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A high-angle, black and white photograph of a modern, curved spiral staircase. The staircase has a tiled or paneled surface and a metal handrail, curving upwards in a circular pattern.

# THE THREE BRANCHES OF DESIGN





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A look at history provides  
a glimpse of the future



BY BRADY MICK

Occasionally, in times of chaos and change, there is value in reconsidering and reevaluating foundations for a previously conceived or discussed idea. Facility design is one example of where this process applies. As workplace design continues to morph between the challenging demands of being more efficient and effective and providing a greater experience for people, everyone involved can gain value in design considerations by looking back in time.

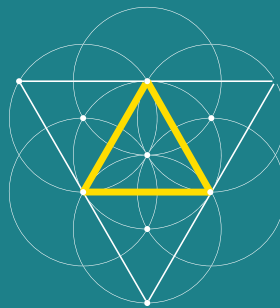
According to the ancient Roman architect and author, Marcus Vitruvius Pollio (De Architectura, 15 BC), architecture consists of three requirements: strength, unity and beauty.

They were referred to as the Vitruvian Triad. While the manifestation of these three constructs may have changed over time, it's important to evaluate how a rebalancing of strength, unity, and beauty can impact the future value of workplace design in a positive way.

**STRENGTH**  
firmitas

**UTILITY**  
utilitas

**BEAUTY**  
venustas



*In architecture, these three applications have been recognized for centuries. However, like with anything, translations of these constructs have varied, values have shifted, and the relative importance of each has been questioned. Nevertheless, Vitruvius's three design constructs play into most of the decisions faced by a facility manager.*



## firmitas

*Latin for strength and durability. Represents construction of a foundation steeped in structural stability.*

It also means building this foundation using quality tools, materials, and experience — leaving no room for bargain-basement thinking. Much of strength's value in the past was focused on permanence, but how might this concept be perceived in the present? What is today's version of firmitas regarding office design? Obviously, this concept has been reevaluated to consider today's needs. Strength in the modern workplace means being able to provide resilience over an extended period — maintaining its value over time. Strength also refers to materials and forms of construction, so even for the less permanent structures, there are varying degrees of strength. Consider also how strength can come from office design's adaptability factor. Much of an office's retained value comes from its ability to cater to the needs of its residents as times change.



## utilitas

*Latin for usefulness or utility. Think of this requirement as the building's ability to predict and respond appropriately to the needs of its proposed residents.*

A building's function is separated into primary and secondary spaces. Primary refers to the main function of the building (e.g. rooms), and secondary space is what makes the building usable (e.g. hallways, toilets). In modern office design, the concept of function is hotly debated and negotiated. Many believe its significance should be applied only to structures like factories and mass housing — where the need for utilitas originated. Today, embedding tools such as technology, activity settings and mobile-ready furniture are creating a new demand for utility, which in many cases outweighs the two additional design drivers — firmitas and venustas.



## venustas

*Latin for beauty. The element of beauty can be made apparent in the use of attractive materials, skilled craftsmanship, and keen attention to detail.*

Before the 20<sup>th</sup> century, venustas was mandatory for most newly constructed buildings. But, since then, it's been less of a concern, likely due to an increase in mass production. Vitruvius divided beauty into six basic concepts: material and refinement, ornament, proportion and geometry, appropriateness, meaning, and design and inventiveness.

## OFFICE DESIGN EVOLUTION

The past 30 years, office design has taken workspaces from cubicles and c-suites to collaborative meeting areas and charging stations. Although some companies have been slower to change than others, today the majority have at least some percentage of space dedicated to collaborative efforts.

Beginning in the 1990s, it became tough to argue with the reality that work doesn't always get done, or need to get done, inside the traditional office space. Most employees can accomplish their work remotely as long as they have a computer and an Internet connection. Thus, facility managers have been shifting their focus away from the offices, cubicles, and conference rooms that had comprised their "normal" for years. In modern workplace design, these managers are discovering a new "normal" — one that favors spatial variety, excellent Wi-Fi connectivity, and a technology-enriched, team-focused workplace. Broadly speaking, there has been a relaxing of the workplace. As such, the time has come for designers to create environments based on the reality of increased collaboration, innovative behaviors, stand-up desks, and highly active, matrix-oriented work. Through this time of transition, it is advantageous to return to the roots of office design constructs to show how rebalancing the strength, utility, and beauty requirements can positively impact the future of workplace design.

