



# Intranet as an information management tool for local government

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## 1. Introduction

The continuous advances in technological development have led to a flood of information and are creating a dynamic environment that constantly transforms the way we do things. Successful organizations recognize the strategic value of managing their information and information resources continuously to support efficiency and effectiveness, and for survival as well as for competitive advantage. They realize that the mere access to or availability of information is not sufficient, but rather having the right information at the right time in the right format. They embrace technology to achieve this and to support new values like innovation and the ability to adapt to challenges.

Local government operates in the same environment as other enterprises and is furthermore obliged to be an efficient, frontline, development agency constantly seeking the best way of delivering services to all its residents and to put 'people first' in the way it runs its administration (Department Constitutional Development, 1999). Like people and capital, information is a resource that drives local government's (corporate) efficiency and productivity (Altin, 2000:1) and, therefore, the management and use thereof to achieve its goal is imperative.

The intranet in turn is an information age tool that empowers organizations to manage in new ways. It has the ability to move beyond previous physical, functional and management style boundaries and to generate and add value to information and processes. Furthermore it

promises to develop communities and nurture individual knowledge. It is therefore deemed necessary for local government to investigate the extent to which this tool can be embraced for the purpose of information management in local government.

The research problem under investigation is:

How can the features of an intranet be utilized as an information management tool for the Midrand Metropolitan Local Council?

Sub-problems addressed are:

- What are the goals of information management?
- What are the unique features of an intranet?
- How can the intranet enable information management?
- What is the current status of the Johannesburg Metropolitan Council's intranet?
- How can an intranet content framework be established to support information management?
- Which developments are proposed for the Midrand region?

The research method followed is the combination of a literature study and a case study.

The article examines the goals of information management, defines the intranet and examines the relationship between the intranet and information management. The current status of the Johannesburg Metropolitan Council (JMC) intranet is evaluated in terms of the information management potential of an intranet. Proposals are made for the Midrand MLC in terms of prerequisites for optimization and local content and a method to establish intranet content for line function departments to support information management. The article is concluded by intranet development proposals for local governments in general.

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## **2. Goals of information management**

Information management comprises the functions of planning, organizing, directing and controlling of information to attain the aims and objectives of the organization. The purpose of information management is to promote the organization's effectiveness and efficiency by enhancing its capabilities to cope with the demands of its dynamic internal and external environments (Marchand, 1982:61). Coping in this sense means learning and adapting, and implies pro-active decision making and problem solving for survival as well as for competitive advantage of the organization.

The goal of information management is to provide decision makers with efficient access to relevant information to support effective decision making. In the case of a local government, the information is multi-disciplinary, operational or strategic and structured or unstructured. The management therefore is interdisciplinary, cuts across departments and brings together information technology and systems (information carriers) and information techniques (content skills) to enhance and direct the information assets to the advantage of the organization.

Information management is mainly seen as a dynamic, management function with strategic significance because the overriding aim is to align the organization to a changing environment. It is a catalyst for change (Fairer-Wessels, 1997:4) and every employee is involved.

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### **3. Features of an intranet**

An intranet reproduces the functionality of the Internet in the corporate network (Altin, 2000:1). It is a set of applications built on an Internet-enabled infrastructure meant for internal use only by employees of an organization (Detlor, 2000:2). Web browsers are used to navigate across information on the network and features such as multiple Web sites and Web pages, electronic mail, newsgroups and online meeting facilities may be included (Curry and Stancich, 2000:250).

Time or geographical location does not restrict the distribution of information and the target audience or authorized user can access and retrieve information from his/her desktop. The ability to share information is a major benefit. Secondary benefits of intranets are the reduction in duplication of information, and the reduction in copying and distribution costs (Curry and Stancich, 2000:251).

The intranet supports a single solution for organizing, searching and retrieving large amounts of information from various applications, formats and sources. The wealth of information that can be made available on an intranet is, however, not the characteristic that distinguishes it from all previous computer-based infrastructures, but rather the ability to make everyone a publisher (Telleen, 2000:6,11). This is underpinned by designs that encourage ease of use, common standards and tools like standard script libraries. The result is the introduction of a shift towards placing the information management responsibility back into the hands of the functional specialist rather than the technologist.

Information from different departments in the organizational structure is combined into one framework and the organizational boundaries become invisible to the user. Interdisciplinary decision making is facilitated and virtual collaboration groups can be established.

The information that can be made available via the intranet ranges from highly structured (e.g. databases) to unstructured. Structured data can be added by using 'forms' while applications like threaded discussions, chat sessions and shared white boards extend computer functionality to support unstructured processes.

