



Knoll Workplace Research

# Engaging Workspace with Technology

A Planning Approach to Future-Proof Your Investment

Dr. Michael O'Neill  
Senior Director, Workplace Research  
Knoll, Inc.

**Knoll**

# Engaging Workspace with Technology

## A Planning Approach to Future-Proof Your Investment

### New work styles demand a planning approach that jointly considers furnishings and technology

The all-encompassing use of technology in today's office is driving more mobile, social, collaborative—and less predictable—patterns of work. Organizations recognize that technology is central to work effectiveness. Employees must be able to easily interact with their technology tools in order to collaborate, share information and adapt to changing work and business needs.

Whether intended or not, workspace planning and furniture decisions greatly impact workers' abilities to use their technology and, thus, work effectively. However, in the planning process, often little consideration is given to what technologies will be implemented, how individuals and groups will use them, and the furniture capabilities required to support their use. *This disconnect between workspace and technology can lead to poor office design and reduced employee performance.*

#### Furniture should offer a flexible platform for technology and work process

In order to facilitate effective work, *furnishings must offer a flexible platform for the use of technology* that helps employees connect with each other, display and share information, and adapt to ever-changing work processes. However, office planning and furniture selection decisions often fail to consider furniture that works well with technology components—or anticipates the impact of shifting technologies over the long term. As a result, the work environment may be less effective than desired and offer constant frustrations to workers within these technology-rich settings.

#### Good planning can improve the link between furniture and technology

Employees increasingly supplement their desire to **connect** with others by using

### Connect, Display, Adapt

Synchronizing furniture and technology



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technology, starting with the fundamental need for basic power and online access, to use of sophisticated videoconferencing tools. Collaboration now frequently involves **displaying** and interacting with information using a range of small handheld to large mounted screens. Finally, changing technology, coupled with a fluid business climate, requires employees to unpredictably adjust their work style—requiring **adaptability** of furniture and technology.

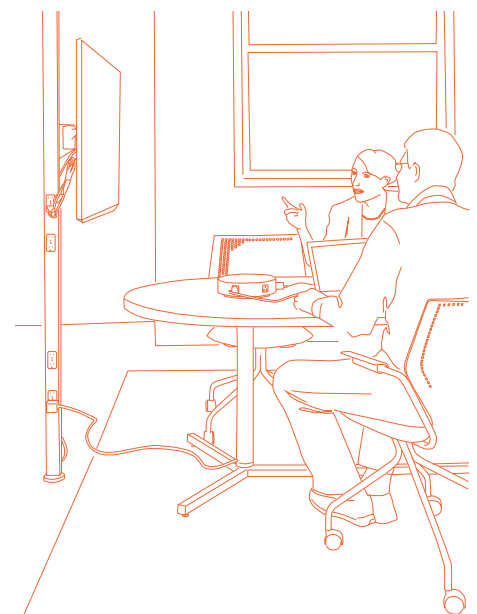
In this section we provide planning considerations for selection of furniture elements that work with technology to provide a high performance work environment. The office should support employees ability to:



#### 1. Connect to each other, and to technology

Connecting involves people coming together for work and social interactions. People bring their technology (videoconferencing, laptops, tablets, smartphones, etc.) and need to “plug and play” in a wide variety of work settings. As reliable access to Wi-Fi becomes a given, the challenge shifts to supporting recharging needs through easy connection to power. Power modules must be *visually* accessible from afar so people know where they can plug in. Modules should be *physically* accessible, located in a way

that brings people face to face (for instance located table top or within a portable power module, not behind people or under the table). Thus, planning and furniture selection should allow people to easily connect to power within individual, group and social spaces—anywhere work occurs.

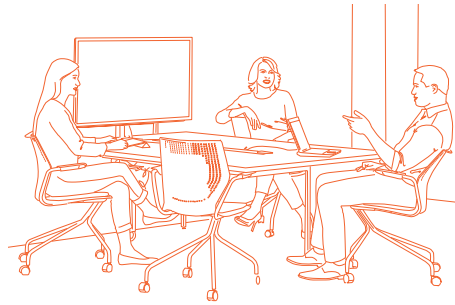


Power poles, monitor arms and portable power modules, along with agile seating and tables, can be used to quickly create a workspace for effective group work.



