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THE COMPLETE MEETING ROOM™

Collaborative Work Environments

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PURPOSE.

Collaborative Work Environments has been developed to assist architects, interior designers and facility planners in determining the most effective use of office space in the next few years. Its conclusions are based on the research findings of many leading workplace thinkers and designers, who are quoted in the document.

OVERVIEW.

Now that the alternative office experimentation of the 1990s is behind us, we look ahead to identify the driving forces expected to determine the physical make-up of the workplace throughout the first decade of the 21st Century.

Several workplace trends are already apparent and will continue to influence interior office design:

- Organizational structures are flatter and less hierarchical, with more emphasis on team and group work to accomplish tasks. They are also more customer-focused and project-oriented.
- The workforce is more diverse in race and gender—and it's growing older. Perhaps even more significantly, temporary or contract workers are making up an increasingly larger percentage of the total office worker population.
- Information and communications technologies are more personal, collaborative and portable. They can now enable 'work from anywhere' business strategies.

While some organizations, in response to these meta trends, have implemented work at home and shared workstation programs to reduce real estate costs, the most significant results appear to have come from workspace redesign programs that better help people work together. In some cases, these programs have reduced the size of private offices or workstations to free up space for teamwork; in others, meeting and project rooms have been added to existing spaces and justified on the basis of increased organizational effectiveness.

Certainly, some aspects of teamwork and collaboration can be accomplished by using the Internet, the telephone or other telecommunications technologies, but future organizations will continue to rely on face-to-face and shoulder-to-shoulder communications to get the job done. In fact, one leading futurist has said the often described office of the future may more resemble a conference

center than a traditional office because of the great need to support working together activity.

However, people will still need a place to do their private, concentrated tasks, even in this age of teamwork. In fact, the most often mentioned deficiency of current office environments, according to the workers themselves in the BOSTI 2000 study, is the lack of acoustic privacy to support distraction-free solo work. Even in team-based organizations, individual work still consumes a majority of the average worker's time spent in the office.

Overall, the need to support undistracted individual and group work activities is the most often cited workspace drawback. The more acoustically enclosed a given workstation or group work area, the higher the degree of performance and satisfaction reported by workers.

Ironically, the organizational development trends toward open organizations and open communications have been confused with the emphasis on open plan workspace design over the past 25 years. According to BOSTI, "Open offices do not an open organization make...in fact, open offices often impede the open communication necessary to achieve organizational openness." The growing movement toward open organizations should actually be accompanied by a movement away from the outmoded open plan concepts and toward more enclosure for both individual and group work activities.

We refer to this approach as room-based workspace planning, and it is the basis for this research review. Much has already been written about individual workspace design, so the focus of this publication is to define and describe collaborative workspaces. At least four distinct types of workspaces comprise the overall category, each with key subtypes:

- **MEETING SPACES:** small and large meeting rooms, breakout rooms, conference rooms, board rooms, customer presentation rooms and teleconference rooms.
- **LEARNING SPACES:** management seminar rooms, employee training rooms and computer training rooms.
- **TEAMING SPACES:** permanent or temporary team rooms, project rooms and workgroup offices.

- **AD HOC SPACES:** physical support for informal interactions in non-traditional workspaces, like alcoves, stairwells, cafeterias and hallways.

Often, several of the above room functions are integrated, using flexible furniture, to create multi-purpose rooms that can be easily reconfigured by occupants for the appropriate work application.

This decade will be characterized by the great organizational need to facilitate teamwork and collaboration by a largely professional workforce made up of employees, temporary or contract workers, outside consultants and service providers. Office interior planners and designers will be challenged to create a new generation of workspaces to support these organizational goals.

AUTHOR and EDITOR.

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SPONSORSHIP.

The development of this white paper has been underwritten by Nevers Industries (Minneapolis, MN), a manufacturer of complete room furnishings for places where people work together, in meeting, conferencing, learning, teaming and collaboration activities.

DEDICATION.

This publication is dedicated to the memory of Mike Brill, the Founder and President of BOSTI Associates, who passed away in 2002. We can honor his life by listening carefully to what he had to say and designing future workspaces that support his organization's research findings.

RELEVANT THINKING AND RESEARCH

THE NEXT SOCIETY.

What will corporations and other large organizations be like in the near future?

"In the developed countries, the dominant factor in the next society will be something to which most people are only just beginning to pay attention: the rapid growth in the older population and the rapid shrinking of the younger generation."

"What has not yet sunk in is that a growing number of older people—say those over 50—will not keep on working as traditional full-time, nine-to-five employees, but will participate in the labor force in many new and different ways: as temporaries, as part-timers, as consultants, on special assignments and so on."

"Within the next 20 or 25 years, however, perhaps as many as half the people who work for an organization will not be employed by it, certainly not on a full-time basis."

"The next society will be a knowledge society. Knowledge will be its key resource, and knowledge workers will be the dominant group in the workforce... Knowledge workers see themselves as equal to those who retain their services, as professionals rather than employees. The knowledge society is a society of seniors and juniors rather than of bosses and subordinates."

