



Implementing an Intranet

A Management Overview

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1. EXECUTIVE SUMMARY

Simply speaking Intranet is the term for the use of Internet and World Wide Web (WWW) technology on an internal network.

Just as the Internet connects and makes information easily accessible from networks and computers in companies, businesses, governments and universities around the world, an Intranet can connect and make accessible the islands of information on separate computers and servers within an organisation.

In simple terms an Intranet is like a mini version of the Internet. It is a self contained computer network that can be designed specifically for individual companies or businesses using the same technology as employed on the Internet.

It is platform independent which means that it can be operated on a variety of existing computers, networks and legacy applications.

The purpose of the Intranet is to give everyone in an organisation seamless access to the same information from their desktop computers or workstations.

For example, the human resources department collect and maintain mountains of paper about policies, benefits and regulations. Keeping this information current and updated and fully accessible to employees is a difficult task in most organisations. At any given time, some employees will have erroneous, irrelevant or outdated information in their HR manuals.

Maintaining the same information on an internal Web based system and making it available to employees on the company Intranet instead of printing the materials is a cost effective and efficient method of ensuring the data is timely and accurate.

As there is only one copy of the information it is easier for the HR department to manage and update it. The employees use a browser environment to search, print and view the latest and most relevant data.

This purpose of this white paper is to illustrate the factors to consider before implementing Intranet site for a business. We will also discuss the importance of considering the Intranet as a means to improve business processes and thus create a more productive and efficient organisation.

2. TABLE OF CONTENTS

1. Executive Summary	2
2. Table of Contents	3
3. Transforming your organisation	4
3.1 Identifying the benefits.....	5
4. Intranet Architecture	7
4.1 Integrating Information Design with Business Planning.....	7
4.2 Don't overlook design	8
4.3 Think tasks rather than documents	8
4.4 Organise tasks into processes	9
4.5 Create workgroups around processes	9
4.6 Good design equals good business!	10
5. Intranet Application Examples	12
5.1 The Company Intranet.....	12
5.2 Sales & Marketing Intranet	13
5.3 Human Resource Intranet.....	14
5.4 Customer Service & Support Intranet	15
5.5 Manufacturing & Operations Intranet.....	16
5.6 Finance & Accounting Intranet	17
6. Intranet Benefits	18
6.1 General Communication.....	18
6.3 Effectiveness (business results).....	19
6.4 Cost reduction.....	19
6.5 Low cost development and delivery	19
6.6 Company Benefits	20

3. TRANSFORMING YOUR ORGANISATION

The first thing to realise about an Intranet is that it is not just another piece of new technology or an IT toy. Once it is implemented it will become a powerful tool that will provide improved communications, improved business processes and more efficient staff.

The benefits of Intranets to a small or medium sized business do not substantially differ from the benefits reaped by the larger organisations. In fact, within large companies there often exist multiple smaller, segregated Intranets. A small human resources Intranet, for example, will tend to feature substantially different content than an Intranet for engineers.

Whatever the scope be it organisation wide, departmental or workgroup, Intranet services promise to grow institutional knowledge and increase employee effectiveness. Online news, secure document sharing, and email are just a few examples of Intranet applications.

More and more small and medium sized companies in the UK are doing business on the Internet and most of them now have an Internet site of their own. These organisations have recognized the business opportunities offered by an Internet presence; marketing, advertising, sales, invoicing and after sales service. It is for these specific services that the Internet is a unique tool. However with these new opportunities comes an increased role for an efficient Intranet.

Intranets offer the ability to link internal and external information. Building Intranets using common Web technologies dovetails nicely into an organisation's external marketing and e-commerce strategies, linking the business generation methods with improved process management to ensure effective customer relationship management and product distribution. In addition information created on the Intranet, such as statistics, can be made available on the external web site for customer and partner use where required.

The approach for creating a small to medium sized Intranet appears deceptively simple. First, define the goals and specific applications the Intranet will have. Then, select a few basic tools with which to build it. Once deployed, begin populating the Intranet with electronic information. And watch the return on investment pour in!

