

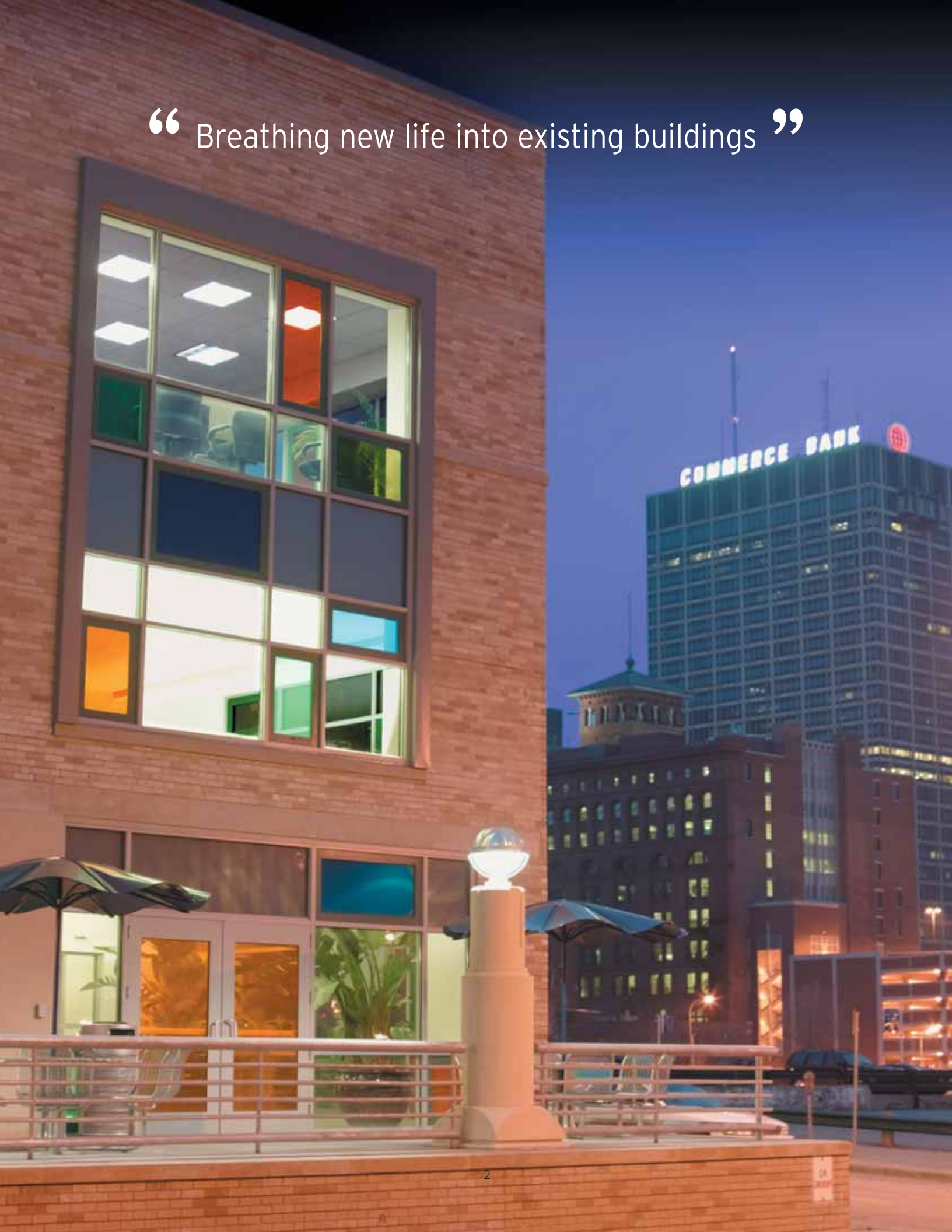
# Nu-Life

Renovation & Modernization of Existing Workspace



*Access Flooring  
to the Power of* **Tate**<sup>®</sup>

“ Breathing new life into existing buildings ”



# Renovation Solutions to the Power of Tate

Tate is recognized as a leader in access flooring technology, design, and manufacturing. Expertise and experience in supporting a wide range of modernization demands has allowed Tate to create service distribution systems and products specifically designed to meet the requirements of today's renovation. With the power of Tate, your facility will discover new levels of flexibility, environmental integrity, and cost control.