"Knowledge rapidly becomes obsolete, and knowledge workers regularly have to go back to school. Continuing education of already highly educated adults will therefore become a big growth area in the next society."

"Knowledge workers are highly mobile within their specialization. They think nothing of moving from one company to another as long as they stay within the same field of knowledge. They may have an attachment to an organization and feel comfortable with it, but their primary allegiance is likely to be their specialized branch of knowledge...In sharp contrast to yesterday's workers, to whom a job was first of all a living, most knowledge workers see their job as a life."

Peter Drucker excerpts from "The Next Society"

THE CHANGING WORK FORCE.

Summary of New Workstyles, Including Evolution of Contract Workers

"Originally, the changing nature of the work force was quantified in terms of three factors: race, gender and age. A growing awareness of these factors now reveals other parameters of diversity, including cultural background, disability and sexual orientation...The trend towards a more diverse work force is expected to continue through 2021."

"The race and gender factors alone will alter the American work force significantly: Of those who now enter the labor force, not to replace workers leaving but to fill new jobs, over 80% are non-whites, women and/or immigrants."

"But there is a third major factor to consider—age. Just as our society is graying, so is our work force. In 1982, slightly over one third of the work force were ages 35 to 54. In 2005, this age group will make up almost half of the work force."

"As the 'post-recession' workplace takes shape, one thing is clear: Many more people will work on contract in temporary jobs, rather than as employees... Organizations are moving towards a core group of employees that will have a typical career with the company and, surrounding them, a larger group of workers who come and go."

"Most office workers, some experts predict, will eventually have tailored employment contracts and portable pension funds, moving from company to company to suit the needs of businesses and their own preferences."

Hudson Institute, Work Force 2000 Study

IMPROVING ORGANIZATION EFFECTIVENESS THROUGH INTEGRATED WORKPLACE PLANNING.

Critical Need to Plan for People, Technology and Facilities Together

"Many planners who deal with aspects of the workplace, whether they are technologists, organization developers or facility planners, are coming to the realization that the workplace has to be planned comprehensively...Improving productivity is especially problematic since it is the resultant of many variables, just one of which is the physical workplace."

"Performance must be defined in terms of the goals and objectives of the specific group, versus the individual. In corporations today, it is generally the group, whether it be called a department, group or team, that is the basic work unit.

"The Sun Microsystems Work Effectiveness Group (WEG) was created as a corporate strategic design group to ensure that moves to new campuses and field sites involve all constituents in all aspects of the planning and design process and result in the enhancement of work. The overall approach...involves equal attention to people (HR), technology (IT) and space (RE) factors in its design work, resulting in fully integrated work environments."

John D. Adams PhD, Sun Microsystems

THE NEW OFFICE. RESEARCH FINDINGS.

What is Driving the Movement Toward Rethinking the Office?

"A significant change in our notion of work has already occurred—the shift to interdisciplinary teams. Our work is increasingly interdependent. Organizations are acknowledging that to accelerate ideas, improve products and shorten development cycles employees need access to information and the continuous exchange of ideas across hierarchical and functional boundaries....Increasingly, the workplace is being used as a tool for management to support collaborative work." *Martha Whitaker, HOK*

"Modern work is largely collaborative. Most of us work in organizations where our specialized role meshes with others to produce a product or service. Most white collar workers spend large portions of their time in meetings. Increasingly, jobs are being organized by teams...a representative work group has fewer than ten members and works on their task for a period of weeks or months... collaboration depends heavily on face-to-face interactions."

Gary Olson, University of Michigan Collaboration Lab

"One way to enhance interaction is to create group space. Group space is common nonterritorial workspace shared by a group or work unit. In some facilities, companies have reduced the size of individual offices to a single worksurface with storage and contributed the remainder of the traditional office space allotment to the group area." *Tom Allen, MIT*

"Companies that adopt a project team organization structure experience an eight to ten fold increase in planned meetings...most people in these types of organizations work on four to six teams at any given time. At present (1992), the typical organization allocates about six square feet per person for meeting space; in the future, project team organizations will allocate up to thirty five square feet per person for meeting space." *Jon Ryburg, Facility Performance Group*

"The primary unit of organizational productivity is shifting from the individual to the team. Office designs, therefore, must shift emphasis from individual workstations to tailored workplaces for various size teams, task forces, skunk works, etc." *Phillip Stone, Harvard Business School*

"The pyramidal hierarchy of business organization is becoming more flattened; people are spending more time in meetings and informal conversations working collectively toward common goals; salary and other reward systems are increasingly team-based....Concurrent with the trend toward smaller individual workspaces there is a balancing trend toward more shared spaces of sufficient size to accommodate groups of people collaborating. Clusters of small workstations are arranged around tables seating four to eight persons, and enclosed rooms where teams can display their collective work and engage in open dialogue are being built." *Marilyn Farrow, FIIDA*

"The most effective teams consist of six to ten people, have dedicated workrooms, are highly collaborative and want flexibility in their physical environments...Face-to-face contact by team members is critical...In recent years, the ratio of meeting seats in an organization has dropped from 5:1 to 2:1." *Karen Lalli, Hillier Group*

ALTERNATIVE WORKPLACE DESIGN APPROACHES. 1990–2000.