## CHALLENGES IN FACILITY MANAGEMENT

Being challenged by the virtual workspace comes in the form of issues such as managing remote employees and contractors, supplying the necessary equipment for virtual meetings, designing flexible work options, and satisfying the demand for increased shared space and collaboration tools.

So, what does “firmitas” mean to this virtual workspace?

“Facility managers are always looking for strength,” says Brian Collins, a facility manager at Microsoft. “They are always attentive to how their buildings look, but especially how they can be maintained and sustained. This is considered a strength.”

Collins goes on to describe how facility managers struggle with the role of design in office space and how popular and prevalent it is becoming. “Managing office space when there is such a variety of options, along with the lifespan of some of these designs, is challenging to say the least.”

Utility is arrived at by measuring judicious distribution of the parts. However, today’s parts don’t consist of offices, cubicles, and conference rooms. Today, utility requires far fewer private offices. In fact, even the need for each employee to have an assigned seat requires serious questioning. Cubicles are, at best, 50 percent occupied by assigned individuals at any given time during a typical workday. Also, it’s not uncommon to measure 10 percent of assigned offices as vacant and as many as 80 percent of total conference room chairs as “not in use.” Open collaboration and an environment suitable for innovation are becoming basic requirements in office design — creating a new set of utilitas challenges that include privacy, distraction isolation, personal identification, and management redefinitions of good work behaviors.

Finally, looking at the role of *venustas*, much of today’s failure in workplace design comes from a lack of beauty, brand identity, and basic design quality. Generic cubicles, drab office design and anything else that makes an office look basic and unspecific distract from an accepted standard of beauty and aesthetic appeal to which any facility manager should aspire. By thinking in terms of how the parts make up the whole, the ideal is that a workspace will be designed that represents one company exclusively — without sacrificing its visual value.

*According to a Business News Daily article, “10 Biggest Challenges for CEOs in 2017,” workplace design matters. It’s on the list at number nine, and the virtual workspace is a legitimate challenge. Furthermore, it’s the only one of the ten concerns listed that is solely within a company’s control. The other nine are focused on stress reactions that come from the external environment:*

1. New political administration
2. Costly health insurance
3. Rising cyber security threats
4. Finding capital
5. New hiring
6. The economy
7. Consumer expectations
8. Marketplace competition
9. The virtual workspace
10. Market oversaturation

## LOOKING AHEAD

On architecture’s timeline, office design has repeatedly met obstacles in its attempt to meet people’s expectations. In today’s workplace, walls continue to come down — a factor that can be measured as a business’s advantage. The open office has its share of human behavioral advantages, which can be weighed against the three design constructs to help arrive at a high value equilibrium. For one, facility managers have to evaluate that fine line between inspiring collaboration and reducing concentration and productivity. The answer depends upon the nature of the business and the degree of creativity required from the employees on a daily basis. Also, the idea of open design is a *firmitas* cost advantage in that it reduces construction, lowers heating and cooling expenses, and cuts back on equipment purchases due to the shared spaces. This should be juxtaposed with the values of *utilitas* and *venustas* as equal business advantages to determine its contribution to work productivity.

As the design industry continues its attempt to satisfy the new workplace, it will always have to deal with tensions between designing for personal preferences, designing for one-size-fits-all, and most recently designing for non-descript activity and variable settings. A balanced consideration of the true potential of design requires an investment in time for all stakeholders. In the end, every facility manager knows that regardless of where we are in the evolution of facility design, ulti-

mately the value comes from providing areas conducive to productivity.

## FINDING EQUILIBRIUM

Strength, or structural stability, arises from carrying down foundations to a good, solid bottom — as well as choosing the proper materials without being frugal. Utility, or using space appropriately, comes from judicious distribution of the parts so purposes are duly answered. And beauty, or the attractive appearance of a space, is produced by the pleasing design and good taste of the whole — as well as dimensions of all parts being balanced. Although emphasis of these constructs has changed over time, each of the three affects design results. Each can be rebalanced or redistributed to unite with the open collaboration of modern workplace design. FMJ



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