## 2. Display, share, view, and interact with a range of static and dynamic content on screens

Displays can range in size from a hand-held device to a large TV or touch screen. Users can literally “see what you mean” with others who are in the same room or at another location. The individual workspace typically supports the use of single or multiple monitor setups. Since a greater proportion of work has shifted to a wide variety of collaborative spaces, furniture needs to support any size monitor within a variety of locations (for instance, supportive seating that permits ease of holding a handheld device, or a wall, desk, or power pole-mount for larger monitors).

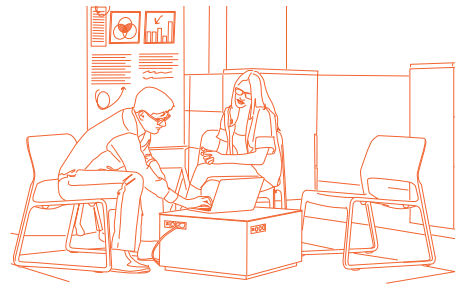


**Videoconferencing spaces use rapidly-changing technology. The furniture should allow technology to be easily “changed out” over time, when it needs to be updated.**



## 3. Adapt to changing needs through furnishings and technology

Adaptability comes in two forms. First, it is offered through furniture and technology that can respond to changes in work process. Second, adaptable furniture can accommodate changes over the short and long term to the ever-changing technology it is, in effect, temporarily hosting



**Short, unplanned casual interaction is encouraged by furnishings that allow people to share ideas through both whiteboards and technology. Furnishings must seamlessly support technology needs, like simple “plug and play” accessibility to power for the proliferation of devices.**

People should be able to adjust the furniture and technology components of the spaces in which they work on a monthly, weekly, daily or even hourly basis, to fit their needs. Agile furniture elements such as monitor arms, power poles, adjustable height tables, charging stations and other furnishings can be used together to provide flexible workspace that adapts to changing work and business processes.

Furniture should be “technology neutral,” designed to house any technology platform. In this approach, furniture can accommodate updates to technology over time because the elements are not permanently built-in. Thus, the organization can select the best technology for its needs and take advantage of improvements, instead of being restricted by what its furniture will support. In choosing furniture, consider the shorter lifespan of

technology when compared to the longer lifespan of office furniture. Avoid the dilemma in which furniture tied to old technology becomes prematurely obsolete.

### Workplace planning and furniture should engage, not embed, technology

Furniture should engage technology, but the two elements should not be integrated so closely that they cannot offer independent adaptability to meet work tasks. Rigid integration is seductive because it is a neatly packaged, though short term, solution. But complex technology becomes even more challenging to manage when these elements are embedded in furniture. And this approach

heightens the risk that when the technology becomes obsolete it will also render the furniture unusable.

A strategy emphasizing adaptability of furniture in its relationship with technology will extend the useful life of the workspace, make the workspace easier to manage and control long-term costs.

### Future proof to support emerging space types and work styles


As the nature of group work continues to evolve in ways that cannot be entirely foreseen, furniture elements need to flexibly adapt to and support the shifting technology requirements of emerging work styles. These will include a range of formal and informal interactions, and occur within a wider variety of locations, both within open and enclosed spaces.

It is increasingly true that “work happens everywhere.” The most rapidly growing categories of group space are brainstorming areas, small meeting rooms (6-8 people), project team rooms, and video conferencing spaces. Since these locations are where the creative and project work of the future will occur, “future-proof” them by ensuring the furniture and technology support people’s abilities to connect, display and adapt.

### Suggested Reading

O’Neill, M. and Wymer, T. (2011). The Metrics of Distributed Work. White Paper, Knoll, Inc., New York, NY.  
O’Neill, M. (2012). Adaptable by Design. White Paper, Knoll, Inc., New York, NY.  
Knoll Research (2012). Activity Spaces: A Variety of Spaces for a Variety of Work. White Paper, Knoll, Inc., New York, NY.  
Ouye, J. (2011). Five Trends that Are Dramatically Changing Work and the Workplace. White Paper, Knoll, Inc., New York, NY.

