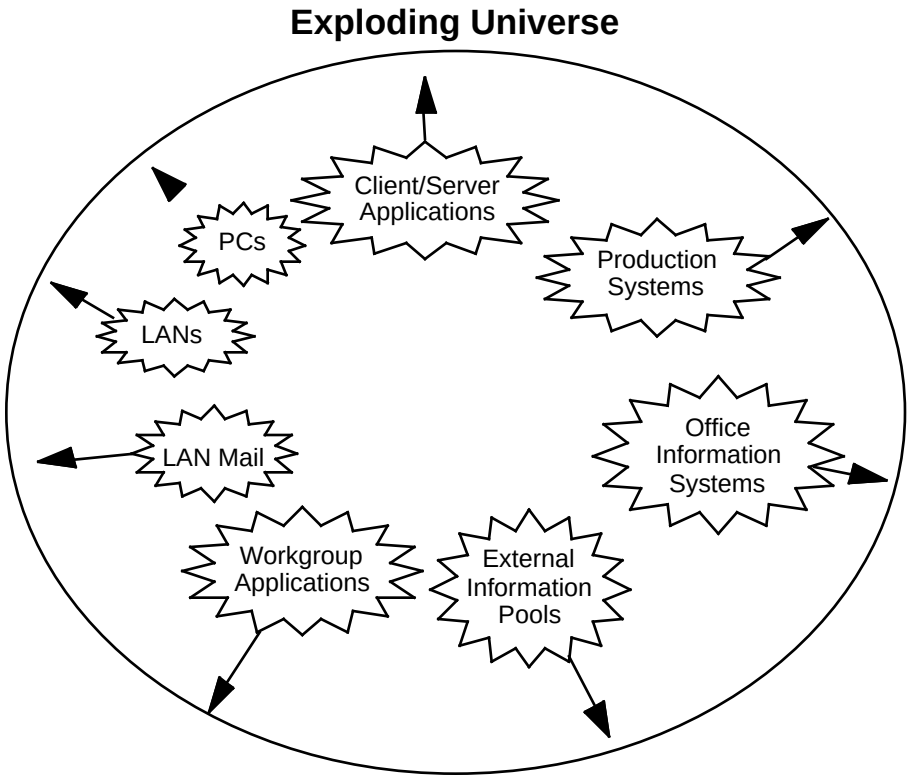
Workgroup systems key trends, 1995-2000.

Reader Notes



New Architecture, Tools and Management Model to Rein In Chaos

Source: Gartner Group

The typical IS environment continues to fragment as system classes and information types and sources proliferate. Add profligate PCs, LAN E-mail, workgroup applications and groupware, and the picture often seems out of control. An architectural model is emerging, backed by major vendor investments, that will rein in this seemingly endless fragmentation. Welcome to Gartner Group's Workgroup Systems Model. As it emerges, it promises to integrate the "anytime, anywhere" information sources of the Internet and various information providers. It will reshape client/server implementation plans, proliferate groupware properties and out-mode many popular workgroup applications. Giving IS organizations a chance to consolidate and recentralize certain functions, it will provide end users with more freedom to exploit an emerging class of workgroup-systems-based applications ("Ready-to-Ware"), as well as an opportunity to create new applications using wizards, agents and other almost-code-free, rapid development methods.

This presentation explores the Gartner Group Workgroup Systems Model, its real-world implications, the technology and architecture, key vendors, and the practical steps to take to exploit this new domain.

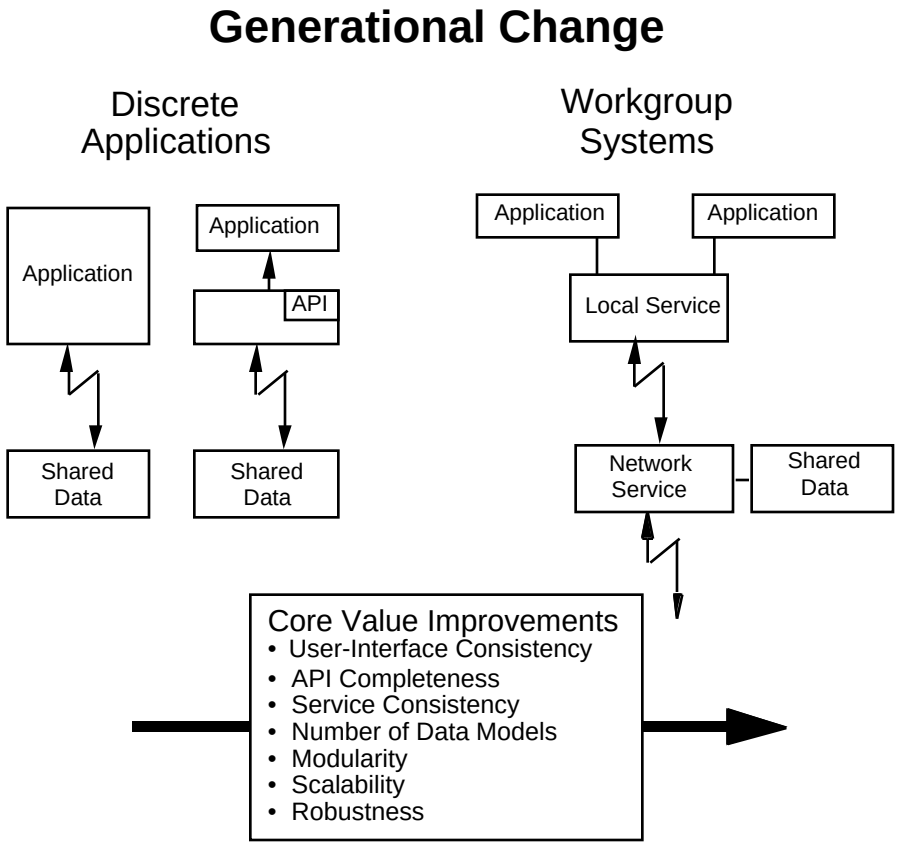
1. **What is the real-world impact of workgroup systems?**
2. **Will workgroup systems fit into an organization's overall technology strategy?**
3. **How will the costs, risks and rewards of vendors' workgroup system strategies change through 2000?**
4. **When and how will workgroup systems be deployed?**

Besides exposing this new model, we will explore the fundamental question of what key planning assumptions will be disrupted as the market moves toward workgroup systems.