## Solution Flexibility

Tate Access Floors offer a fluid capacity to react and respond to your facility's need for change. Whether it is the creation of a flexible infrastructure system designed to respond to organizational change or adapting to new technologies and integrating the next generation of communication tools, Tate Access Floors provide easy and simple solutions now, and in the future.



## Green and Sustainable Design

By improving indoor air quality and maintaining the physical integrity of the working environment Tate Access Floors play an important role in the environmental and energy efficient design of any renovation. Tate Access Floors provide you with the ability to control thermal, energy, and air quality control levels, zone by zone, throughout the facility. With Tate Access Floors and underfloor air distribution, your company will have the ability to deliver improved personal comfort control, enhanced ventilation effectiveness, and improved indoor air quality while saving energy and delivering the safest, healthiest working environment possible.

## Cost Control

Tate understands that even the most advanced technology needs to offer long-term value if it is to provide a positive return on your investment. That is why Tate Access Flooring for renovations has been designed to control costs through durability and long-term service, adaptability to future expansion and change, along with easy, low-cost maintenance requirements. Additional cost savings are also realized through easy installation as well as lower operating and system requirement costs for power, communication, and air services.

Cover photos courtesy of:  
Qk4 (left), Qk4 & [www.amvfproductions.com](http://www.amvfproductions.com) (right)

# Create a Green and Sustainable Working Environment

By deciding to renovate an existing structure you have taken major steps to reduce the impact of construction on the environment and create a green and sustainable design. Tate Building Technology Platform® provides a cost-effective solution that will help you create 'green' indoor environment levels of air, sound, and light quality that promote good health, and create a more productive and comfortable working environment. The Tate Building Technology Platform® also enhances the aesthetic value of your building - adding significant worth to your business in terms of image and attractiveness for prospective clients and staff.



**LEED®** Driven

## Indoor Environmental Quality (IEQ)

Tate's Building Technology Platform® with underfloor air is a cost effective strategy for improving a facility's indoor environmental quality. IEQ accounts for 23% of LEED® Credits and has a significant impact on the health, well being, and productivity of personnel and staff.

## Energy and Atmosphere

The Tate Building Technology Platform® outperforms past energy efficiencies by reducing HVAC chiller size by up to 10% and reducing cooling energy consumption by at least 20%.

## Materials and Resources

The Tate Building Technology Platform® is made in the USA and is constructed of recycled materials that help meet LEED® standards for efficient use of materials and resources. Every element of the Tate Building Technology Platform® has been designed to provide the ultimate in environmental protection and efficiency.



## LEED® Certified Projects from left to right:

*Premier Automotive Group Headquarters, Irvine, CA; Visteon Village, Van Buren Township, MI; Foundry Square, San Francisco, CA.*

## Solutions for Green Building Status

Tate Access Floors created the Tate Building Technology Platform® to provide businesses with the solutions they need to reach Green Building status\*. The Tate Building Technology Platform® offers a number of significant opportunities for your business to achieve LEED® environmental goals and credits. The Tate Building Technology Platform® contributes to points in three of the five LEED® credit categories – delivering optimum performance in the critical areas of Indoor environmental quality, materials and resources, and in energy and atmosphere.

\* As designated by U.S. Green Building Council (USGBC) and the Leadership in Energy and Environmental Design (LEED®) program.

## Sustainable Solutions

Tate professionals can show you the most effective solutions for reaching your goal of creating a long-lasting, healthy environment. They can also show you how you can most cost effectively meet your most immediate needs for technology support, communications, data, and power, while building-in opportunities for manageable and low cost reconfiguration in the future. Tate technicians and engineers can direct you to solutions that have worked for businesses like yours in the past, or provide unique approaches that can solve unusual office challenges.