What Have Been the Major Office Design Approaches of the Past Decade?

"Alternative workplace strategies are new ways of coordinating work processes, organizational culture, information technology and the physical workplace to improve the organization's performance and the quality of work life...the most significant of these are: collaborative team environments, non-territorial offices, home-based telecommuting, satellite work centers and virtual officing...collaborative team environments are designed to support the work of cross functional teams.

They typically include a dedicated team space and individual workstations for concentrative work." *Managing The Reinvented Workplace, IDRC Publication*

"With alternative officing, workers are more likely to see smaller space (private office or workstation) standards, fewer enclosed areas, greater access to natural light, more choices in furniture and finishes, and fewer basic office sizes. The conventional ratio of one worker to one work space is changing. Non-territorial approaches are expected to increase in coming years. Project team environments and activity settings encourage interaction while combining shared and individual space. Telecommuting and the virtual office are examples of alternative officing approaches that maximize time spent off-site and minimize space requirements at the facility." *International Facility Management Association Report, 1995*

WORKPLACE DESIGN PRIORITIES. UNFILLED NEEDS.

The most extensive work environment research study ever conducted, involving over 13,000 workplace users, was completed and published by BOSTI Associates (Buffalo, NY) in late 2000. The ten most often reported workplace qualities that have the greatest effect on individual and team performance, as well as job satisfaction, were ranked as follows:

1. Ability to do distraction-free solo work
2. Support for impromptu interactions
3. Support for meetings and undistracted groupwork
4. Workspace comfort, ergonomics and enough space for work tools
5. Workspace supports 'side-by-side' work and 'dropping in to chat'
6. Located near or can easily find coworkers
7. Workplace has good places for breaks
8. Access to needed technology
9. Quality lighting and access to daylight
10. Temperature control and air quality

According to BOSTI, "The two workplace qualities with the strongest effects on performance and satisfaction are those supporting distraction-free work and supporting interaction with co-workers...Both of these top workplace design attributes must exist without compromising the other."

BOSTI cites acoustic privacy as the largest unmet need, with this recommendation: "...the most practical way to contain noise from conversations, meetings, telephones and speakerphones (and voice-recognition computing, when it becomes widespread) that originates within individual workspaces is to enclose them with properly constructed floor-to-ceiling walls and a door. This also protects individuals from the nearby noise created by informal interactions which regularly occur in corridors serving individual workspaces and in informal meeting areas interspersed among them."

Regarding team or group workspaces, BOSTI concludes, "Clearly, groups need the same freedom from distraction to get group-focused work done as do individuals. Thus, a high-performance workplace must allow group work to be sequestered in spaces designed for that activity. Unfortunately, only about half (54%) the people in our database find undistracted groupwork well supported."

Finally, BOSTI answers the objection "we can't afford the cost of providing enclosed workspace" with the following commentary: "That only seems to be the case when the facility metrics used are based on cost alone. If you factor in the monetary value of the business benefits, you can't afford not to do it when enclosed workspaces support the business more effectively."

Source: BOSTI 2000 Study

FUTURE OFFICE DESIGN TRENDS. 2001-2010.

The "Beyond the Non-Territorial Workplace" Conference, held in the Fall of 2000, produced by the Chicago Institute for the Study of Architecture and Technology and sponsored by Okamura Corporation brought together several workplace planning and design researchers, including Mike Brill, Founder of BOSTI; Vivian Loftness Dean of the School of Architecture at Carnegie Mellon University; Neil Frankel, Principal of Frankel + Coleman; Dennis Cahill, former Publisher of *Interiors* and *Architecture* magazines; and the author. The purpose of the conference was to explore and agree upon the most significant workplace design trends of the coming decade.

Based on the author's notes, here is a summary of the major findings of this group:

- **INDIVIDUAL WORKSPACES**

Smaller, but more enclosed – 2 sizes may fit all (about 60 and 120 sq.ft.)

Maybe fewer – some individual workspaces in project rooms

Some with drop-in spaces – for outside resources/visitors (about 30 sq.ft.)

Trend: high performance, distraction-free home bases

- **MANAGER OFFICES**

Fewer, but still very important

Critical but often unmet need – private meetings (2-3 people)

Trend: meeting offices – convertible from manager office to small meeting room

- **EXECUTIVE OFFICES**

Needed for both ceremonial and technical work activities

Trend: smaller with adjacent meeting/conference space

- **CONFERENCE ROOM**

Ceremonial space – primarily now for clients

Trend: conference room as high impact presentation room

- **MEETING ROOMS**

Everyday Functional Spaces

Trend: many more, but typically smaller (6-8 person spaces most needed)

Trend: flexible, multi-Purpose spaces – with user reconfigurable furniture

- **PROJECT ROOMS**

Collaborative spaces – the major new office dynamic

Some include individual workspaces – some don't

Purposes: work together (heavy display needs), maintain project memory (storage needs)

Room types: paper-based, electronic, artifact-related – mixture of all

- **AD-HOC SPACES**

Many, creative locations: corridors, stairwells, vestibules, cafeterias, etc.