That question implies four other questions as listed above. On the real-world impact of workgroup systems, we will look at how workgroup systems will change both the industry and the ways that users acquire applications, as well as its impact on cost of ownership and the new, more flexible ways applications will be designed. On integrating workgroup systems into an overall technology strategy, workgroup systems will result in a rewrite of many client/server applications, and it will displace today's OIS and LAN E-mail. It also will tie-in external information pools and streams. On vendor strategies, we will segment vendors into different classes based on their core focus, so users can answer the question of whom to trust based on what they need vs. who is No. 1 in a particular category. We also will compare vendors based on key strengths and weaknesses, and look in detail at the leading indicator and vendor in the domain. Finally, on the question of "What to do next?" we will go through the key decisions users should be making, and illustrate them with practical examples.

What is the real-world impact of workgroup systems?

Reader Notes



Source: Gartner Group

Workgroup computing is a generic category that includes applications, systems and other components. **Workgroup systems** is an architectural model based on client/server technology. Beneath the simplicity of the diagramed model lie major operational advantages, sweeping changes in the software industry and potentially new IS management strategies.

Architectural Pollution: The bulk of workgroup applications are discrete, separate products built on LAN-based file or database sharing. They implement their unique user interfaces (raising end-user support costs). Where they present an API, there is no consistency across APIs. Often, they duplicate facilities found in other applications; for example, most LAN calendaring and scheduling packages maintain their own user directory, forcing organizations to resort to intermittent cross-product directory synchronization. They also ship their own (often closed) database engines, substantially reducing the usability of data stored within them. **Architectural Resolution:** Workgroup systems represent the systematization of a set of commonly required services (APIs) so that workgroup applications no longer have to build their own. The implications of a clean cleavage between common services and application logic are profound.

Reader Notes

By 1998, discrete workgroup applications will shrink from 90 percent to 30 percent of the workgroup computing market, while workgroup systems will grow from 10 percent to 70 percent (0.6 probability).

Product Categories at Serious Risk

(Shared-File Variants Only)

1. Third-party LAN mail products
2. File-sharing tools
3. Shared personal information managers
4. Group information managers
5. Contact managers
6. Discussion databases
7. Group decision support (meetingware)
8. Calendaring — scheduling
9. Shared file document managers

By 1998, all workgroup applications that do not support the emerging workgroup network services standards will be at serious risk.

Key Issue: What is the real-world impact of workgroup systems?

In the software industry, users should expect a major consolidation in many product categories such as those listed above.

Consolidation: Discrete, self-contained workgroup applications will move from the emerging to declining phases very quickly, compressing in half the typical seven- to 10-year cycle. Those workgroup application vendors will be forced to adapt to the model and make major innovations — or withdraw from the segment.

This has significant implications for short- to medium-term workgroup application investment plans. The list above is ordered based on risk, with No. 1 being the highest risk. All LAN shared-file products in the product categories will be in serious risk by the end of 1997, and some (notably the first six) are likely to show signs of suffering from the market's move toward workgroup systems in 1996.

In 1998, the profile of products at risk will expand to all workgroup applications that do not conform to the workgroup systems model and support the de facto services standards.

Reader Notes

By 1998, Ready-to-Ware workgroup templates, not objects, will be recognized as the first large-scale instance of the technology-based reuse of expertise by end users (0.7 probability).

Ready-to-Ware Workgroup Applications

- Solution-based, not technology-focused
- Require “quick-and-dirty” tailoring to fit
- Sell departmental workgroup systems
- Attract legions of VARs
- Many traditional workgroup applications
  - Sales lead management
  - Marketing encyclopedia
  - Online catalogs
  - Correspondence tracking
  - Expense reporting

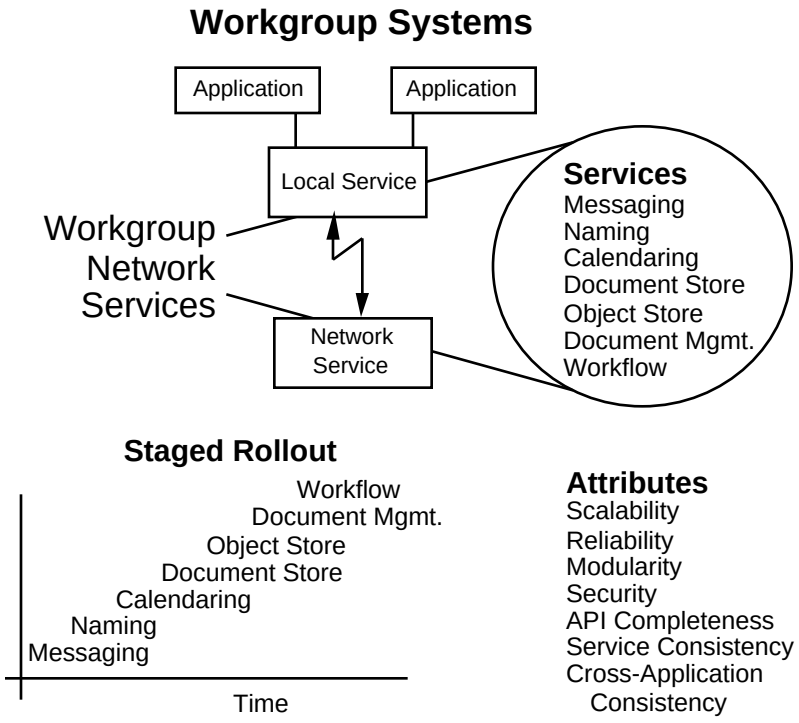
Key Issue: What is the real-world impact of workgroup systems?

While the industry will see a contraction in a number of categories, end users, workgroups and department managers will see an explosion of preformed solutions at dramatically reduced price points.