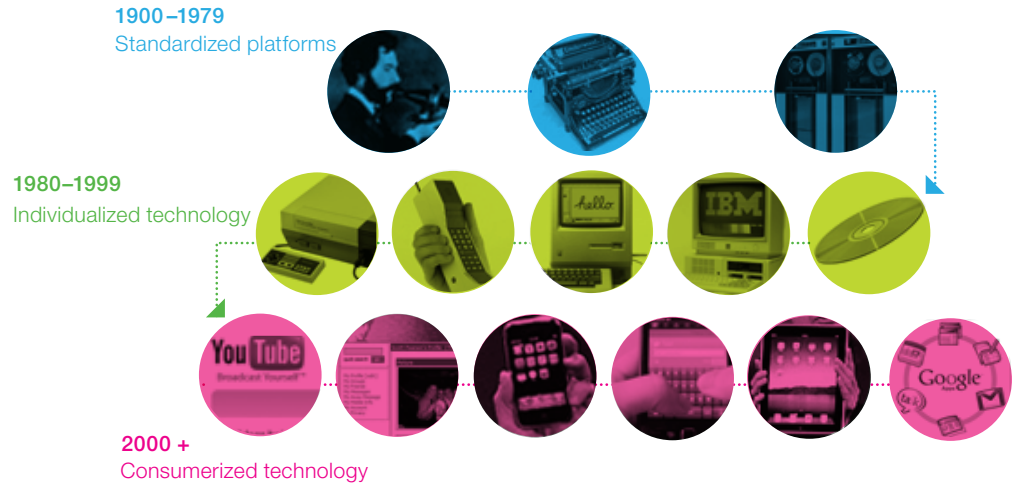
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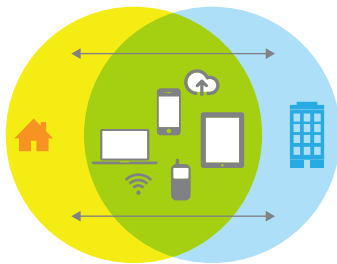
# The Role of Workplace Technology Is in Transition

Technology has been part of the workplace for more than 100 years. During this time technology innovation exploded, driving major changes in the ways offices are planned, furnished and used. During the first part of the 1900s, standardized platforms emerged. Later in the century, cell phones and personal computers individualized the technology experience. More recently, as use of devices, software, and social media rapidly increase, employees are demanding use of their personal technology, with profound implications for today's workplace.

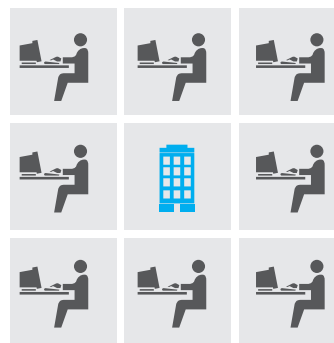


## Office technology has become “consumerized”

The year 2000 marked a turning point in the relationship between personal and office technology, as the “consumerization” of technology put wireless communications and mobile devices in the hands of almost everyone. People began bringing their personal technology to work, expecting the ability to “plug and play.” Organizations faced the challenge of accommodating technologies for which they were not prepared. The old model of technology implementation was top down: technology decisions were made at the enterprise level and all employees used the same limited number of devices, applications and platforms. The new model is both top down and “grass roots.” When businesses observe that people want to use their own devices and can do so effectively, many are deciding that it is more expedient and productive to support them.



## The workplace, driven by technology and evolving work process, is becoming more flexible and nimble



Old workplace/technology model



New workplace/technology model

As organizations take steps to support increasingly collaborative and technology-enabled work processes, the old workplace model, which was based on a fixed location for work and standardized technology, is being replaced by a newer model based on flexible work styles and mobile and technology tools. This new model in turn requires a greater need for flexible furnishings.

## Technology has a short “half-life”

The relationship between furniture and technology has been further complicated by the speed of technology innovation. While office furniture often has an expected lifecycle of about ten years, the lifecycle of technology is about 18–24 months. As a result, technology should not be “rigidly integrated” into furniture that has 5–7 times its lifespan.

