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THE COMPETITIVE ARMAGEDDON: Survival and Prosperity in the Connected World of the Internet

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Introduction

In the years ahead we will witness a massive transformation of business. As with a giant earthquake, this will bring with it the most dramatic and rapid business changes we have ever experienced. The corporate landscape will change in ways never before thought possible.

We will see the demise of corporations that are household names today: if not as financial debris assigned to history, then as takeover victims of competitors who saw the signs - and then acted first to survive and to prosper. This is not a prediction of the distant future: *it will happen within ten years - maybe less.*

There will be an Armageddon unparalleled in corporate history. It will affect all industries and every organization: Private Sector, Public Sector and Defense. The fault lines are shifting; pieces are locking into place; the pressure is building ...

Read no more, and become part of that discarded historical debris. Or read on to learn how you can survive and even prosper; perhaps to become one of the giants of tomorrow.

To understand the impact of the coming competitive maelstrom, we must review the effect that technology has had on the computer industry. IBM first ruled that industry in the 60s: the decade of large mainframes. But IBM sadly misjudged the effect that minicomputer technologies would have on its mainframe markets in the 70s; Digital Equipment snatched the lead from them in that market shift. With its size, IBM again grasped the lead in the 80s with microcomputer technology: but relinquished it to Microsoft and Intel in the late 1980s ... who have owned the desktop through to the present.

These technologies are all part of the First Era of the Information Age, described in "*Paradigm Shift*" by Tapscott and Capston. The Second Era is now upon us: its catalyst is the Internet and the corporate Intranet. The tremors can be felt now; the quake is about to hit - perhaps sooner than even Tapscott and Capston expected. This paper addresses the steps that we should all take, to survive and ensure we are part of that future.

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The Internet and Intranets

From 1995 we have seen rapid growth of the Internet and Intranet. From

initial steps, with static Web sites to promote or inform, organizations are now about to embrace the Internet as a vehicle for Electronic Commerce. Enterprises will sell to a global marketplace. The low costs involved are a great equalizer; even small organizations will have a potential market presence previously attainable only by the largest enterprises.

Small companies will prosper; large ones will stagger and fall as the Davids sweep many of the Goliaths from the earth. This is not inevitable; *but for organizations that fail to act now, it will come to pass ... as surely as night follows day.*

One example of a likely survivor, perhaps a winner in this tomorrow, is Federal Express. Physical products sold on the Internet must still be delivered to end-customers. FedEx can see massive growth in shipping - which is their business. Taking the initiative they now offer free, to merchants who sell products to their own end-customers, their BusinessLink software. They thus become an integral part of their own customers' delivery channel. Other examples abound, in transportation and other industries, of organizations that are already grasping the many opportunities presented by the Internet.

As other enterprises also add value in the services they deliver to their customers, using Internet technology proactively, we will see one of the greatest market shifts in corporate history ... it will be a competitive Armageddon.

The Need For Action

On the Internet, many business processes need to change: in fact they will change radically. We will find that the only thing stable tomorrow ... will be CHANGE itself. But reorganizations that take months or systems development projects over years are not fast enough. Action is the key.

The only thing stable tomorrow ... will be CHANGE itself.

***What has been missing is a sense of urgency:
recognition by management of the need to act.***

Organizations must design for change; to be able to survive they must change rapidly, and often. One Critical Success Factor is to align systems with strategic goals. This is not a technology problem, it is a business problem: a problem of great concern to senior managers. We cannot just do the same as we always did, only faster. Instead these systems must be driven by strategic goals, through strategic alignment.

Success comes from using IT as a competitive weapon, based on

strategic directions. Management leadership is the second Critical Success Factor.

These two CSFs are vital in defining a Strategic Technology Plan for action. This plan is readily defined for each organization. But what has been missing has been a sense of urgency; a recognition by senior management of the need to act.

Strategic Technology Plan

An organization's Strategic Technology Plan is a competitive blueprint for the future based on its Corporate Plans - from which systems can be built that are aligned with strategic directions.

To succeed, this needs input from the senior managers and planners who set directions. This investment in time is hard, yet it is vital for Internet and Intranet success. Over two days, lead by a Facilitator, jointly they develop an initial corporate blueprint, called a Business Model. Its catalyst is the organization's Mission, Goals, Key Performance Indicators, Strategies, and current and potential Markets; discussed later in: "[Developing a Strategic Technology Plan](#)".