A high-level category that will explode is Ready-to-Ware workgroup applications. Ready-to-Ware is analogous, for example, to Lotus shipping templates with its Notes product. Historically, sample applications shipped with tools usually to show off the features of the tool. Ready-to-Ware workgroup applications show the work that can be done and the problems that can be solved with the workgroup system on which they are built. Users and departmental managers are excited about the applications because they approximate many of their (unfulfilled) requirements. These applications likely will need some tailoring before being used and will exploit workgroup network services. Ready-to-Ware workgroup applications differ from traditional workgroup applications in that while Ready-to-Ware will be useful, they often will have insufficient content to be commercially viable as stand-alone products.

Reader Notes

Workgroup network services can cut administrative, user support and service delivery costs an average of 40 percent by the second year of operation (0.6 probability).



Source: Gartner Group

Key Issue: What is the real-world impact of workgroup systems?

Because they are built on a distributed logic client/server model, workgroup network services are, in theory: much more scalable, reducing the number of servers that have to be managed; more reliable, reducing the likelihood of service outages; more modular, allowing for easier setup, management, troubleshooting and maintenance; more secure, reducing outages due to inadvertent or deliberate tampering and corruption; and better integrated across multiple applications, increasing application integration and reducing end-user training and support costs.

These advantages translate directly to a lower TCO when compared to predecessor applications of like functionality based on LAN file sharing.

These advantages depend on the quality and maturity of the workgroup network service installed. The conclusions are based, in part, on user experiences when migrating from LAN E-mail to client/server messaging systems. Two factors that will erode some of the savings are the addition of workgroup applications (e.g., Ready-to-Ware) and increased usage.

Reader Notes

Groupware design principles will be a key part of 75 percent of applications developed in 1998 (0.7 probability).

Groupware Is About People

Contrast

Information Technology

Finitely deterministic

- Defined processes
- Structured data

vs.

People

Add nondeterministic value

- Recognize
- Consider, analyze
- Prioritize, decide
- Discuss, agree
- Create insights

Work With

- People
- Nonstructured objects, patterns and relationships

Academic Model

Subject

- People

Verbs

- Facilitate (ease)
- Augment (improve nature or quality)
- Mediate (hide differences in place, time or expression)

Object

- Interactions, shared activities (meetings, projects and common objectives)
- Individuals, physical or virtual teams and anonymous collections

Groupware supports nonstructured, nondeterministic people processes, and the objects with which they commonly work.

Source: Gartner Group

Key Issue: What is the real-world impact of workgroup systems?

Workgroup systems is an architectural model. Groupware is a set of design principles that are architecture-independent. At the core of groupware's design principles is the notion that IS can add value to the ad hoc people processes it cannot automate. Abstractions such as discussion databases, the Internet, meeting-support tools, ad hoc routing and other collaboration, navigation and sharing tools are designed to support the ways people interact with each other and with information. By 2000, groupware features and services will be available everywhere.

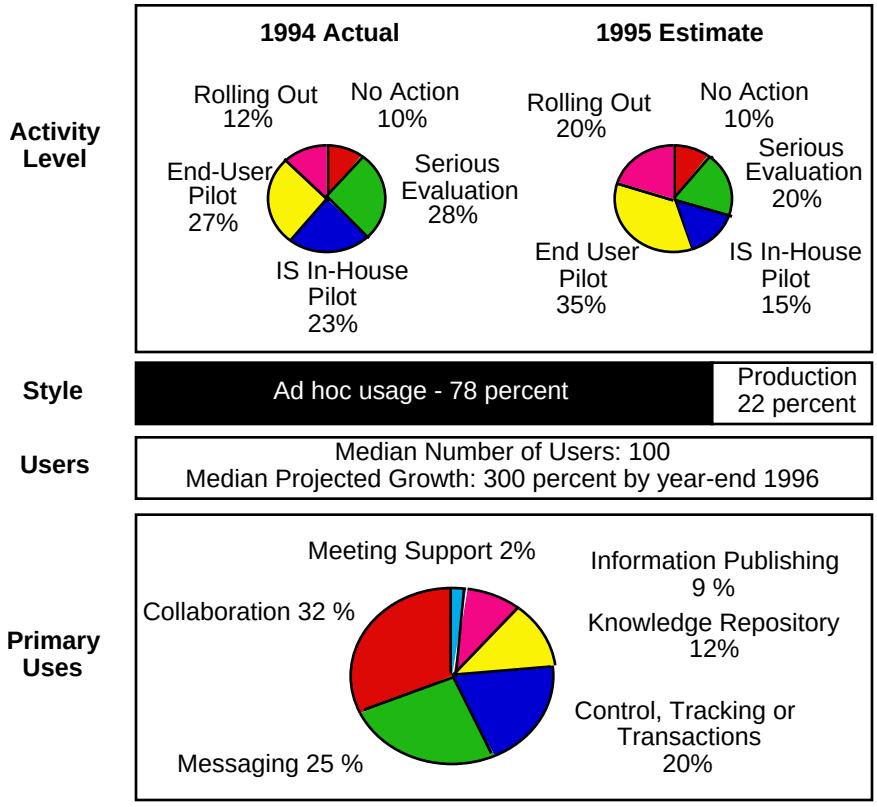
Consider the following continuum: **Groupware focuses on people-driven processes. Production systems focus on process-driven people.** The workgroup systems architectural model effectively supports both ends of the continuum and all the gradations in between.

Groupware design principles implemented through the workgroup systems architectural model will provide the most persistent ROI. **Groupware abstractions substantially increase application flexibility, independent of whether the application is groupware-like.**

By 2000, 50 million corporate users will exploit groupware as a native part of their computing environment (0.7 probability).

Reader Notes

Groupware Usage



Source: Gartner Group

Key Issue: What is the real-world impact of workgroup systems?

