to provide facilities that enable the effective delivery of services that are appropriate and meet the needs of the community.
Elements: transport accessibility, safety, location, disability access, equity of access, design and fitout, building functionality
- **Physical Perspective⁷**
Objective: Council aims to provide buildings that are fit for the purpose for which they are being used.
Elements: building condition, maintenance, compliance, risk and duty of care, IT capability, flexibility
- **Community Perspective**
Objective: Council aims to provide facilities that support and facilitate the delivery of services that meet the needs of the community.
Elements: community satisfaction, community participation
- **Financial Perspective**
Objective: Council aims to provide facilities that are economically sustainable and are affordable to the community.
Elements: service cost, building cost
- **Utilisation Perspective**
Objective: Council aims to provide facilities that are available to the community at times of demand and that are well utilised.
Elements: opening hours, user numbers, capacity, demand
- **Environmental Perspective**
Objective: Council aims to provide facilities that are environmentally sustainable.
Elements: Australian Building Greenhouse Rating Scheme, energy management, recycling, waste management, building materials

Performance Indicators

Each of the Logometrix Perspectives is represented by a Key Performance Indicator (KPI). These are the top-level indicators used to determine how well council facilities are performing according to the agreed upon strategic goals.

Underlying each Key Performance Indicator is a set of Element Scores. These lower level indicators capture aspects of performance that are prerequisite to the achievement of strategic goals. Each Element in turn is derived from a set of raw data about the facility. Together these three tiers of data and indicators are a powerful tool for evaluation facility performance.

Beginning with the broad overview provided by the KPIs, councils can 'drill down' to the next level of data, the Element Scores, to obtain more detailed information about facilities' strengths and weaknesses. Raw data, finally, can pinpoint specific reasons for a facility's success or failure.

⁷ The name of the Building Perspective was changed to Physical Perspective to avoid confusion.

The Service Indicator

The issue of collecting standardised data on facility performance for the Service Perspective proved to be a particular challenge. Data about facilities' service function is often of an intangible nature and cannot be expressed in dollars and meters. In order to capture this intangible data a set of statements was developed that described each aspect of a facility that was considered vital to enabling service delivery in line with strategic objectives. In other words, each statement described one *criterion* of a facility that was important for effective service delivery. The idea was that facilities could then be scored against these criteria to see whether they supported or hindered service delivery.

However, different services, such as kindergartens and libraries, for example, have different requirements of their facilities and are not easily comparable. Thus not every criterion for service enablement is relevant to every type of facility. So how can a uniform set of performance criteria be applied to a diverse range of facilities? The solution is to score each criterion twice; first in relation to whether or not the criterion is *required* for service enablement, and then in relation to its *actual performance*.

As stated previously, it is councils' objective to provide facilities that enable the effective delivery of services that are appropriate and meet the needs of the community.

This objective is circumscribed by seven Elements that describe how the facility must enable service delivery in order for the strategic objective to be achieved.

- Transport accessibility (Council's objective is to provide facilities that are physically accessible the community using appropriate modes of transport)
- Safety (Council's are responsible for providing facilities that feel and are safe for employees and the community)
- Location (Council strives to locate facilities in such a way that provides added benefits for users)
- Disability access (Council aims to provide facilities that area accessible to community members if all abilities)
- Equity (Council strives to provide facilities that promote equity within the community)
- Design and fit-out (Council aims to provide facilities that are well designed and fitted out for the intended uses)
- Building functionality (Council aims to provide buildings that meet the requirements of users and that are fit for the purpose for which they are intended)

Each of these Elements is defined by a number of *Criteria* that are described in a series of statements.

		Functional Requirement	Actual Performance
	The facility has adequate car parking.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	The parking times are adequate and appropriate for the activities undertaken by the users of the facility.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	During opening hours access to the facility by public transport is adequate.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	The facility is adequately serviced by community transport (eg community bus).	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	Safety of bicycle access to the facility is adequate.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	The facility has adequate bicycle parking.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	The facility is close enough to the target groups it serves and the types of transport they use.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5
	Overall, the facility's accessibility by transport is appropriate to the needs of the target groups.	● 1 ● 2 ● 3 ● 4 ● 5	● 1 ● 2 ● 3 ● 4 ● 5

Figure 5: Service Perspective – Transport accessibility screen

1. Scoring the *Functional Requirement*

The relevance of each individual criterion for the service is determined, that is whether or not the criterion is needed for the service to function effectively. This *Functional Requirement* is scored by the user on a Likert-scale from 1 = Not needed to 5=Essential.

2. Scoring the *Actual Performance*

In a second step the facility is assessed in relation to its *actual performance* on the criterion. A five point Likert-scale from 1 = Doesn't meet to 5 = Exceeds is used.