## Renovation Solutions: Snead Building, Louisville, Kentucky

Qk4, a large local architectural, engineering and construction firm in Louisville, Kentucky, outgrew their headquarters on Main Street in the year 2000. Searching for a new home, Qk4 became aware that the Snead Building, a 1910 reinforced concrete building on the National Historic Register, was being renovated and chose to join the project team in the Phase 1 renovation of the Louisville Glassworks development which anchors the west end of downtown Louisville. A major design consideration for this historic venture was the implementation of a raised floor system. This system would allow the project team to incorporate an underfloor service distribution of air, wire and cable, creating a flexible environment with cleaner indoor air quality.

### Tate Building Technology Platform® Solution:

Allowing minimal disruption of ceiling spaces and providing for future flexibility, Tate's underfloor service distribution system was the perfect fit for this project. Access floor creates a pressurized plenum used to evenly distribute conditioned air through the space providing a higher quality of indoor air. A separate plenum wraps each floor and washes the exterior wall with heated or cooled air as the outside temperature dictates. It also provides runways for all data, electrical and telephone cabling, giving the Snead Building flexibility for future change. By using Tate's underfloor service distribution system, the Snead Building was transformed from an industrial building into a thriving mixed-use facility ready for the future.

# Creating the Perfect Work Environment

To create the perfect environment in a facility you need to address a variety of needs. These needs include maintaining high-quality clean air, improving personal comfort control, attenuating noise, responding to organizational and technology changes quickly and easily, and supporting the overall aesthetic value of the facility – all while being cost-effective during building and operation. With Tate's Building Technology Platform®, you'll be able to address all of the factors required to enhance occupant experiences and create the perfect environment that reflects the goals and image of your renovation.

## Advantages

- Enhanced indoor environmental quality through superior IAQ, improved acoustics, and increased daylighting opportunities.
- Maximum occupant comfort control at design inception and throughout the life of the building using underfloor air with modular 'plug & play' VAV or passive diffusers.
- Energy efficiency through economizer operation, and less fan energy.
- Easily adapts to technological and organizational changes over the building's lifecycle at low cost.
- Point-of-use services wherever you need them with complete flexibility, accessibility, and unlimited capacity.
- Accelerated tax depreciation opportunities.
- Reduced first cost and construction time due to significant reduction in HVAC ductwork and use of underfloor pre-fabricated 'plug & play' wire/cable services.
- Reduced operating costs and lower facility and maintenance costs through accessible, flexible, and adaptable services.

Tate PVD Servicenters™ provide point of use power, voice and data services anywhere on the floor plate

No overhead HVAC system ductwork



Tate ConCore® access floor system – welded steel floor panel, filled internally with lightweight cement for the ultimate in strength and acoustic performance

'Plug & play' modular power wiring system saving valuable construction time and facilitating quick and easy reconfigurations

Enhanced ceiling design freedom with services underfloor

Non-powered workstations providing simplified relocation and significant cost savings compared to powered furniture

Tate PosiTile® carpet providing one-to-one indexable fit to panel – no messy adhesive required

Underfloor VAV perimeter solutions provide both heating and cooling capability



Modular and relocatable VAV or passive diffusers provide increased personal comfort control

Tate PosiLock™ understructure – positive positioning and lateral retention of floor panels with a wide range of finished floor heights

Underfloor service pathway accommodates any type of voice and data system approach, from homerun to passive or active zone cabling



## Renovation Solutions: P&W Architects, L.L.P. Houston, Texas

When P&W Architects outgrew existing office space, they were faced with the challenge of transforming a warehouse type building into office space that reflected their client's studies on the dramatic impact of indoor air and environmental quality on organizations and their employees.

The prime factors in planning the new P&W space: A sustainable approach that resulted in a more comfortable, healthier and productive workforce, and the environmental and energy-saving aspects of clean construction versus conventional methods.