Gartner Group survey data indicates groupware deployment is very broad in investments (in 70 percent of enterprises) but relatively shallow in implementations (typically 100 users) with significant installed base growth projected through 1996. The most promising data point is the relative preponderance of ad hoc usage. The one producing the greatest concern is users' projections that other users are more production-oriented in their current and planned groupware use. We believe this reflects IS organizations' fundamental bias to see the world through production-oriented glasses, not a realistic understanding of the ways in which ad hoc, collaborative and information-sharing systems will help the enterprise meet its overall objectives. The major growth in groupware utilization will not come from incremental roll-outs of existing technology. Once enterprises implement standards-based, workgroup-network-services-based messaging. Groupware will be latent on every desktop. As users and ISVs explore the opportunity, groupware will do for document-centric applications what the spreadsheet did for numeric calculations. (See the recent OIS Strategic Analysis Report entitled *The Reality of Groupware Deployment* for more groupware usage data and analysis.)

Will workgroup systems fit into an organization's overall technology strategy?

Reader Notes

Today's Reality

- Production and TP systems
- Legacy office automation
- Shared-file mail
- Local workgroup applications
- New client/server applications
- Groupware

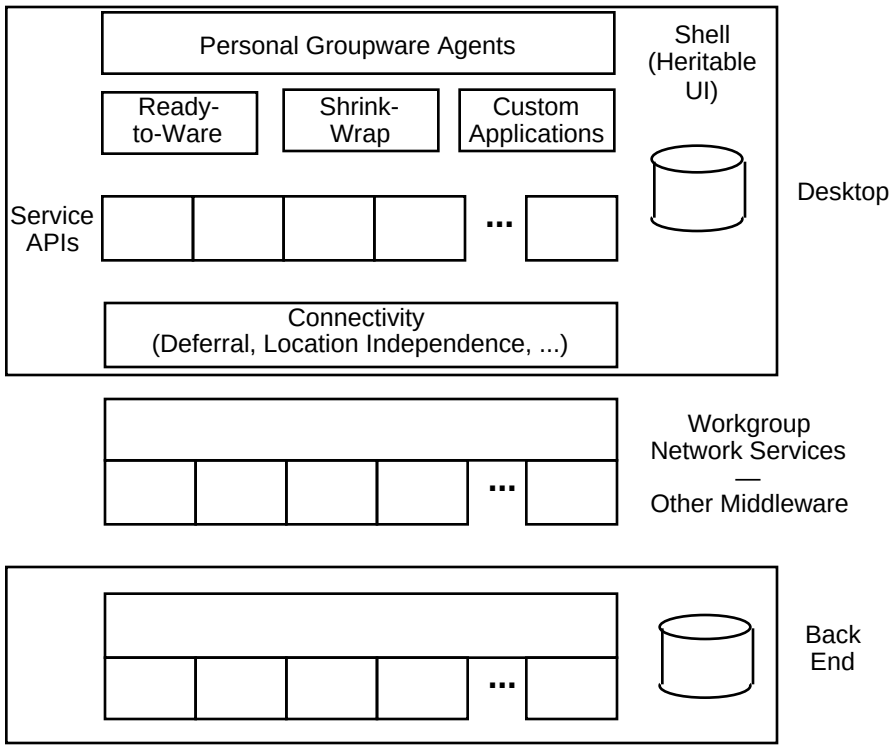
Reality for most organizations is a collection of incompatible systems. Legacy office automation may have run on the same systems hosting production applications, but they typically operated as totally separate domains. Departments and end users dragged in technologies — local workgroup applications such as ECCO Professional, ACT!, OnTime for NetWare and Paradox — that all behave as independentsystems, having little in common with similar applications. Client/server applications designed to deal with data are in an entirely separate world from document-centric groupware technologies such as Lotus Notes.

In this section, we examine how workgroup systems not only fit in with these disparate technologies, but how they can serve to better integrate some, and replace others, to simplify the overall environment, reduce TCO and increase flexibility.

Reader Notes

Eighty percent of custom client/server applications will be rewritten by 2000 to exploit the workgroup systems' UI (0.7 probability).

Unification Model



Source: Gartner Group

Key Issue: Will workgroup systems fit into an organization's overall technology strategy?

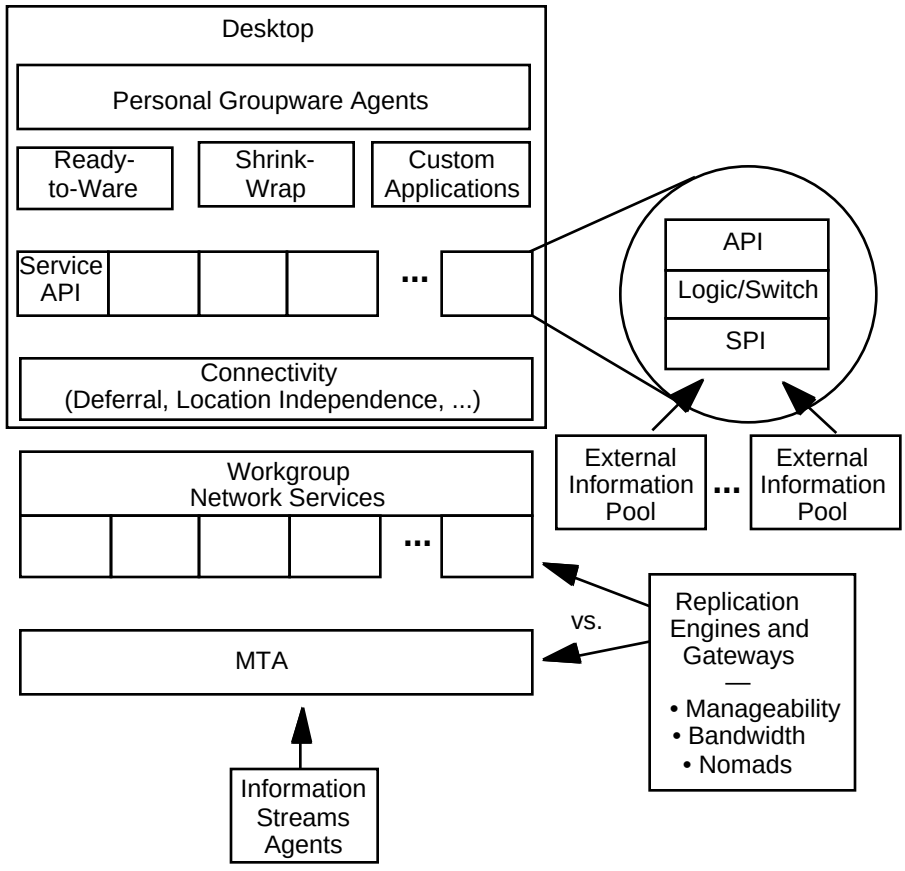
Organizations face the massive impact of end-user support and training on TCO, the need to improve worker productivity and effectiveness and the reality of multiple user interfaces on disparate applications. What is the right strategy for making it all fit together better?