Trend: on-demand, informal collaboration spaces

- **ADMIN/SUPPORT SPACES**

Group access to printers, copiers, fax machines, supplies – critical and efficient

COLLABORATE. TO WORK TOGETHER.

The definition of the word "collaborate" in *Webster's Dictionary* is simply this: to work together. No term better describes the great unmet need for workplace planners and designers in this decade: supporting office workers' need to collaborate. Since the early 1970s, when open plan and systems furniture were simultaneously introduced in America, office space planning and design have largely focused on the micro environment of office workers—their private office or workstation. With the previously noted exception of lack of enclosure, we have largely succeeded in furnishing office workers with high performance, ergonomically correct workspaces to accomplish individual tasks.

But, as we have come to learn in recent years, work in larger organizations requires groups or teams of people to get things done, and our workplaces have been poorly conceived to support this macro office dynamic.

Why do we increasingly need to work together in modern organizations? There are many reasons, but among the more important, according to Gary Olson of the University of Michigan, are:

- Many tasks are too large or have deadlines that are too demanding for one person to do. We assemble teams to take them on.
- Many tasks require a range of specialized expertise that no one person can possess. We form teams of specialists to handle diverse aspects of the problem.
- Individuals have limited perspectives or opinions on problems. We convene groups so a larger set of ideas, wisdom and judgments can be pooled.
- The members of an organization are more likely to agree to a decision or plan if they have participated in or even just observed the process that leads to it.
- In many organizations new members are at least in part trained by having them participate in and observe groups working on problems.

The more recent organizational trends toward downsizing and outsourcing place even more emphasis on the need for collaboration with people who may work outside the organization but frequently visit to participate in project work activities or meetings.

Similarly, organizations that have implemented work-at-home, shared and/or unassigned workspace programs have an even greater need to foster teamwork and organizational unity by having physical spaces to convene their workforce, in whole or in part, at least on a temporary basis.

Collaboration can encompass many forms of group work activity for which appropriate space needs to be provided. Places to hold meetings of various types with groups of varying sizes. Places for educational activities like customer presentations, management seminars and employee training. Places for project teams or functional workgroups to work together on the same activity. And places that support serendipitous meetings and informal interactions.

TECHNOLOGY FOR COLLABORATIVE WORKSPACES. AN OVERVIEW.

Over the past 20 years information technologists have focused enormous attention on equipping the individual's workstation with the right tools to do the job—personal computers, word processing and spreadsheet software, Internet access, and the like. But what happens when these individuals leave their workstations to work in a group or participate in a meeting? In many organizations, they are left without the technology tools on which they have come to depend.

Collaborative workspaces—meeting/conference rooms, training/seminar rooms and project/team rooms—require the same level of technical support, using a new generation of collaborative technologies. The following summary highlights the most popular technologies to be supported:

LAPTOP COMPUTERS

The laptop is fast becoming an indispensable tool for meeting participants. Laptops used for extended periods of time in meetings require voltage regulated power and access to the organization's data network. Some meeting and conference tables now incorporate integrated power and data access as a standard feature.

PERSONAL COMPUTERS

In team room environments, mobile personal computers are often required instead of laptops to provide larger screens and data storage devices.

Sometimes, individuals will actually move their PC from their workstation to the team room for collaborative work.

COMPUTER (LCD) PROJECTORS

The need to display computer generated presentations and related data in group settings has greatly expanded the need for computer projection. Some LCD projectors are portable and brought to meetings by attendees or presenters. A growing number are permanently installed in meeting rooms to ensure availability to anyone who may have a source computer.

ELECTRONIC/INTERACTIVE WHITEBOARDS

Electronic whiteboards record the notes written on the whiteboard surface of a PC, while interactive whiteboards combine the power of a computer and LCD projector with a traditional whiteboard. Computer applications can be projected onto the board and marked or changed with your finger acting as a mouse on the touch-sensitive screen. It allows notes and markings to be captured as electronic data and then saved in files to reduce the work of transcribing and distributing notes.

TELECONFERENCING

Teleconferencing technologies permit live full motion video, full range audio and data/text images to be shared in real time via transmission between different physical sites. Some organizations have teleconference rooms with permanently installed systems to conduct these activities, while others employ portable technologies that can turn any room into a teleconference center.

AUDIO-VISUAL PRESENTATION

Many organizations still make use of VCR and/or DVD players and television monitors to play back prerecorded video programs for customer presentations or employee training. Large flat panel video displays are now becoming popular as replacements to the more bulky TV monitors, and they can also be used to project computer generated programming.

Of course, the electrical and data cabling requirements to power and link these collaborative technology devices to the organization's network are as critical as the technology itself. Generally speaking, meeting, conference and team rooms are lacking in their plug-and-play capabilities to support collaborative technologies at present. However, technology and interior designers are now beginning to pay much more attention to the integration of communications

technologies in collaborative workspaces, as the volume of interior space required for these group work activities dramatically increases.