Needless to say, such an oversimplified recipe includes many hidden details and potential pitfalls in practice. The process used to define Intranet requirements will differ greatly from organisation to organisation.

Wisely selecting the appropriate tools requires technical expertise. Securing employee acceptance and contribution can be challenging, but will also prove essential to the long-term success of the project. And maintaining content, tools, and infrastructure requires ongoing business investment and commitment.

Intranets are becoming an established part of many companies operations and they have the potential to transform the way the business operates and provide very efficient and cost effective business processes internally and externally.

In addition the implementation of an Intranet empowers employees giving them the power to work for the greater benefit of themselves and the organisation.

3.1 Identifying the benefits

The initial benefit from an Intranet is usually a dramatic reduction in the amount of paperwork generated and stored.

For example memos, telephone directories, product catalogues and reports can be stored and accessed on the Intranet rather than being printed and held in large filing cabinets. The document management capabilities of the Intranet will allow quick searches for documents which can be viewed via the browser or printed only as required. Relevant documents can also be shared with other offices, departments or customers as required.

There are some immediate tangible benefits from this issue including reduced paper costs, reduced printing costs, reduced distribution costs and reduced storage costs. In 2002 British Telecom, who run Europe's largest Intranet, estimate they save *£600 million, mainly on the costs associated with producing and distributing printed documents.

*** Source Dataquest 2003**

Depending on the size and market area of an organisation the typical content of an Intranet will include some or all of the following:

- Product specifications, information and illustrations
- HR manuals, internal vacancies, holiday management
- Directories and contact details
- Terms and Conditions
- Internal email and bulletin boards
- Shipping details
- Stock control
- Support information
- Departmental calendars

- Distribution
- Logos, photographs and diagrams

An Intranet will allow all of these types of information to be updated quickly and easily. For example time is not wasted trying to find a telephone extension of an employee who has left; the wrong product information is given to a customer because the directory has not been updated; or a holiday is incorrectly authorised for a particular department.

The Intranet ensures that the staffs are able to do their jobs more quickly and that they are also better informed. This not only improves customer service and provides a more cost effective operation but it also boost staff morale as they are more able to carry out their duties effectively.

A major benefit of implementing an Intranet within an organisation is that staff will have a better understanding of how the rest of the organisation operates. This is particularly relevant in organisations with a number of geographic locations or many operational departments. Rather than feeling disassociated from the centre of the company.

An Intranet can provide a major benefit in the interactivity it can provide within an organisation. Staff can communicate in a far more constructive way than with just email. Problems and projects can be shared and solved utilising the skill sets and expertise within the workforce.

The level of interactivity depends upon the company policy of Intranet. Some organisations will require a fully interactive system to provide a constant flow of information between the relevant employees sharing ideas, comments and innovations and therefore improving business processes.

Other organisations will prefer a static version where users can only access the data without the ability to respond or make changes. The interactivity of the Intranet can be set at varying levels for each department and their application depending upon the requirements.

Later in this paper we will discuss Application Examples for various departments within a typical company.

4. INTRANET ARCHITECTURE

4.1 Integrating Information Design with Business Planning

The corporate Intranet has been hailed as the most important business tool since the typewriter, but the track record so far has been mixed.

Despite many successes, particularly in cost and time savings, many sponsors of corporate Intranets are dissatisfied. They have spent time and money on development, Net-enabled desktops, even Intranet training, but still aren't enjoying significant enough productivity or cost savings.

Why? While critics often point to technological glitches, the real problems may lie in information design.

As previously discussed Intranets should help employees collaborate on business processes such as product development or order fulfillment, which create value for a company and its customers.

Specifically, Intranets centralize the business process in an easily accessible, platform-independent virtual space. Successful Intranets allow employees from a variety of departments to contribute the different skills necessary to carry out a particular process.

While each department of a company may have its own virtual space, Intranets should be organized primarily around the business processes they help employees carry out, rather than the organisational chart of the company.

Focusing on processes rather than departments is a widely-hailed business trend. Recent shifts in corporate structure point to the emergence of "communities of process." Management gurus are helping companies move away from vertical, hierarchical organisational lines towards horizontal, process-oriented groups that link cross-functional teams focused on the same set of business tasks.