As an architect designs a building and develops plans for its construction, over the next three to four weeks the Facilitator, plus assigned IT staff, develops a Strategic Technology Plan and its Report from that initial Business Model.

This plan is used to identify business areas that will benefit from using Internet and Intranet technologies. Data bases and business processes, hardware and software technologies needed by those business areas are identified in the plan. This is documented in a Strategic Technology Report for review by senior management, to identify priority business area projects. An example of a Strategic Technology Plan that can be read online or downloaded, as discussed later in "[Developing a Strategic Technology Plan](#)".

Systems for these priority areas can then be built rapidly using Internet / Intranet technologies, as discussed later in: "[The Internet and Intranets: The Status Today and Reality Tomorrow](#)". These systems, once built, can be changed easily - and fast. Thus as the enterprise changes to compete, its systems also change - so they can continue to provide the required enterprise support.

History is a harsh teacher, as has been said: "*those who ignore history are doomed to repeat it!*" But Microsoft will not emulate IBM and Digital; it will not lose its lead in this technology change.

In his Dec 7, 1995 Comdex address, Bill Gates announced to the world that Microsoft planned to embrace the Internet totally. To Product Managers within Microsoft he offered a simple choice: *"Change your projects to implement this direction, or plan now to disband them!"*

As a large company that is lead strongly by a hands-on visionary, Microsoft transformed itself in 12 short months to embrace the Internet and the Intranet. Together with its many large competitors, Netscape, Sun, Oracle and others, these companies are now focused firmly on delivering software products that will determine the future of businesses world-wide.

Entire industries will be transformed. The ability to interact instantly via the Internet, corporate Intranets - or by Extranets that connect an organisation to its customers and suppliers - will change the way in which business is carried out. History will look back on the coming changes over the next few years as a textbook example of how to capture market opportunities with new technology.

In spite of the recent Anti-Trust action against it, Microsoft will be a survivor in the Second Era of the Information Age and will continue to be one of the market leaders. By following the message in this paper, you too will be a survivor - and perhaps also a leader in your industry.

Developing a Strategic Technology Plan

- A Strategic Technology Plan is developed from an organization's Strategic Business Plan. Using the Mission, Goals, Objectives, KPIs (Key Performance Indicators), Strategies and Markets as catalysts, Senior Corporate Managers and Corporate Planners, the Chief Information Officer (CIO) and Chief Technology Officer (CTO) participate in a two day planning session lead by an external Facilitator.
- An initial high-level Business Model is developed by the Facilitator from the Strategic Business Plan, guided by business knowledge of the participants. The Business Model schematically represents the enterprise in terms of its major data subjects, business activities and processes, and the KPIs required by management to monitor achievement of the Strategic Plan.
- Following this two-day session with management, the Facilitator - working with IT staff assigned by the CIO or CTO - analyzes the Business Model. Software identifies Business Area subsets of business activities and processes that management identified for achievement of the Strategic Business Plan.
- Cross-functional processes are identified by software, that can be re-engineered to achieve competitive or efficiency advantages for the organization from the use of Internet and Intranet

Technology. This analysis takes one to two weeks and is the foundation of the Strategic Technology Plan. The Internet and Intranet opportunities identified in this analysis often suggest changes that management later may decide to incorporate in the Strategic Business Plan.

- In a further one to two weeks, the Strategic Technology Plan is documented as a Strategic Information Systems Plan (SISP) Report. This shows the business areas of major data subjects, activities and processes identified in the Strategic Technology Plan for re-engineering to utilise Internet and Intranet Technology. The data subjects deliver the information needed by management to achieve the Strategic Business Plan and are linked to the Goals, Objectives and KPIs that measure achievement; the activities and processes are linked to the Strategies that implement the business plan. The result is strong alignment of the Business Model (and resulting Internet and Intranet systems developed from it) with the Strategic Business Plan.
- Concurrently, the business areas, activities and processes to be re-engineered for the Internet and Intranet (identified from analysis of the Business Model as discussed above), are assessed for their technology requirements. This Preliminary Technology Assessment is an early estimate of Server Hardware, Software and Network costs, to be Quality Assured later by a more detailed Technology Performance Assessment. This technology cost estimate is one of the components of the SISP Report. The identified technology provides input to the development estimates, next.
- The development time and cost of Internet and Intranet systems to achieve the identified competitive or efficiency advantages in priority business areas are estimated. Data models that integrate with existing data bases and process models of cross-functional processes for the Internet and Intranet will later need to be defined. The data models and process models needed for priority business areas, and the DBMS, Client/Server and Internet/ Intranet development tools to be used, all form input to a Preliminary Development Assessment. This development cost estimate is another component of the SISP Report.
- The development of a Strategic Technology Plan and SISP Report takes a total of three to four weeks, assuming full-time involvement of a Facilitator and IT staff assigned by the CIO or CTO.
- An example of a Strategic Technology Plan and SISP Report developed recently for a South Korean Bank can be read online in English, or downloaded as a Word file for offline reference. The [News Article](#) describing the project, and the [Strategic Information Systems Plan Report](#) are available from the Project Planner page of the IES web site at <http://www.ies.aust.com/~ieinfo/projects.htm>.
- A Facilitator to develop a Strategic Technology Plan and SISP