Architects and interior designers need to treat the meeting room just as importantly as they treat the workstation, when it comes to providing support for new information and communication technologies. Today's meeting room must be flexible, seamlessly integrated with various systems, connected and intuitive, incorporating tools that require little training.

By incorporating the right technology tools in a well furnished, collaborative workspace, the users will be able to do things like:

- have all documents, spreadsheets and presentations available to be viewed and/or modified just as they would at their desktops
- access live statistics on the Internet during a meeting while the whole group watches
- save, print and e mail all written and typed notes from the meeting room
- brainstorm with coworkers in a meeting room and simultaneously in offices around the country while all participants see the same information in real time.

In summary, the new collaborative technologies allow workers to bring their desktop applications to the meeting and team rooms, enabling them to work much more effectively in group settings.

Adapted from Technology for Collaborative Workspaces by SMART Technologies

COLLABORATIVE WORK ENVIRONMENTS. A SPACE PLANNING OVERVIEW.

In the same way we have learned to design just a few types of individual offices or workstations for a wide variety of job and task types, it is possible to recognize and design spaces for the most common types of collaborative work. Interior workspace standards should also be developed to rationalize the size, location and functionality of places for collaborative work, just as we do for individual work.

Historically, the meeting room has served as the all-purpose space for group activities, but rarely did organizations provide enough of this space to support the actual needs, and even more rarely were these spaces equipped with the furnishings and tools to support working together.

Today, it is possible to distinguish five distinct types of collaborative workspaces and one type of multi-purpose space that can incorporate more than one of the distinct features:

- **MEETING SPACES**
For meeting, communicating, discussing, presenting in groups
- **LEARNING SPACES**
For teaching, training and group learning
- **TEAMING SPACES**
For functional or multi-disciplinary teams to work together on a temporary or permanent basis
- **PROJECT SPACES**
For project teams to work together on a temporary basis
- **AD HOC SPACES**
To support informal group work interactions
- **MULTI-PURPOSE COLLABORATIVE SPACES**
To support a variety of collaborative work activities through the use of flexible and reconfigurable furnishings

DESIGNING COLLABORATIVE WORK ENVIRONMENTS. A ROOM-BASED APPROACH.

The landmark research work of BOSTI and others has clearly established the need for more enclosure, preferably full-height walls, in both individual and group workspaces. For these reasons, a room-based approach is strongly recommended for collaborative workspace design, supported by flexible furnishings that serve all of the group work application needs. Tables and chairs do not a collaborative workspace make. For many years, we have agonized over the minute details of furnishings required to support individual work—like ergonomic seating, adjustable worksurfaces, task lighting, overhead storage and technology support. Rarely do we apply the same design principles to meeting rooms and group workspaces.

An effective collaborative workspace should incorporate the following elements:

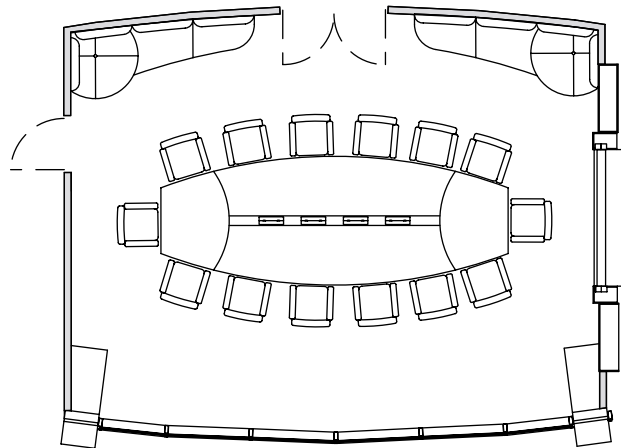
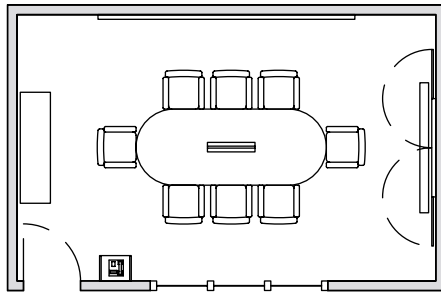
- **GROUP WORKSURFACES**
Frequently modular and equipped to support technology, especially laptops
- **VISUAL INFORMATION DISPLAY**
Often manual or electronic whiteboards and LCD projection, sometimes artifact or model display
- **PRESENTATION SUPPORT**
Including mobile lecterns and furniture for projection equipment
- **SERVICE AMENITIES**
Including furniture for storing/serving food and beverages
- **INFORMATION REFERENCE AND STORAGE**
Mobile furnishings for temporary room use, some fixed furnishings for permanent use
- **MULTI-TASK SEATING**
To support the wide variety of group workspace behaviors
- **ROOM LIGHTING**
Especially dimmable room lighting, emerging: adjustable group task lighting
In those collaborative workspaces designed for the permanent use of project teams, the following additional considerations must be made:

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- PROJECT WORKSTATIONS
Either to replace a team member's outside office, or to add to it
- PROJECT FILES AND STORAGE