The trouble is that this requires significant interaction between departments, functions, even countries. In this respect the Intranet is the ideal vehicle for creating and empowering process-based corporate communities.

Successful process-oriented Intranets look and work as differently as the processes they enable, but they share several common characteristics. First they are built on smart information design. Second, they focus on tasks, not documents, and aim to integrate those tasks into distinct processes.

Finally, the best Intranets encourage collaboration by creating shared and familiar spaces that reflect the personality of the company and create a common ground for all employees.

4.2 Don't overlook design

Just as physical work spaces rely on architectural plans to optimize efficiency, an Intranet needs to be carefully designed to help employees access information and collaborate effectively. Because the public doesn't see the Intranet, information design for Intranets often receives scant attention.

Unlike customers, employees are assumed to be insiders, able to easily locate company information. So, while the company Web site usually has the input of the marketing department, design and structure of the Intranet is often relegated to the IT department.

By default, an organisational chart of the company is often used to organize information on the Intranet. While seemingly the obvious candidate for the structure of the Intranet, an organisational chart actually works against the collaboration the Intranet is meant to foster.

An organisational chart can't help employees from the marketing and legal departments collaborate on bringing a document through the approval process. It won't allow employees from marketing and research and development to work together to create a new product.

4.3 Think tasks rather than documents

Thinking of the Intranet as a tool means understanding the Intranet as more than a collection of documents. While important, documents are usually a means to an end. People use documents to complete tasks. Tasks include fulfilling orders, looking up a customer's billing history, or collaborating on a research document. To complete these tasks, people need to have related documents and tools close at hand

The principal of organizing by task can be demonstrated by the example of working at a desk. When you sit down to begin a task (e.g., creating a budget), you have a variety of information and tools at hand. While a spreadsheet is a "calculation" tool and last year's budget is an "internal document," both need to be next to each other in order to develop a new budget.

Similarly, on the corporate Intranet, the tasks of the users rather than the classification of documents or tools, should dictate the organisation of the Intranet.

Designed effectively around dynamic tasks rather than static documents, Intranets can contribute to dramatic increases in efficiency (as much as a 40% improvement in time spent processing documents, according to the GIGA Group 2003).

Organizing documents within the context of tasks also focuses employees on the function of the documents they are working with. For example, to save employee time while signing up for various retirement plans, information on various retirement plans (including links to financial Web sites) should be placed near the forms actually used to register for those plans.

4.4 Organise tasks into processes

Isolated tasks are usually part of a larger process. Intranets should group together all the tasks that make up a business process. Processes can be relatively discrete, such as tracking deliveries, or getting approval for documents. Or, they can be more complex, such as developing or selling products. The most important processes in a company are those that create value for a customer. These are the central processes which every Intranet should help employees accomplish.

Even simple processes can become more efficient when incorporated into an Intranet. For example, when Ford implemented an Intranet, the company included an application to help geographically dispersed engineers to get authorization for new projects. What would previously be a time-consuming, expensive process, involving the potential for lost documents and delays, is now centralized in an efficient electronic process.

More complex processes can also be effectively integrated into an Intranet. For example, Cadence Systems created an integrated section of the Intranet for its entire sales process. Each phase of the sales process is represented on the Intranet with relevant information and tools. So, the section covering an initial stage of the sales process includes links to customer presentations, sample letters, and internal forms. Organizing all steps of the sales process together also allows for easy tracking of each sales effort.

4.5 Create workgroups around processes

Intranets can break through departmental walls to help accomplish business processes more efficiently. For example, a customer complaint might involve people and information from the accounting, sales and marketing department. Even though the employees necessary to resolve the complaint work in different departments, they are all involved in the process of customer service. By creating spaces for cross-departmental collaboration, the Intranet can help employees collaborate to efficiently carry out the central processes of the company, and cut costs by avoiding in-person conferences and employee reallocations.