There are three viable alternatives: unification at the back end, unifying middleware or unification at the desktop. None of these three, even taken together, will address the need 100 percent. **The highest-yield alternative will be found on the desktop, which makes selecting a unifying UI at that level paramount.**

Desktop-level service APIs are rapidly being standardized, providing user and departmental freedom of choice in each application component area, and user functionality that would be inappropriate to duplicate in custom applications.

Reader Notes

By 1998, 70 percent of the nonlocal information presented through Windows InfoCenter-like applications will be delivered via the MAPI SPI (0.7 probability).



Source: Gartner Group

Key Issue: Will workgroup systems fit into an organization's overall technology strategy?

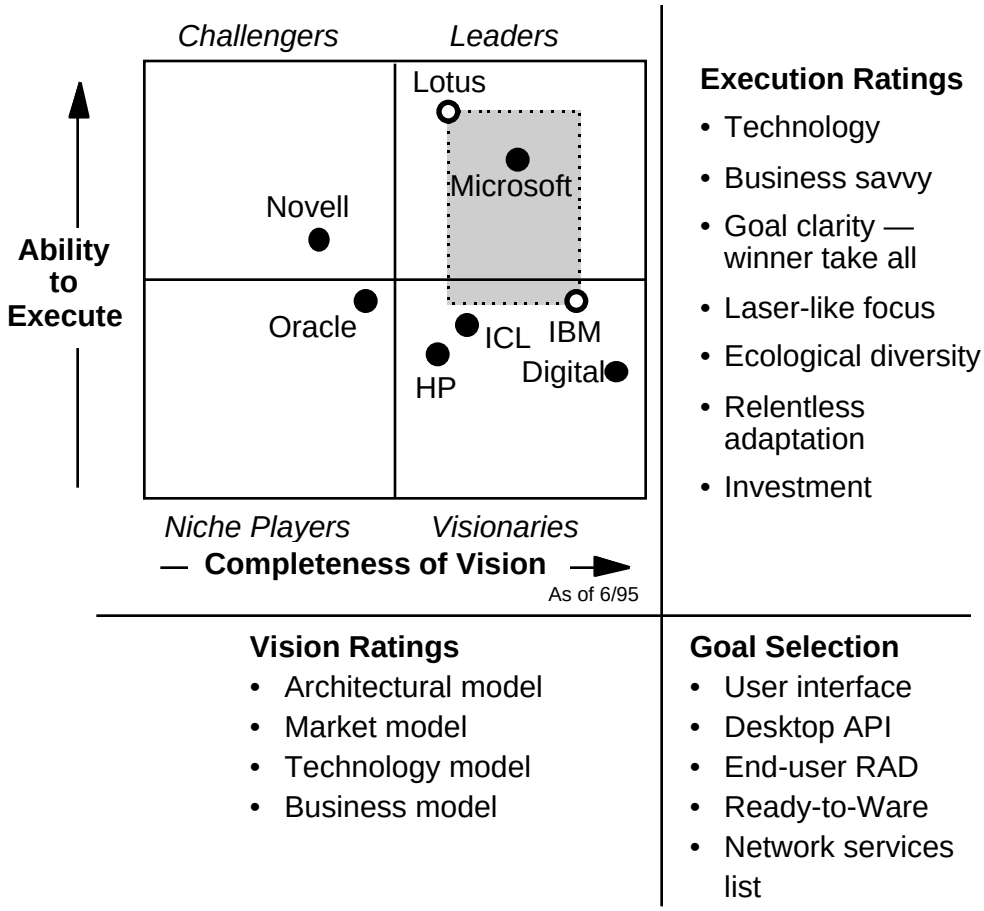
In the workgroup systems model, external information can enter the system at one of three locations: at (or via) the desktop, at the workgroup network services (middleware) layer or via a back-end process.

External information pools will be browsed interactively and fed from Windows desktops, provided there is a MAPI SPI to the information source. Microsoft has won the desktop API battle for MAPI with all major workgroup systems players committed to supporting MAPI for messaging. In addition, we expect all workgroup systems to support Extended MAPI (MAPI 1.0) in products shipping before the end of 1996 (0.7 probability). **What remains for organizations to do is either ensure they have access to MAPI SPI support for all relevant information pools external to the workgroup system, or seek out an interpool replication engine (middleware or MTA layers).**

Information stream agents (e.g., NewsEdge and Hoover) generally use messaging to move information into the workgroup system.

How will the costs, risks and rewards of vendors' workgroup system strategies change through 2000?