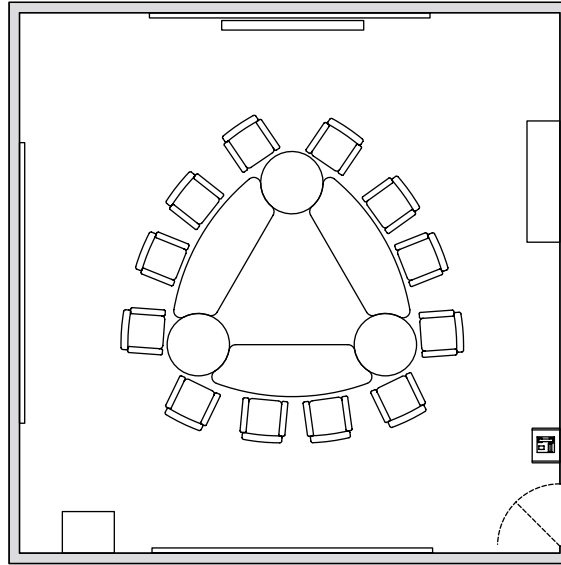
The following room layouts depict the nine most common forms of collaborative workspaces:

1. EXECUTIVE CONFERENCE AND BOARD ROOMS

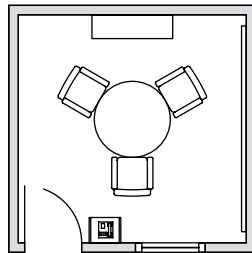


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2. MEETING ROOMS

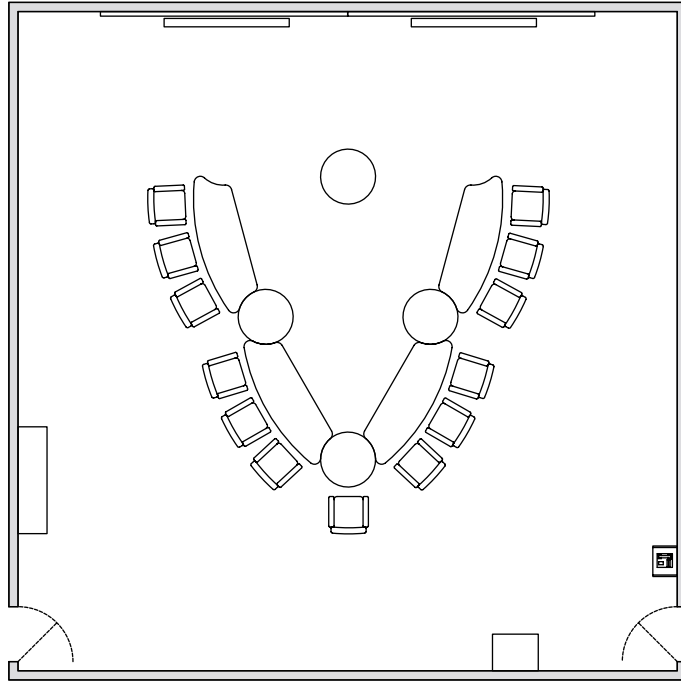


3. SMALL MEETING AND BREAKOUT ROOMS

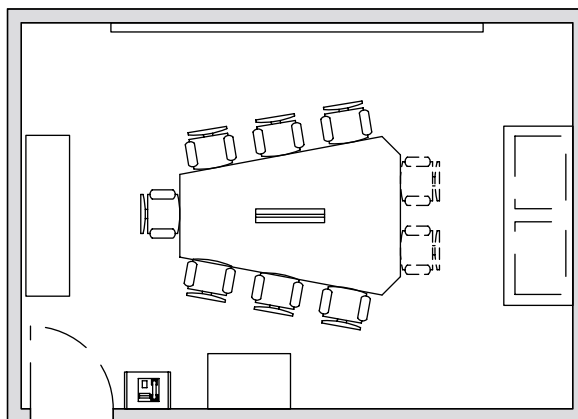


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4. CUSTOMER PRESENTATION ROOMS