Intranets can also bring together employees and partners who are geographically dispersed to work on common problems. Travel costs are eliminated, and employees can increase their productivity by sharing

knowledge. For example, a pharmaceutical company is using its Intranet to allow scientists all over the world to collaborate on research.

A major franchise retailer is using bulletin boards on its Intranet to coordinate major marketing projects. Caterpillar is developing an extranet application so that experts from around the world can collaborate with employees to design new products. Other applications for Intranet collaboration include complex transactions with lawyers and multiple parties, which rely on access to, and modification of, key documents.

The bulk of discussion about collaboration in and between companies centres around security, certainly an important issue to resolve. What receives less attention-but is central to the value of an Intranet-is the design of virtual spaces, which encourage new forms of collaboration. These, in turn, increase the efficiency of key business processes such as product development, marketing and customer service.

Unless there are clear commitments from senior management to have employees collaborate across departments to more efficiently accomplish key business processes, the Intranet may have only limited application and benefit.

Even after the Intranet is designed to encourage collaboration, marketing the Intranet to employees remains essential. As the Intranet creates new forms of collaboration, it will challenge traditional ways of doing work and obtaining information. For the Intranet to be successful, it must provide ways of empowering all employees, offering concrete incentives for employees to use, and encourage the use, of the Intranet.

4.6 Good design equals good business!

The architect Le Corbusier said buildings are "machines for living." Good Intranets should be machines for doing business. Just as design is integral to a good building, it is key to creating an effective Intranet. The organisation and design of information on an Intranet should map out the key business processes of a company, and provide employees with access to the information and people necessary to carry out those processes.

The truly effective Intranet creates new channels of communication that overcome inefficient organisational structures and foster new forms of efficient collaboration. It serves as a model for a company centred around processes rather than departments, collaboration rather than closed doors.

Building an effective Intranet means thinking about how documents can be used to accomplish tasks, how tasks can be organized into processes, and how those processes can be carried out collaboratively by virtual work

groups. The effective Intranet is not only a tool; it is also a model for an efficient, process-centred enterprise, a machine for doing business.

5. INTRANET APPLICATION EXAMPLES

The following tables are a quick reference to illustrate various applications that can be achieved by implementing Intranet technology within an organisation and its' various departments. The applications are examples and the list is not definitive.

5.1 The Company Intranet

Document management & sharing	<i>Securely share documents and files within the company and with remote workers and business partners.</i>
Company handbook	<i>Maintain a handbook of company policies.</i>
Online directories	<i>Maintain an employee directory containing phone numbers, pictures, email addresses and other contact information.</i>
Calendar of corporate events	<i>Post all important events on the Intranet including trade shows, staff meetings, and project deadlines and staff outings.</i>
Manage project goals & tasks	<i>Use the Intranet to assign and delegate tasks and track deadlines.</i>
Company newsletter	<i>Use the Intranet to publish a regular newsletter to the whole company or department</i>
Extranet	<i>Establish an extranet to co-ordinate financial, research, statistical, logistic or product information to business partners or customers.</i>
Knowledge bases	<i>Build a knowledge base of frequently asked questions. The information is immediately available to any employee, field representative, branch office or subsidiary.</i>
Financial reports	<i>Publish financial data in a secure, controlled access folder for use by executive personnel.</i>
Remote employees	<i>Keep employees who are working remotely informed about the latest developments at HQ.</i>

5.2 Sales & Marketing Intranet

Sales and marketing teams can take advantage of Intranets to enhance collaboration with each other as well as other functional groups. The Intranet can also provide quick but controlled access to relevant company databases such as sales forecasts, performance figures and customer information knowledge bases.