The intranet can be utilized for information publishing, communication and/or collaboration purposes. It coordinates workflow and encourages cooperative action.

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### **4. Intranet and information management**

Forrester (1999) reflects that corporate intranets have grown to mirror the morass of the business and departments they support. Too many intranets suffer from unmanaged content and ad hoc site development that is generated as the information in organizations increases. The volume and relevance of the information is a major concern.

This acts as a warning signal and implies that mere technology is not a guarantee for successful information management. An intranet is only as good as its content, which is a result of factors other than technology, namely the human factor. Information management has strategic significance that requires management commitment and user/employee support. The way in which publishers retain ownership and the responsibility for the information they publish is one of the key factors for success (Curry and Stancich, 2000:251).

The basic rules of information management need to be applied when planning an intranet. This necessitates a thorough information needs analysis that would determine which information is required for maximum contribution to the organizational business strategy.

Priorities can be determined accordingly and management commitment is a prerequisite.

According to Abell and White. (1999:1) the majority of intranets have been developed with an inadequate examination of objectives and resources. Without an information strategy in place, intranets are all too often populated with whatever content could be easily converted into an HTML format. This typically includes documents such as telephone directories, manuals, user guides and personnel newsletters. An information audit can identify content that really makes a difference to business, is crucial to business processes and improves productivity. Technology allows crucial business processes to be aligned and to be built into the intranet framework.

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## 5. Case study

After the municipal elections on 1 November 2000, the Midrand MLC will be incorporated into the JMC as one of 11 regions that together will form the Johannesburg Unicity. The JMC will then be the central, coordinating body for the regions regarding all 'corporate' activities, including intranet development. It is deemed necessary to examine the *status quo* of the JMC intranet in terms of its utilization as an information management tool and to propose a development path for the Midrand MLC.

### 5.1 Johannesburg Metropolitan Council (JMC) intranet

The JMC implemented an intranet in 1997. A newspaper article read by a political consultant initiated the development. An internal team prepared a dummy run using Lotus Notes and FrontPage, which was then presented to management for approval. It is not clear what the selling angle was at that time, but it is presumed that it was focused on electronic mail and information publishing (quantity of information) rather than on the strategic impact (quality) and collaboration possibilities of the intranet.

An intranet team was formalized and consisted of seven members, namely an editor, sub-editor, administrator, designer, administrative clerk and two information technology officers. This team has since been split and only three people are dedicated to the intranet currently, with the main responsibility of content maintenance and design. They report to the communication department of the JMC.

There used to be an editorial team and related policy, but currently the focus is on maintenance of already identified information like committee meeting minutes and telephone lists, which is undertaken by the switchboard operators. Regular editorial meetings have been replaced by *ad hoc* discussions. The editorial policy is a guideline for design and publishing on the intranet and is not the equivalent of an information policy.

In terms of the reliability and user-friendliness criteria proposed by Curry and Stancich (2000:259), the JMC intranet fares well. The existing information is well maintained, no broken links exist, the information is well organized with ease of navigation, the content is well presented and the site loads fast. What is lacking, though, is the name of a contact for each 'piece' of information. Only one name is supplied for the whole site as contact for any problems experienced, be they technical or content related. Acknowledgement for contributions and responsibility for maintenance are not visible.

Other departments are involved on an *ad hoc* basis as and when they request information to be published. Some line function departments use the intranet extensively for databases. These are set up by the Web designer and maintained by the functional specialists. The participation of other departments in general was described as 'horrific', meaning that

information contributions to the intranet were seen as an 'add on' to their job and not an integral part thereof.

Training was supplied to employees in the early stages and was focused on awareness, utilization and to show the content. No other campaigns were or are run to establish buy-in from all employees, including top management.

Although the site has received 28 000 hits as of May 2000, it is not clear how important the intranet is perceived to be in terms of information management. No surveys have been conducted to establish the value in terms of everyday use and the extent to which it allows information to be leveraged to improve competitive advantage and thus efficiency and effectiveness.

Two-way communication and collaboration does not seem to be a priority, as the chat line is not utilized (it was 'abused' and stopped), no announcements are made 'from the manager's desk' or *vice versa* and comments are received via e-mail to a specific person only.

Two search facilities are catered for, namely one to search HTML documents and another to search Lotus Notes information. Access is also provided to other popular Internet search engines.

The intranet content is classified into 'useful' and 'strategic' information. *Useful* information currently provided is the JMC telephone directory, meeting schedule (for committee meetings only) as well as newspaper and magazine articles. Although the latter can be extremely useful information, indexing is according to article title, date and newspaper/magazine name only while the article itself is scanned and saved as an image. The sites as contained in Appendix 1 incorporate *strategic* information. The target audience is mainly management and the content is mostly transversal/corporate. Provision is made for line function Webs although they tend to be poorly populated and maintained.