Reader Notes



Source: Gartner Group

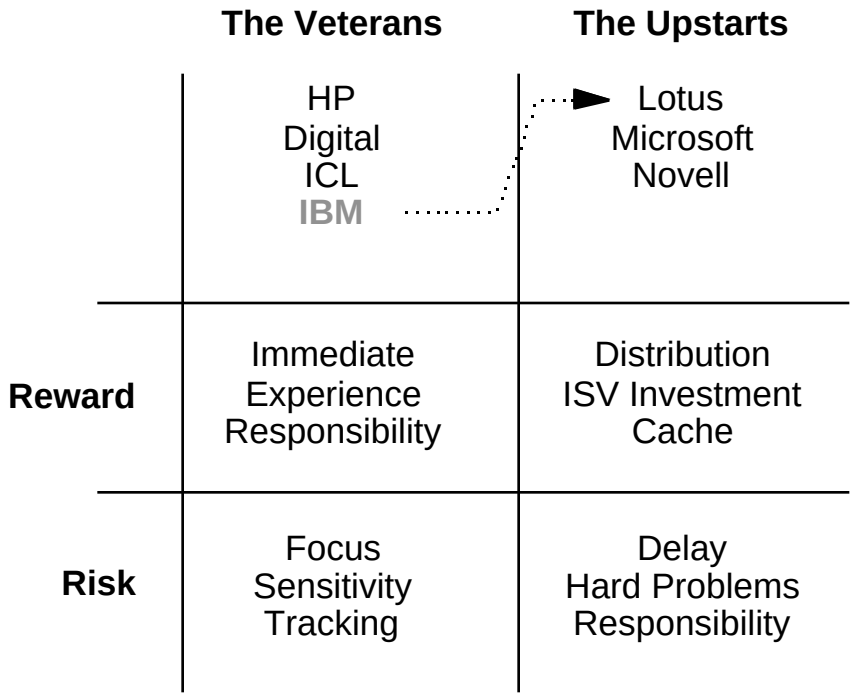
Users need to factor two additional dimensions into their planning: what type vendor best meets their needs (the market leader may not be the best match) and what is the scope of their requirements? The figure above is specific to enterprisewide workgroup systems vendors.

Industry Black Hole: The firms in the lower half of the figure are more solution-oriented than those in the top half. They also have much more experience with enterprise-class and legacy systems. The firms in the upper half of the figure have neither the skills, staffing nor business models to take on the complex enterprise-scale systems. However, they have massive market presence, particularly in the entry-level workgroup systems segment. Firms in the lower-half generally lack the experience, structure, courage and confidence to compete for the entry-level workgroup systems that almost inevitably grow into larger implementations. Firms in the upper-half are leaving it to IS organizations and their contractors to deal with the thorny issues of systems integration. *Among other things, IBM's acquisition of Lotus represents the intersect of a well respected global scale systems integration capability, selected robust (enterprise class) middleware (e.g., MQSeries) and leadership workgroup systems technology.* If IBM/Lotus execute appropriately, they have the ability to reshape this segment of the industry.

Reader Notes

The first pervasive workgroup network service installed by 2000 will be client/server messaging (0.8 probability). The vendors that lead in messaging (mid-1997) will be the long-term leaders in workgroup systems (0.7 probability).

Workgroup Network Messaging Services



Source: Gartner Group

Key Issue: How will the costs, risks and rewards of vendors' workgroup system strategies change through 2000?

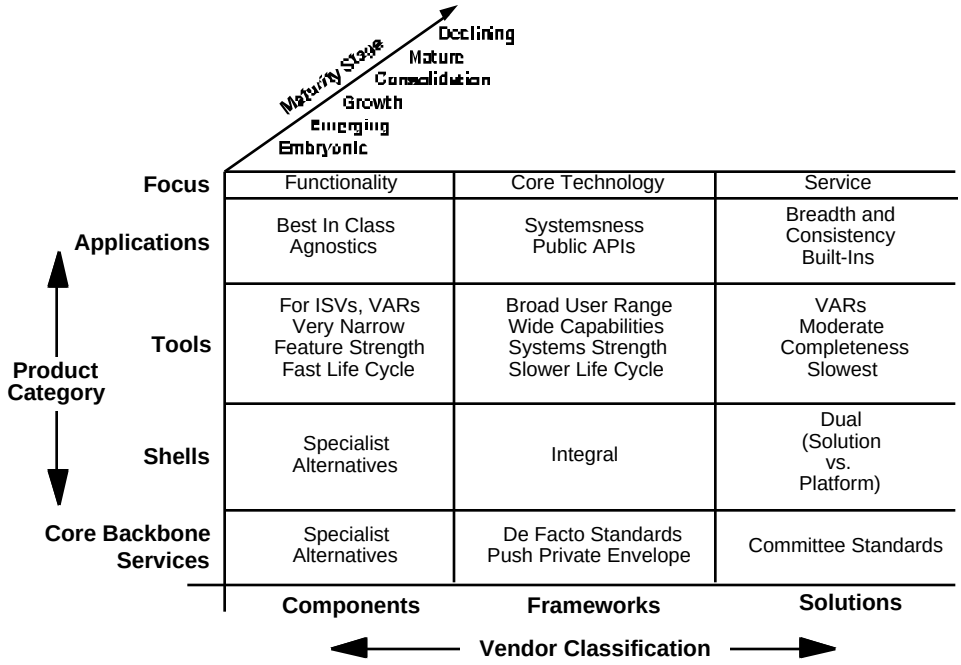
The fundamental trade-offs in selecting a messaging services vendor are immediate gratification vs. a market-derived mantle of superior ability to execute; and fear that solution providers will withdraw from the segment vs. a legitimate concern that upstarts will take far longer than they will admit to copy the veterans' expertise.

Organizations need to isolate their workgroup systems strategy for their specific messaging services vendor's implementation by selecting standards and enforcing them on vendors and user organizations alike. Key areas for standards-based isolation include the MTA. SMTP/ MIME and X.400 are both viable ways to isolate the messaging engine on the MTA side. At the desktop, MAPI has won the war. At risk for any vendor other than Microsoft is the issue of synchronizing MAPI support with Microsoft's specification. MAPI is more than messaging.

Reader Notes

Workgroup framework vendors will control 80 percent of the workgroup market by 1998 (0.6 probability).