Note that the *Functional Requirement* and the *Actual Performance* scales are independent of one another.

3. Calculating the *Element Score*

The *functional requirement* is used to identify which of the standard set of Logometrix criteria are needed to enable effective service delivery to the community. Only criteria rated 3 to 5 on the Likert-scale (“desirable”, “needed” or “essential”) are considered important in this respect. Functional requirements are then collapsed into two categories:

- Not Important (scores 1=not needed, 2=optional) – indicates that the criterion is not required to enable service delivery
- Important (scores 3=desirable, 4=needed, 5=essential) – indicates that the criterion is required to enable service delivery

Any criteria rated “not important” are not considered in further calculations, as these criteria are not important for the particular service being assessed.

Scores for criteria rated “important” on the Functional Requirement scale are summed and divided by the number of items. This results in a value between 1

and 5, the *Element Score*. The Element Score reflects how well the facility succeeds in supporting the strategic objective of the particular service Element (eg transport, safety, etc).

Criteria for other Service Perspective Elements are scored in the same way.

4. Calculating the *Service Indicator Score*

Results for all Element Scores are summed and divided by the number of Element Scores. The resulting *Service Indicator Score* gives a general overview of the facility's service performance. The Service Indicator Score can then be evaluated in relation to councils' objective of providing facilities that enable the effective delivery of services that meet the needs of the community:

1 = Poor Service Enablement

The building is not suited to the service's needs and service delivery is restricted because of building-related impediments.

2 = Insufficient service enablement

The delivery of community services is not facilitated and supported to the extent needed and in some instance service delivery may be hampered due to building related impediments.

3 = Partial Service Enablement

The delivery of community services is not supported and facilitated to the full extent required, but service delivery is not significantly hampered.

4 = Adequate service enablement

Service delivery is facilitated and supported to a satisfactory level.

5 = Excellent service enablement

The delivery of community services is facilitated and supported beyond the basic requirements and has added benefits for users and staff of the facility.

Note that the process of averaging leads to a loss in meaningfulness of the resultant value due to the multiple effect of collapsing data and using relative data. Consequently the Service Indicator Score should not be read in isolation, but has to be considered in context. Any interpretation of service performance that goes beyond a general overview must consider the Element Scores to backtrack and find specific areas of concern.

Benchmarking

Benchmarking is done by scoring each individual facility out of a total score of 100. This provides a snapshot of overall performance and allows facilities to be ranked against other facilities of their type, and across facility types. The benchmarking process is best illustrated by way of an example.

Perspective Indicator	Weighting
Service Perspective	25
Community Perspective	20
Building Perspective	18
Utilisation Perspective	17
Environmental Perspective	10
Financial Perspective	10
Total	100

Fig. 6: Weighting Perspectives

1. Each Perspective is assigned a weighting according to its strategic importance. The individual councils undertake this weighting process. In this example (Fig. 6), the Council of Sharing Caring has decided that its main aim is to provide services that meet community needs. Service provision and community satisfaction are considered the most important objectives, while the cost of running the facility is the least important aspect.
2. *Perspective Indicators* for each facility are calculated using the Logometrix tool.
3. A category average for each Perspective Indicator is taken.
4. Perspective Indicators for the individual facility are then compared to the average of all facilities of its type. If the individual facility performs at or above the category average, it is awarded the weighting score is assigned according to the table. If the facility performs lower than the category average, a weighting score of 0 is recorded.
5. The weighted scores are then added up for each facility, thereby providing the overall weighted facility indicator score out of 100.
6. Facilities may then be ranked against other facilities of that type, or cross facility type comparisons may be made.

Conclusion

The integrated facilities management tool developed for this study allows LGAs to evaluate facilities in relation to strategic aims. Logometrix differs from traditional approaches to facility performance measurement in that it balances tangible and intangible data and relates facility performance to the strategic goal of service delivery. Logometrix accounts not only for facility cost, but also for functionality. This approach is particularly valuable in the case of local government where profitability is not considered as important as service delivery to the community.

In addition, Logometrix provides a benchmarking system that allows councils to weight strategic areas of facility performance and to rank facilities according to their achievement of strategic goals. In this way Logometrix facilitates comparison between facilities that are of like type, as well as facilities that are of from different categories.

Benchmarking in conjunction with the three tiers of data and indicators provided by Logometrix (performance criteria, Element scores and Perspective KPIs) empower councils to make informed strategic decisions about facilities.

Further Research

Logometrix has been designed to meet the needs of LGAs and was developed for a not-for-profit environment. There is, however, considerable scope to apply Logometrix to a corporate environment. While the private sector is more focussed on bottom-line performance, corporate organisations, too, can benefit from evaluating their real estate assets in relation to their contribution to strategic outcomes.