The extent to which (if at all) the intranet is utilized to support decision making, especially by the functional specialists, is questioned. Although a large amount of hard work is involved in maintaining the current intranet information, a lack of strategic focus and formal coordination exists. Furthermore, the top-down commitment and bottom-up buy-in seems to be lacking. Business processes (structured and unstructured) are not imbedded in the intranet and value adding to existing information is absent. It is concluded that the JMC intranet is currently not utilized to its full potential as an information management tool.

## **5.2 Midrand MLC**

Midrand is in the unfortunate position of not having a fully-fledged intranet yet. Although Microsoft Outlook is used extensively for its mailing, calendar and contact capabilities, no content framework has been implemented to date. This disadvantage can be converted into an opportunity.

### **5.2.1 Prerequisites for optimization**

Although the JMC intranet serves as a development guideline for the Midrand MLC, it is clear that the potential hindrances to optimization of the intranet as an information management tool have to be addressed during the early phases of the process. The following proposals are made in this regard:

Management support

The intranet needs to impact on a strategic level, which necessitates the commitment of senior management. The corporate information policy stands alongside other strategic policies and needs to be 'lived' and reflected in the culture of the organization. Acknowledgement and incentives need to be aligned to nurture values like information sharing and knowledge generation.

#### Co-ordination and communication structures

To be successful, the intranet needs to be formally managed. A central (JMC) planning and coordination function can be supported by local implementation. This allows for alignment to local requirements. A Web programme committee is proposed for Midrand, chaired by the sponsor (senior manager/champion) and attended by representatives of all departments and information management section and to attend to strategic, content and non-technical matters. The communication structure will reflect the fact that the Midrand MLC is too small to have separate editors, publishers, Webmasters and administrators. The importance is that ongoing communication is required for support, learning, improvement and commitment. The latter is especially necessary in the case of functional specialists.

#### Maintenance and improvement

Technology allows ease of maintenance by non-technical people. This allows for functional specialists to take ownership of their information in terms of publishing and maintenance. Continuous improvement should be built into the maintenance process by ongoing assessment of the value the information adds to the organization. The functional specialist is in the ideal position to do this and to systematically incorporate knowledge management as part of the process.

#### Awareness, training and marketing

Awareness and marketing campaigns should never stop if the intranet is of strategic importance to the organization and information management is part of the organizational culture. Training is required on a continuous basis to keep up with the dynamic environment.

#### Structured approach and content framework

The intranet needs to be developed according to a detailed plan or requirement specification, based on the information and business processes required to add value to the organization. This should be supported by an information needs analyses and can be supported by an information audit (Abell and White, 1999:1). A clear strategy should exist as to the development focus, priorities, programme and associated performance indicators.

### **5.2.2 Local content**

Although the JMC intranet will contain the corporate information, it is recommended that local information relevant to Midrand be maintained in the region. This includes general information such as a map of the area with a search facility to locate services, facilities and places of interest and provide relevant information. A business listing, calendar of events and online complaints are proposed to support customer care. Value adding to the news section is proposed in the form of a link to, for example SABINET (intranet toolkit), which enables users to create their own search criteria (SABINET, 2000).

Functional specialists need a current awareness service related to their specialist terrain. Value-addition to the Meeting decisions is proposed in that relevant items can be grouped. This can be combined with an alerting/push system (e.g. DialogWeb) according to profiles of

functional specialists. The library items (SABINET ReQuest) could prove valuable.

The intranet can be planned to function as an entrance point (corporate portal) for all local information requirements.

### **5.2.3 Electrical department**

The engineering department was used as a trial for a possible procedure to establish an intranet content framework for functional specialists. A workshop was held to establish the current information management status, to visit the business objectives and business focus and to identify gaps. Eventually a revised information management situation and content framework for the intranet was proposed (workshop agenda attached as Appendix 2).

The model proposed by Abell and White (1999:3) was used to establish the focus of the department. Although the major focus was on adding value, reducing cost was also identified as an important element. The department was consequently identified as customer focused and process improvement oriented. This focus, in combination with the business objectives, provided another dimension to the content framework. The various clients (internal and external) and their information requirements furthermore guided the proposed content framework. Information requirements were viewed in their contexts (situations) in order to include information processes.