Workgroup Product Universe



Whom You Trust Depends on What You Need

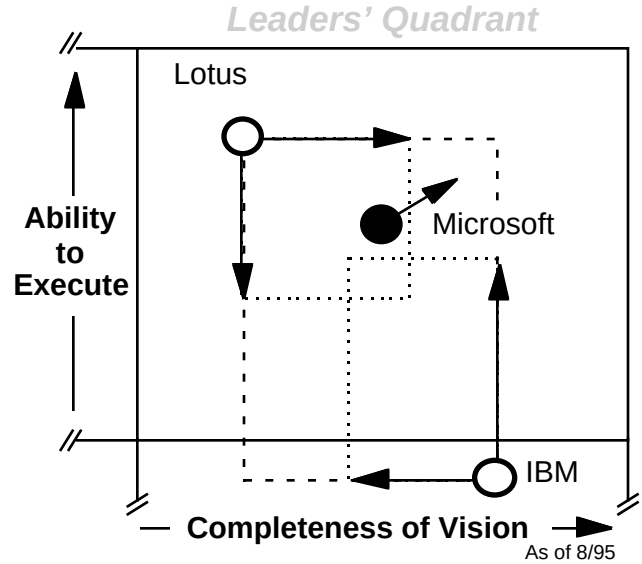
Source: Gartner Group

Key Issue: How will the costs, risks and rewards of vendors' workgroup system strategies change through 2000?

The breadth of **solutions** (e.g., ICL's TeamWARE) attracts IS shops with strong control over all internal technology and clearly specified requirements. They relinquish some flexibility, modularity and leading-edge features but gain well-defined, broadly capable systems. Vendors with the best channel and customer targeting will lead the class. A **components** approach (e.g., Action Technologies) appeals to firms with the resources needed for technical self-sufficiency and the temperament for relatively high rates of vendor churn. In return, they get the highest functionality. Vendor success in this class requires maintaining best-in-class position. **Frameworks,** a middleground, ideally can be almost as painless as complete solutions but provide more freedom (i.e., choices between framework vendors' vs. best-of-class components). Market share rules this vendor class. Aggressive (Type A) firms tend toward the component approach; pragmatic (Type B) ones tend toward frameworks, and conservative (Type C) firms, with their view of IS as a decade(s)-long capital investment, are more prone to bet on complete-solution vendors. Organizations also differ based on industry classification and organizational style.

Reader Notes

By end-1998, Microsoft and IBM/Lotus' Workgroup Network Services market shares virtually will be tied for first place (i.e., they will vary by less than 10 share points, 0.7 probability.)



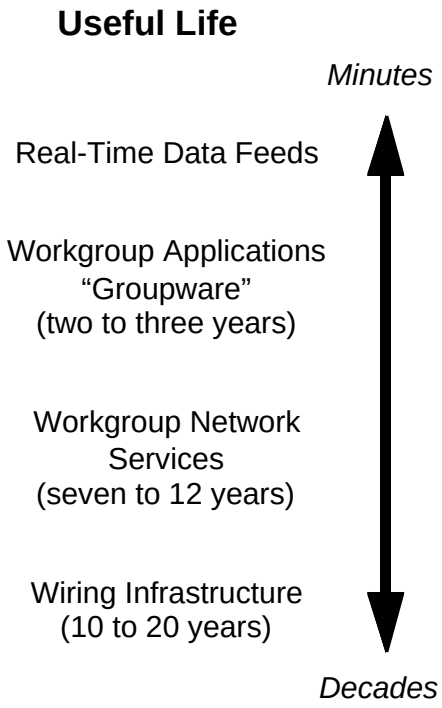
IBM/Lotus	Microsoft
• Strengths	• Strengths
– Heterogeneity	– Windows-NT focus
– Nomadic computing	– Clean sheet design
– VARs	– ISVs
– Enterprise SI	– Pervasive distribution
• Critical challenges	• Critical challenges
– Universal shell	– Heterogeneity
– Middleware differentiation	– Business model

Source: Gartner Group

Key Issue: How will the costs, risks and rewards of vendors' workgroup system strategies change through 2000?

Microsoft will not be a player where client or server cross-platform support is needed, a key Lotus competitive advantage IBM strongly endorses. For quality nomadic support, Lotus has at least a two-year lead vs. Microsoft. Microsoft will have great difficulty in closing that lead. Microsoft's narrow platform coverage and clean sheet design may produce major strategic advantages in cutting administrative costs and evolving toward a distributed object storage model. Lotus' Ready-to-Ware application advantage is likely to disappear in less than two years as Exchange client and MAPI ubiquity attract large numbers of ISVs and start-ups to build the workgroup applications that will be sorely lacking when Exchange version 1 ships in 1Q96 (0.8 probability). In 1Q96, Notes V.4 will provide the first real Notes integrated development environment (0.7 probability); we speculate Notes V.4.1 will support RDBMs usage as an adjunct to (or replacement for) NSF data structures. IBM's SI capabilities will provide a major boost for Lotus in selected (major) market segments but also may drive some Notes partners closer to Microsoft. Internet co-option and fragmentation present a major opportunity to disrupt the overall playing field.

When and how will workgroup systems be deployed?



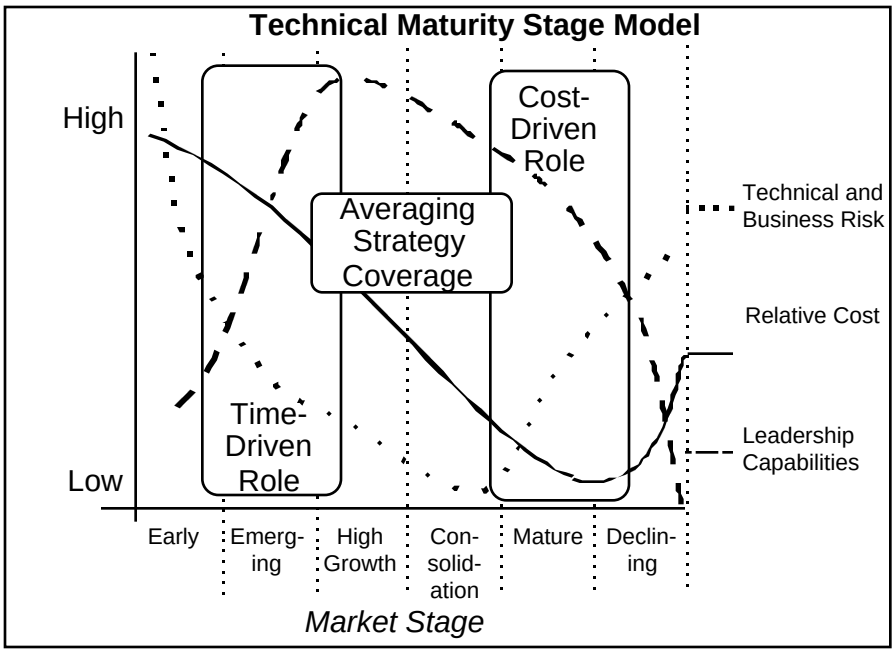
Source: Gartner Group

It is easy to fail by being long on vision and short on execution. Here we look at some of the practical aspects of exploiting the workgroup systems model.