Report for your organization can be arranged by Information Engineering Services Pty Ltd - see [More Information](#) below.

The Internet and Intranets: The Status Today and Reality Tomorrow

- Web browsers are now available for all platforms and operating systems, based on an open architecture interface using HyperText Markup Language (HTML). A key factor influencing future computing technologies will be this open architecture environment.
- The Web browser market will be largely shared between Microsoft and Netscape. But the strategy adopted by Microsoft has seen it rapidly gain market share at the expense of Netscape: it will use its desktop ownership to embed its browser technology (Internet Explorer) as an integral and free component of Windows NT and Windows 98.
- The Internet is based on TCP/IP communications protocol and Domain Naming System (DNS). Microsoft, Novell and other network vendors recognise that TCP/IP and DNS are the network standards for the Internet and Intranets. This open architecture network environment benefits all end-users.
- The battle to become THE Internet language - between Java (from Sun) and ActiveX (from Microsoft) will likely be won by neither. Browsers now support *both* languages, and will automatically download from Web servers, as needed, code in either language (as "applets") for execution. Instead, the winners of this battle will again be the end-users, who will benefit from the open architecture execution environment.
- Data Base Management System (DBMS) vendors (those that plan to survive) will all support dynamic generation of HTML for browsers, with transparent access to the Internet and Intranets by applications using these tools. They will accept HTML input direct from Web forms, process the relevant queries and generate dynamic HTML Web pages to present the requested output. DBMS products with this capability include: Microsoft SQL Server, IBM DB2, Oracle, Sybase, CA-OpenIngres and Informix.
- Client/Server vendors (again those that plan to survive) will also provide dynamic generation of HTML for browsers that will be used as clients, with transparent access to the Internet and Intranets for applications built with those tools. Client code, written in ActiveX or Java, will both be supported and downloaded as needed for execution, and for generation of dynamic HTML output to display transaction results. Products include: Microsoft Visual Basic 5.0, Visual J++, Access 97;

Powersoft Optima++ and Powerbuilder; Centura and SQLWindows; and Borland Latte, Delphi and C++.

- Data Warehouse and Data Mining products will provide a similar capability: accepting HTML input and generating HTML output if they are to be used effectively via the Intranet and Internet. And also Screen Scraper tools that provide GUI interfaces for Legacy Systems will become internet-aware: accepting 3270 data streams and dynamically translating them to, or from, HTML to display on the screen. Thus they will provide a transparent HTML interface for easy migration of 3270 mainframe Legacy Systems to the Internet and Intranets.

The Author

Clive Finkelstein is Chief Scientist of Visible Systems Corporation in the USA, and Managing Director of Information Engineering Services Pty Ltd and of Visible Systems Australia Pty Ltd in Perth WA Australia. Acknowledged world-wide as the "Father" of Information Engineering - developed by him from 1976 to bridge from strategic plans to systems that support those plans, he and his companies provide consulting and education services to help organizations survive in the future.

These services include: Strategic Business Planning; Strategic Technology Planning; Strategic Information Systems Planning; Business Process Reengineering; Internet and Intranet Technology Selection; Data Warehousing, EIS, DSS and OLAP; and Object-Oriented Development. The services use business-driven methods and I-CASE tools as needed, for Forward Engineering, Business Re-Engineering and Reverse Engineering.

See his latest book:

“Enterprise Architecture for Integration: Rapid Delivery Methods and Technologies”, by Clive Finkelstein, Artech House, Norwood MA (March 2006)

- [Read Book Review](#)

More Information

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