### Tate Building Technology Platform® Solution:

Utilizing Tate's BTP, P&W accomplished it's original objectives and was able to:

- Develop a facility that is environmentally conscious and cost-effective, setting standards for new and renovated buildings
- Reduce the cost of workspace reconfiguration
- Maintain a facility that can meet changing requirements
- Design office space with an integrated systems approach
- Increase overhead ceiling heights for greater design options
- Enhance the work environment through improved ECHOIC (Indoor Air Quality / Indoor Environmental Quality)
- Reuse modular wiring, modular carpeting, access floor panels and underfloor HVAC terminals



# A Healthy and Productive Working Environment

Tate Access Floors provide significant advantages in maintaining air quality and control of a building's indoor environment. Air quality, access to additional sunlight, correct thermal and humidity conditioning, and proper acoustics all work together to create a comfortably maintained working environment. Properly managed environments have been proven\* to significantly impact employee health, comfort, and productivity. Tate's Building Technology Platform® features high performance underfloor HVAC services that provide improved indoor air quality, enhanced comfort control, daylighting opportunities, and improved acoustics meeting today's most stringent government and environmental standards.

*\* According to the U.S. Environmental Protection Agency (EPA)*

## Keys to creating a healthier working environment for staff

- Deliver supply air at floor level to improve ventilation effectiveness and provide occupants with first benefit of clean, fresh air.
- Increase natural daylight for improved staff comfort and productivity through overall reduction in overhead service distribution space.
- Provide floor mounted diffusers with air direction, volume, and 'plug & play' placement flexibility to ensure maximum personal comfort control.
- Deliver floor supply air at low pressure to maximize acoustic performance, energy efficiency, and maintain clean air in occupied zone.



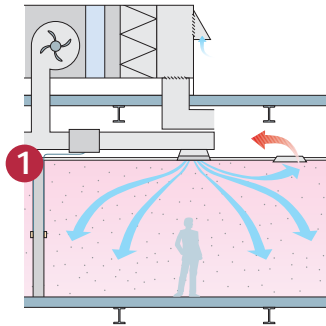
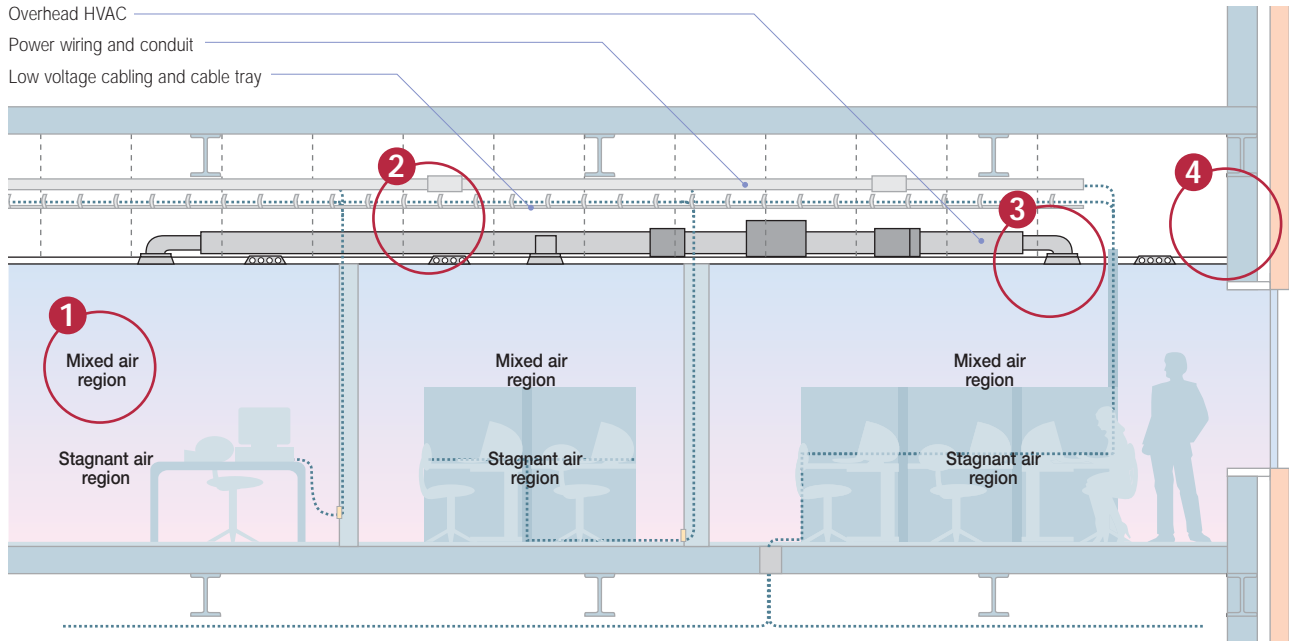
“Under floor air offered us the best combination of efficiency, flexibility, cost, and most important - comfort.”