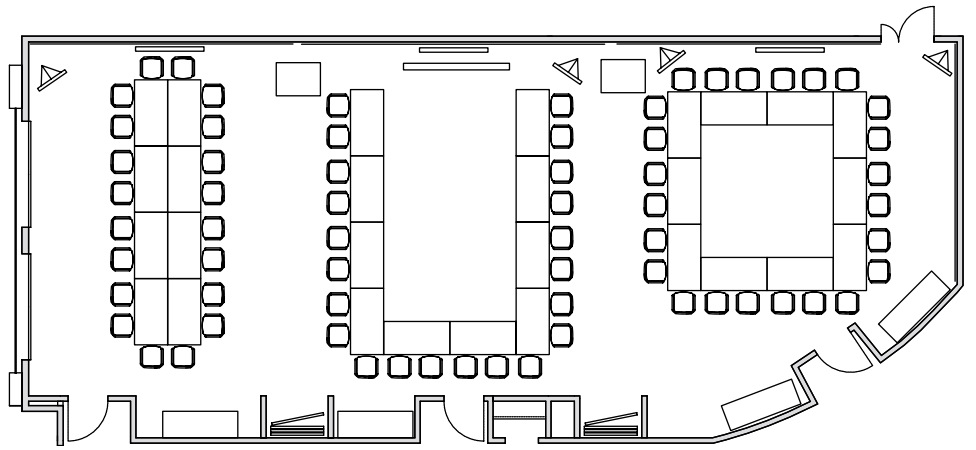


5. TELECONFERENCE ROOMS

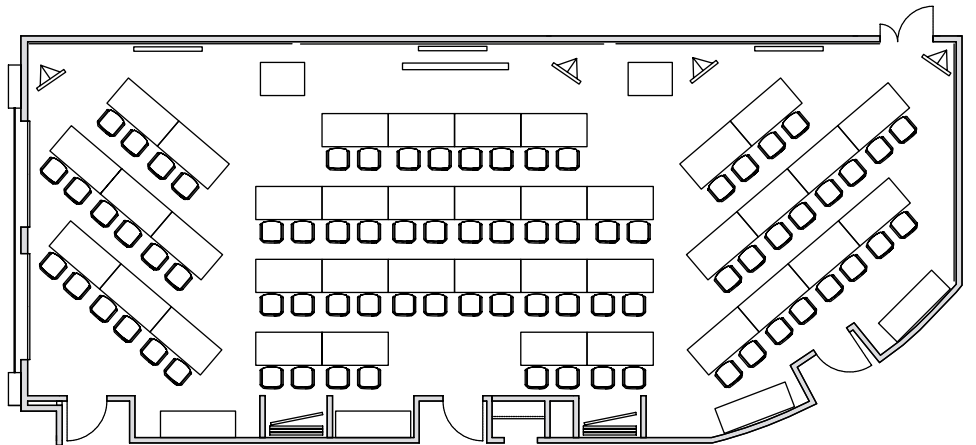


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6. MANAGEMENT SEMINAR ROOMS

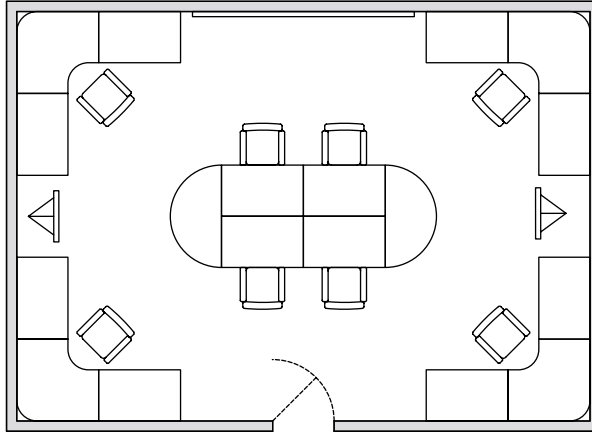


7. EMPLOYEE TRAINING ROOMS

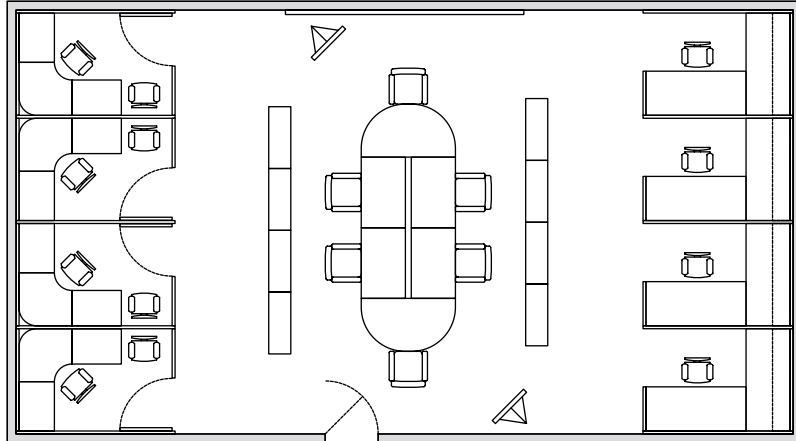


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8A. TEAM/PROJECT ROOMS

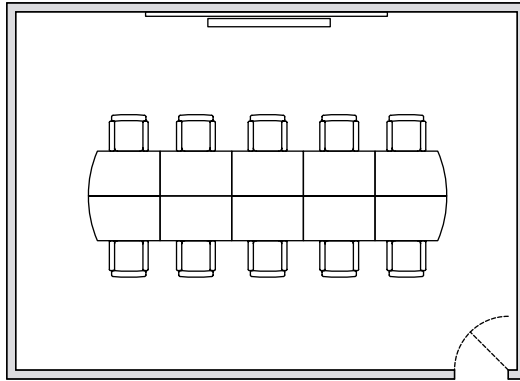


8B. INTEGRATED PROJECT/TEAM ROOMS

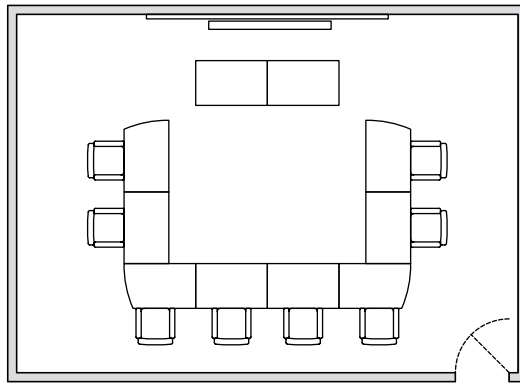


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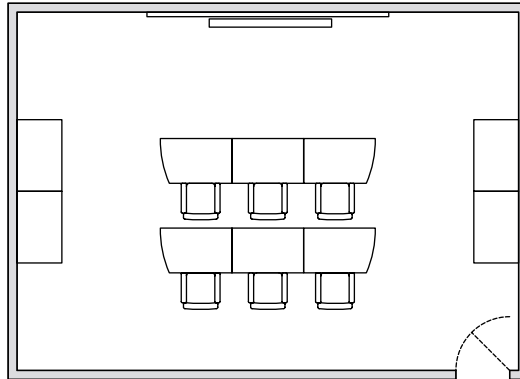
9A. MULTI-PURPOSE ROOMS - MEETING



9B. MULTI-PURPOSE ROOMS - SEMINAR



9C. MULTI-PURPOSE ROOMS - TRAINING



NEVERS INDUSTRIES. FURNISHINGS FOR PEOPLE WORKING TOGETHER. *The Complete Room Furnishing Philosophy*

Since its founding in 1975 by Gerry Evenstad, Nevers Industries (Minneapolis, MN) has focused on the design and manufacture of complete furnishings for meeting and conference rooms. In the mid 1990s, the company expanded its product offering to include complete furnishings for management seminar and training rooms. The company will once again enlarge its application capabilities to provide complete furnishings for team/project rooms and multi-purpose group workspaces.

Nevers longstanding business description, "The Complete Meeting Room," will change to "Complete Furnishings for People Working Together" to better reflect its expanded business purpose and direction.

Nevers will now offer three broad collections of furnishings to outfit the full range of collaborative workspaces, from basic meeting and seminar rooms to sophisticated conference and board rooms, and now to team and project rooms:

- **AMERICANA**

Conceived and designed by Mr. Evenstad himself, the Americana Collection features classic American style furnishings primarily for meeting and conference rooms. This is the collection that established Nevers as a complete meeting furniture provider and continues to be the company's most successful product. In addition to collection completeness, the collection offers a wide range of furniture finish options in traditional and transitional styles. The Americana Collection will now include the innovative Meeting Office that can transform little used manager offices into dual purpose small meeting rooms with convertible furnishings.

- **SEMINARIO**