It was agreed that information should be managed in such a way to be available to support customer care. A list of frequently asked questions (Appendix 3) as well as links to relevant Web sites (<http://www.eskom.co.za>) was proposed. The incorporation of the customer care system enabling users to log service requests, a link to the financial system and a facility to track and trace electricity connection applications were further proposals. The incorporation of the development application workflow system was flagged for future incorporation. Various reports, forms and worksheets were identified for completion as 'form to database' on the intranet which would support efficiency and collaboration. (Unstructured information was not included in the analysis.) Information identified as being required from other departments was noted as transversal or corporate information (e.g. legal, human resource and treasury information) to be shared between departments. Appendix 4 contains the summary of clients and information requirements.

Establishing the source, format and priority of the identified information as well as adding the maintenance frequency and responsibility thereof concluded the workshop.

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## **6. Conclusion**

Intranet technology in itself is not the solution to information management. Although the features of an intranet provide excellent possibilities for local government in this regard, several hindrances exist for optimization as an information management tool. The environment in which the intranet is 'born' and develops is of crucial importance to its success. Maximizing the potential of an intranet is a strategic issue and must be well managed and planned before the information and the way it is utilized can sustain a competitive edge for the organization (Curry and Stancich, 2000:250).

Local governments are well known for the various systems (e.g. financial, personnel, GIS) that exist separately. The integration of these existing legacy systems into one infrastructure with a single point of access is a major benefit to local government. Furthermore, GIS can be made an integral part of the intranet to support information management. Integration, together with interdisciplinary processes imbedded into the intranet infrastructure, promises to be a

significant contribution to information management.

Although technology returns the power to the user in terms of publishing, distribution, sharing and searching of information (push and pull technology), a human paradigm shift is still required to support this culture. Technology also accommodates unstructured processes, knowledge management and the creation of new ideas. It would be worthwhile for local government to investigate formal incentives in this regard.

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## Annexure 1

### Johannesburg Metropolitan Council intranet

#### Content

##### 1. Constitutional and legal framework

- Constitution

- National
- Provincial
- International
- Local
- Founding

## 2. Institutional framework and structures

- Metro local government in greater Johannesburg
- Organigrams
- Council and committee system
- Provincial
- National
- International
- Section 21 companies

## 3. Policy development and management

- Metropolitan policy framework
- Policy database
- Provincial
- National
- Policy resources

## 4. Decision database

- Search for a decision
- Track a report

## 5. Work in progress

## 6. Finance and budget

- Financial institutions
- Financial and fiscal commission
- Budgets

## 7. Human resources and industrial council

- Affirmative action
- Conditions of service and employee benefits
- Jobs in the GJMC
- National human resource framework
- Industrial council
- Labour relations act and agreements
- Labour unions

## 8. Development facilitation act

- Development facilitation overview and act
- Provincial regulations
- Land development objectives
- MDF and consultation

## 9. Cooperative governance

- Greater Johannesburg forums
- Intergovernmental relations

## 10. Political parties and resources

## 11. Cellular phones

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## Annexure 2

### Intranet information requirement analysis

#### Agenda

08:30	Background and purpose
08:45	Current situation
	- Clients
	- Information
09:10	Business objectives and units
09:30	Business focus
	BREAK
10:00	Revised situation
	- Clients
	- Information
10:30	Intranet information content
	- Priorities
	- Source
	- Format
	- Maintenance (frequency and responsibility)
12:00	Way forward
12:15	Closure

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## Annexure 3

### Intranet information: frequently asked questions

1. Streetlights (policy, complaints, etc.)
2. Power failures (reasons, where, when)
3. Connection fees (domestic, pre-paid, bulk)
4. Existing tariffs
5. Technical questions (earth leakage, etc.)

6. Meter reading (accuracy, testing, etc.)
7. By-laws and legal aspects

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## Annexure 4

### Clients of the electrical department and associated information

Client	Information
<b>Internal to department</b>	
Management Supervisors and foremen Workshop	Daily, monthly and Metro reports Capital projects progress reports Functional specialist information
Electricity planning ESI network	Electricity act, by-laws Link to ESKOM and other relevant Web sites
Treasury department	Bulk meter readings, contributions and connections Tariffs Time sheets Store item requisitions
Town secretary department	Service agreement for development applications Compiled contracts Disciplinary hearings (schedule)
Town engineering department	Request for services GIS map: sewer, water, proposed roads
ESI test department	Routine test requests
<b>External to department</b>	
Consultants Developers Service installation contractors	Costs for specific developments Standards of service
Electrical contractors	Specifications, costs and procedures Standard commencement forms
Consumers Ratepayers	Frequently asked questions
CMIP CIVEC	Capital projects progress reports
Suppliers	Specifications
Government departments Gautrans Telkom	Request for services GIS map: sewer, water, proposed roads Links to Gautrans and Telkom sites

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