Product information & reference material	<i>Provide a central repository to access the latest information, such as product availability, price lists, catalogues, brochures, data sheets and specifications.</i>
Sales reports	<i>Distribute sales goals and performance data.</i>
Calendar of sales activities and events	<i>Use the online calendar to post sales meetings, product launches and tradeshow.</i>
Sales presentations	<i>Post the latest sales presentation for the product launch.</i>
Competitive knowledge base	<i>Build a knowledge base about each major competitor, and make the information immediately available to all field sales representatives.</i>
Customer contacts	<i>Centralize your customer contacts database.</i>
Rewards and recognition	<i>Fire up your team by announcing the latest big sale.</i>
Sales training	<i>Provide training videos and documentation for products, services, competition, sales skills and other topics useful to field personnel.</i>
Field communication	<i>Publish company-wide newsletters.</i>
Press library	<i>Publish press releases and other company announcements.</i>
Remote sales offices	<i>Inform remote sales offices worldwide about the latest developments at headquarters.</i>
Art asset library	<i>Create a library for all corporate logos, identity and graphics and make it accessible to everyone.</i>
Proposal templates	<i>Create a library of proposal templates and forms.</i>

5.3 Human Resource Intranet

An Intranet can provide an easy to navigate environment that is accessible by all employees regardless of their location or which computing platform they use.

All HR information is on line, updates are fast, straightforward and easy to manage. Employees have immediate access to the latest information and they use a simple browser interface to find what they need quickly.

Online Directories	<i>Maintain an employee directory with phone numbers, pictures, e-mail addresses and other contact information.</i>
Benefit Plans	<i>Link to information on pension plans and benefits programs.</i>
Company Schedules	<i>Post company events and the holiday schedule and announce enrolment deadlines, orientation events and training schedules.</i>
Recruiting	<i>Publish job postings, internal educational opportunities and career development information.</i>
Employee Surveys	<i>Survey your employees.</i>
Organizational Charts	<i>Provide up-to-date organizational charts and information.</i>
Employee Suggestion Box	<i>Use the Intranet to provide a discussion area for employees to submit feedback and ideas.</i>
Rewards and Recognition	<i>Provide recognition for the employee-of-the-month awards.</i>
Outing and Team Building	<i>Post photos of the company outing or team building events.</i>

5.4 Customer Service & Support Intranet

Implementation of an Intranet can enable fast access to a customer database or a knowledgebase of known problems and fixes. In addition an Extranet can be established to allow direct and secure access to corporate information by customers, dealers and distributors. These external users enjoy ready access to the information they need without the intervention of service or support staff. This reduces the number of incoming calls that require human intervention, so service and support staff can spend more time solving complex problems.

Online Information	<i>Post answers to routine questions for access by customer service. A Knowledge Base can also be made available on the intranet and guest access can be enabled to provide direct access for customers, distributors and dealers.</i>
Customer Information	<i>Use a database application accessed from the Intranet to provide online forms for entering data about customer problems.</i>
Problem Escalation	<i>Provide a discussion forum or database of information detailing problem escalation from field personnel to customer service to engineering.</i>
Training	<i>Post online training about products and customer service tools and techniques to the service and support staff.</i>

5.5 Manufacturing & Operations Intranet

The intranet can assist manufacturing departments in consolidating data from multiple sources and simplifies access to the information.

An organisation can extend its intranet into an extranet that includes customers and suppliers. The Intranet helps to foster collaboration among manufacturing and other functional groups within the company. This assists in identifying product problems, incorporating design changes, enhancing productivity and improving inventory control. The result is reduced costs and higher profit margins.

Production Schedules	<i>Publish production schedules for access by management and manufacturing personnel.</i>
Supplier Coordination	<i>Enable suppliers to review resource or part availability, prices or status for the benefit of downstream production.</i>
Lot Control	<i>Use a database application to maintain lot-related information and track inventory usage to satisfy government regulations or company quality assurance requirements and warranties.</i>
Quality Assurance	<i>Maintain a database to review quality assurance statistics and better facilitate Quality Improvement Programs.</i>
Bill of Materials	<i>Use a relational database application to maintain a complete bill of materials for every product.</i>
Safety and Environmental Compliance	<i>Easily publish time-sensitive compliance information for safety and environmental compliance requirements.</i>
Supply Chain Coordination	<i>Provide each supplier with a private workspace to post deliverables, check status and view ongoing performance.</i>
Product Launches	<i>Organize and track documents, analytics, reports, plans, task lists, calendars and correspondence about a new product launch.</i>
Supplier Management	<i>Consolidate contracts, compare performance, and examine current issues and activities with a supplier for a total strategic view of the relationship.</i>
Business Processes	<i>Encapsulate business processes in templates and immediately institutionalize and make them available to all employees, facilities and suppliers.</i>

5.6 Finance & Accounting Intranet

An Intranet can provide a secure, central point for collecting and publishing financial information. It can also provide a vehicle for ensuring rapid updates of information and availability of accurate and timely information. As a result, managers across the company are able to track financial performance and maintain effective control.