*Kevin Tenbrook, Principal, P&W Architects, Houston, Texas*

# Benefit from Tate's Underfloor Air Management Solution

Avoid the complaints. Conventional overhead HVAC systems do not provide optimum efficiency or personal comfort control. With Tate's underfloor HVAC system, consisting of modular 'plug & play' floor mounted diffusers, ultimate flexibility, energy efficiency, and personal comfort control can be assured.

## Conventional overhead HVAC method



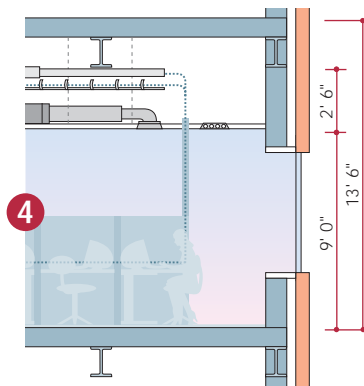
**Wastes energy**  
Hot air rises, yet conventional HVAC distribution is designed to force cool clean air from the ceiling and mix it with the hottest, most pollutant-filled air before getting to the occupants.



**Lack of individual control**  
Hot/cold complaints consistently rank top of the list of issues raised by building occupants. Conventional systems are difficult to access and expensive to change. Therefore, they rarely are changed.

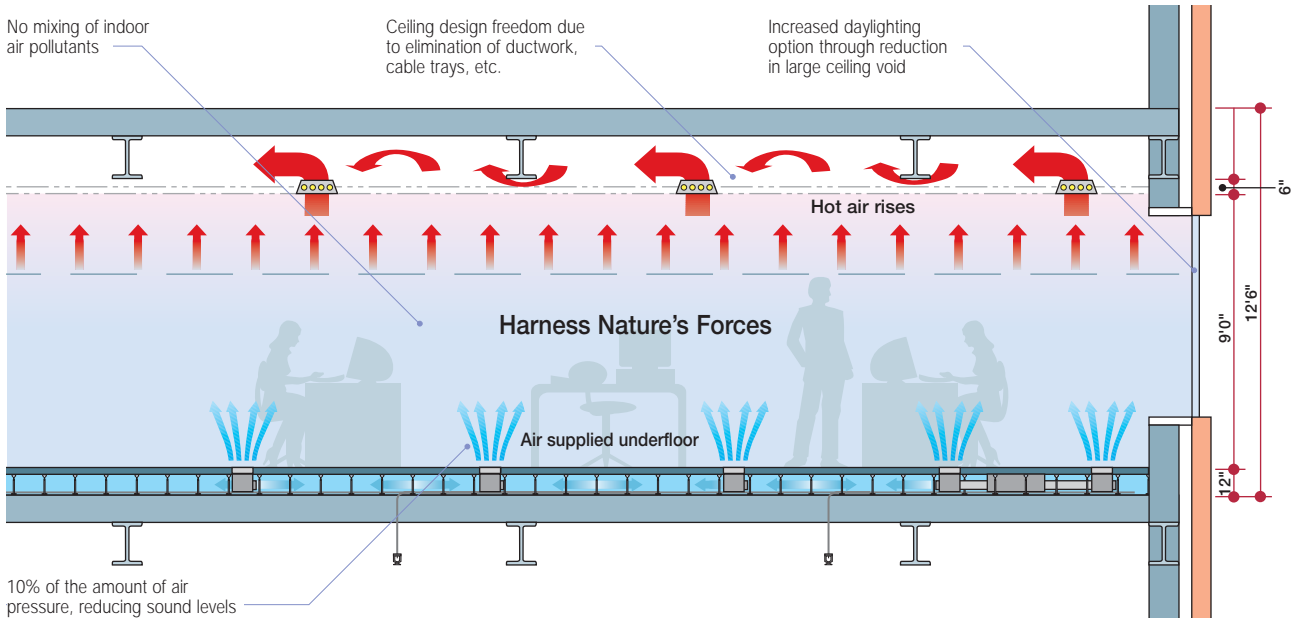


**Expensive and inflexible**  
Rigid, fixed ductwork makes changes expensive and disruptive. Extensive amounts of ductwork and labor intensive installation slows down construction and drives cost up.