The Seminario Collection, designed by Daniel Figueroa for Drabert GmbH, is sold in the U.S. by Nevers under an exclusive licensing agreement. It is a full range grouping of contemporary European style furnishings, originally designed for seminar, training and meeting rooms. The collection will be dramatically expanded with the introduction of Seminario for Teams, additional furniture elements to support project and team work fully compatible with the existing offering so that multi-purpose collaborative workspaces can be furnished with an integrated product offering.

- **EVENTI™**

Eventi™, designed by Roberto Danesi, is a complete collection of modern Italian design furnishings originally conceived for executive board and conference rooms. The Eventi collection has now been further extended with the addition of many visual display, storage and service elements—and expanded to serve meeting room applications with the addition of smaller and lighter scale table elements.

- **CUSTOM SOLUTIONS**

Perhaps most significantly, these Nevers collections—American, Seminario and Eventi—have each been designed as furniture platforms to enable designers, specifiers and end users to modify them to suit unique site requirements or aesthetic design preferences. The platform approach permits Nevers to offer custom solutions from a standard and tested product design that takes the risk and unnecessary cost out of custom specifications.

SOURCES

- "The Next Society" special report in *The Economist*, Peter Drucker
Hudson Institute Workforce 2000 Study
- "The Changing Work Force," Herman Miller Research
- "Temporary Work: The New Career," New York Times
- Sun Microsystems Workplace Effectiveness Group
- "Improving Productivity Through Integrated Workplace Planning,"
Joe Akinori Ouye, Ph.D., Facility Technics
- "Report on Alternative Officing," IFMA
- "Managing the Reinvented Workplace," IFMA/IDRC
- "The Future of Work and the Workplace," Martha Whitaker, HOK
- "The Nature of Group Work," Gary Olson, University of Michigan
- "Group Space Design," Tom Allen, MIT
- "Technology for Collaborative Workspaces," Smart Technologies Inc.
- "Designing High Performance Offices," on Ryburg, Facility Performance Group
- "Your Office Is Where You Are," *Harvard Business Review*, Stone/Luchetti
- "Experimental Designs of Group Work Settings," Robert Luchetti Associates
- "Office Trends Impacting Design," Marilyn Farrow, FIIDA
- "Team-Based Office Interior Design," Karen Lalli, Hillier Group
- "Disproving Widespread Myths About Workplace Design,"
Michael Brill, BOSTI 2000 Study
- "Beyond the Non-territorial Workplace" Conference, author's notes
Chicago Institute for the Study of Architecture and Technology