For most organizations, universal, immediate deployment of each new technology will turn out to be exactly the wrong prescription. Life cycle planning — which pieces to deploy, where and when — is critically important. Thus, planning practices must include assumptions that cover not only the point when a particular workgroup software element will be ready but also when it will be obsolete.

Reader Notes

Time-driven units in 80 percent of organizations will circumvent IS organization attempts to institute universal workgroup technology plans (0.7 probability).



Action

- Common workgroup network services
- Different degrees of freedom by organizational unit

Source: Gartner Group

Key Issue: When and how will workgroup systems be deployed?

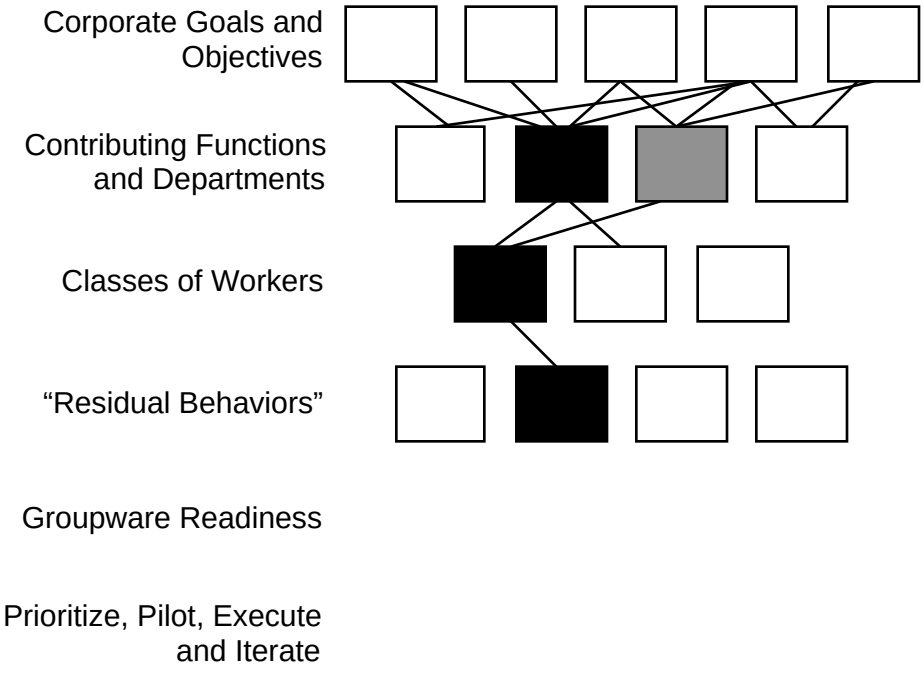
If the average U.S. family has 2.3 children, and there are 53 million family units, how many of these units are average and contain 0.3 of a child? Similarly, divisions, departments and functions within a single entity often have different needs. An organizational unit can be classified into one of two categories: cost-driven (i.e., they derive competitive advantage from focusing on the absolute lowest cost of production, and wring out maximum long-term returns from large costs in plant, property, equipment and other assets); or time-driven (i.e., they focus on establishing fleeting competitive advantages despite the inexorable treadmill of rapid innovation). Every function and department within an enterprise is either time-driven or cost-driven. At an aggregate level, enterprises are both. To be politically and operationally pragmatic, IS confuses aggregate vs. average (i.e., it develops a middle-of-the-road universal systems strategy that fails optimally to meet the needs of either the time-driven or cost-driven elements). Cost vs. time should be a primary determinant of the IS spending mix for mature vs. emerging technologies. **Core Recommendation:** The right strategy is two separate, unequal (but interoperating) strategies, one for time-driven functions and one for cost-driven functions.

Reader Notes

Through 2000, 60 percent of production-oriented, development-intensive internal groupware projects will fail to meet their ROI objectives (0.7 probability).

Exploiting Groupware Design Properties

Selective Deployment Steps



Source: Gartner Group

Key Issue: When and how will workgroup systems be deployed?

Groupware functionality, the hallmark of dozens of LAN-based applications and a few client/server applications, will be pervasive in workgroup systems before the end of the decade. Exploitation should begin as soon as a workgroup network services strategy is in place. Exploiting groupware can be tactical (e.g., soft-copy publishing applications to cut printing costs) or strategic. The selective application deployment matrix focuses on strategic applications, and should play an important part in planning to exploit groupware.

When working with LOB and functional managers in the user divisions, departments or organizations, identify goals by department and discipline for each class of worker. The goals should be a form that pertains to groupware (i.e., "increase creative quality" or "win a higher percentage of bids" vs. "improve printer availability" or "reduce transaction processing delays"). Iteratively fine-tune the definition of the class of worker and the department or discipline's goal, while zeroing in on how off-the-shelf groupware technologies can be applied to accomplish the goal in the selected cell. Think globally. Act locally.

Workgroup Systems Leadership Scenario — 2000

	Opportunities	Threats	Probability
Internet	• Reshaping the proprietary world • Key infrastructure provider	• Co-option • Fragmentation • Diversity	0.15
Novell	• OEM and VAR channels • Network services	• LAN heritage • UI invisibility • Differentiation	0.20
IBM/Lotus	• 2:1 messaging share • Systems integration	• Shell penetration • Type reversion • Next steps of the newer IBM	0.30
Microsoft	• Homogeneous harmony • ISV and OEM channels	• Business model • Standardization • Low end	0.35

Source: Gartner Group