By setting guest access and security parameters, an Intranet can also permit external business partners, shareholders and analysts to have limited access to financial data, and it can also enable an organisation to build tighter relationships with these constituencies, and provide them with timely, accurate information.

Financial Reports	<i>Publish financial data in a secure, controlled access folder for access by executive management.</i>
Policies and Procedures	<i>Establish a central location for corporate policies and procedures related to finance and accounting.</i>
Budgeting	<i>Publish historical budgeting data, including projected and actual spending.</i>
Asset Management	<i>Publish a complete inventory of current assets online for review and update.</i>
Expense Reports	<i>Enable employees to prepare expense reports in a uniform manner.</i>
Compliance Deadlines	<i>Maintain a complete record of various tax and contract compliance deadlines.</i>
Contracts	<i>Establish a central library of executed contracts. Store legal and contract templates in a library to provide secure access to selected individuals.</i>
Financial Deals	<i>Organize and track documents, market data, reports, financial models, task lists, calendars and correspondence on a single investment or deal.</i>

6. INTRANET BENEFITS

6.1 General Communication

- Internal communication and coordination
 - GIGA Group report UK (2003) cites potential for up to 80% impact on productivity:
 - 40% of worker time spent in processing documents
 - 40% of worker time spent communicating
- Extended enterprise partnerships
 - Improved channel communications and coordination
 - Improved supplier communication and coordination
- Purpose-driven, adaptive organization
 - Better central communication of objectives, guidelines and best practices
 - Enhanced decision quality, understanding, acceptance, and execution
 - Empowerment for dialog, information access, and knowledge sharing at all levels

6.2 Productivity (business process efficiency)

- Faster, easier, more flexible, and open communication
 - A suite of standard, easy to use, powerful, and rich facilities
 - Rapid transmission and feedback
 - One-to-one and many-to-many dialog
- More productive collaboration
 - Ability to collaborate in multiple media, without time or geographic constraints
 - Dynamically structured topics or threads to permit responsive, ad-hoc, on-topic focus
- Better learning and knowledge management
 - Increased development, distribution, application, and quality of intellectual capital
 - Better collection and sharing of market intelligence
 - Enhanced training resources, available to all on demand

6.3 Effectiveness (business results)

- Faster time to market
 - Rapid project development and roll-out
 - Better communication to and with relevant parties
 - Improved coordination
- Better, faster feedback, adaptation and correction
 - Empowerment of feedback
 - Faster gathering and response to feedback
 - Increased collaboration participation and effectiveness

6.4 Cost reduction

- Meeting, travel, and telephone time reduction
 - Powerful collaboration abilities
 - Reduced and better focused use of traditional meetings and telephone
- Training, corporate, administrative, and operational communications cost savings
 - Reduced cost of printing and distribution
 - More timely and rapid access to information
 - Powerful information retrieval abilities

6.5 Low cost development and delivery

- Use of existing, standard, flexible infrastructure
 - Immediate
 - Easy to use (browser based)
 - Low incremental costs
 - No vendor lock-in
- Reduced need for training
 - Standard user interface (browser based)
 - Standard tools and software

- Reduced cost of development
 - Short cycles using standard tools and components
 - Shift to business content focused self-development

6.6 Company Benefits

- Increased involvement in effective business processes throughout the company
- Reduced risk of losing customers or disengaging staff because of dated or inaccurate content
- Increased productivity resulting from employee's faster access to essential information and documents
- Easier access to latest and accurate information and content 24x7 (particularly important to offsite employees and partners)
- Improved communication with staff, agents, partners and customers