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References

- Adler, Michael and Ziegler, Erio (1996) *Gazing into the oracle: the Delphi method and its application to social policy and public health*, Jessica Kingsley Publishers, London.
- Amaratunga, D., Baldry, D. and Sarshar, M. (2000) Assessment of facilities management performance – what next?, *Facilities*, Vol. 18, No.1/2.
- Apgar IV, M. and Bellew Jr., J. P. (1995) Models for real estate decisions, *Corporate Real Estate Executive*, March/April, pp. 37-41.
- Apgar IV, M. (1995) 'Managing real estate to build value', *Harvard Business Review*, 73, (6), pp. 1-11.
- Apgar IV, M. (1995) 'The strategic role of real estate', *Corporate Real Estate Executive*, May, pp. 20-23.
- Brackertz, Nicola & Kenley, Russell (2002b) Evaluating community facilities in local government: managing for service enablement, *Journal of Facilities Management*, forthcoming.
- Brackertz, Nicola and Kenley, Russell (2002a) A service delivery approach to measuring facility performance in local government, *Facilities*, Vol. 20, No. 3/4, 127-135.
- Brackertz, Nicola and Kenley, Russell (2000) Taking a service delivery approach to measuring facility performance in local government, *Proceedings of the CIBW70 Facilities Management and Maintenance Symposium: Providing Solutions to Business Challenges – Moving Towards Integrated Resources Management*, Brisbane 15-17 November 2000.
- Brackertz, Nicola and Pontikis, Jane (2000) *Logometrix Research Projects: Local Government Facilities – Strategic Performance Measurement: Report on Stage 1, July – December 2000*, The University of Melbourne.
- Givens, L.G. (2000) SAM in a Nutshell, *Facilities Manager*, March/April, pp.26-33; <http://www.appa.org>.
- Hinks, J. and McNay, P. (1999) The creation of a management-by-variance tool for facilities management performance assessment, *Facilities*, Vol.17, No.1/2, pp.31-53.
- International Centre for Facilities, "Use the Serviceability Tools and Methods for productive and cost-effective workplaces, <http://www.icf-cebe.com>
- Kaplan, R. S. and Norton, D. P. (1992) The balanced scorecard: measures that drive performance, *Harvard Business Review*, Jan-Feb, 71-81.
- Morgan, David L. and Kruger, Richard A. (1998) *The Focus Group Kit*, Vols 1-6, Sage Publications, Thousand Oaks, California.

Appendix I - Timeline

June to December 1999 – Service Balanced Scorecard Pilot

The City of Port Phillip (Melbourne, Victoria, Australia) approached United Consultants and the Corporate Real Estate and Asset Management Research Group (CREAM) at the University of Melbourne, with a brief to develop a set of indicators for its community facilities. Indicators were to reflect the facilities' ability to deliver services to the community. The Service Balanced Scorecard (SBS) was the result of this research and provided the critical connection between the role physical facilities and the delivery of public services in a local government setting. The SBS was implemented with the City of Port Phillip in late 1999 (refer Brackertz & Kenley 2000; Brackertz & Kenley 2002).

January to June 2000 – Collaborative Logometrix Research Project is formed

The successful implementation of the SBS generated considerable interest from other LGAs in Victoria. Consequently a collaborative research arrangement was set up with the cities of Stonnington, Melbourne, Maribyrnong, Glen Eira, Darebin, Greater Shepparton, Bass Coast and Port Phillip. A software developer, Xpedite Professional Services and the law firm Maddocks, also joined; the Victorian Department of Infrastructure - Office of Local Government supported the project. The research was to be conducted CREAM at the University of Melbourne. The result of this collaboration is Logometrix (Local Government Facilities – Strategic Performance Measurement).

Collaborators applied for a SPIRT Grant (Strategic Partnerships with Industry – Research and Training Scheme) from the Australian Research Council (ARC). These grants support academic research and provide matching funds for contributions by Industry Partners to facilitate projects that are relevant to Industry and beneficial to the wider Australian community. The grant was submitted to the ARC in September 2000.

July to December 2000 – Logometrix Stage 1

Because of the uncertainty of whether the grant would be awarded, Logometrix was initially funded independently by the Industry Partners and commenced research in July 2000.

Logometrix Stage 1 was an analysis of LGAs information needs in relation to the strategic measurement of facility performance. The results of this research are published in a confidential report to participating councils (Brackertz & Pontikis 2000).

January 2001 – December 2002 – Logometrix Stage 2

The ARC grant was awarded and the research on Logometrix Stage 2 commenced. It was decided to shift the research from the University of Melbourne to the Institute for Social Research at Swinburne University of Technology, Hawthorn, Australia, as the Institute has an extensive and distinguished record of research with LGAs and was considered a fertile environment for the Logometrix to flourish. Here the final Logometrix tool is currently being developed.