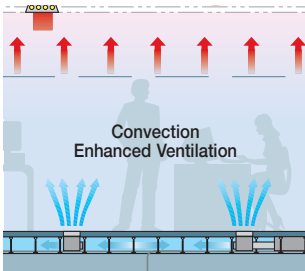
**Poor space utilization**  
Large ceiling void space required due to poor integration of fixed service pathways.

## Tate BTP underfloor air management system



### Unrivalled flexibility

With the entire space under the access floor used as an air distribution pathway, you can plug modular VAV or passive diffusers in anywhere, and when you make changes in your space, simply adjust air direction or unplug and relocate in minutes!



### Improved energy efficiency

Save 20% or more on your HVAC energy costs by using underfloor air. How? Significant fan energy savings, more hours of economizer operation, and reduced outside air option due to better ventilation effectiveness.



### Improved personal comfort control

With options available for individual volume and air direction control, underfloor air delivers the ultimate in personal comfort control.



### Improved indoor environment quality

- Better ventilation effectiveness - superior IAQ
- Quieter operation - improved acoustics
- Optimized ceiling void - increased daylighting opportunities



## Renovation Solutions: DST Systems, Inc., Kansas City, Missouri

DST Systems, Inc. is the number one information processor for the mutual fund industry. DST also offers software, securities processing, and other services to mutual fund and insurance companies. As DST moves further into the 21st century, they recognize some of the greatest demands on their buildings are flexibility, maximization of space, and the capability of the building to accept new technologies.

Responding to rapidly changing business conditions is critical, and Tate's innovative Building Technology Platform® is a complete system that assures the ability to respond to change. DST's newly remodeled facility is a great feat. The two-story 40,000 ft<sup>2</sup> manufacturing space has since been converted into a three-story 60,000 ft<sup>2</sup> high-tech office space. Located in downtown Kansas City, Missouri, this pioneering building transformation could only be made possible through the use of Tate's Building Technology Platform.

### Tate Building Technology Platform® Solution:

A spectacular renovation project using Tate's Building Technology Platform® clearly illustrates the concept of  $1 + 1 = 3$ . And, DST proves this new math is truly valuable indeed. Utilizing the space saving features of a Tate access floor, underfloor wiring, and YORK's FlexSys™ underfloor HVAC distribution system, the architects were able to insert an additional floor between the first and 'second' floor. This was made possible by eliminating the excessive and wasted overhead drop space traditionally used to house HVAC ductwork and wiring in a drop ceiling. Even with the addition of an entire third story, there was still room for an 8 ft ceiling throughout the first level and the 'new' second floor.

# Easy Adaptation and Flexibility for Years of Low-cost Service

The Tate Building Technology Platform® has been designed to provide optimum value, flexibility, and trouble-free service now, and in the future. The modular design allows you to adapt to change easily and at a low cost. With Tate Access Floors adapting to ever-changing technologies, constant organizational shifts, and new environmental regulations and standards will no longer demand expensive facility investment and construction costs. Tate underfloor systems allow you to update your technical capabilities, floor plan, HVAC controls, and image, using your own effective and low-cost resources.

## The Freedom of flexibility

Spaces are reconfigured at a rate of 40% per year. To meet this demand for change, Tate's Building Technology Platform® is designed to afford interior design freedom and quick 'plug & play' access to all services.

- Flexible and accessible services allow you to plan your space around functional requirements rather than be limited by fixed, inflexible services.
- Simple service connections minimize the need for professional outside services.
- Power, voice, data, and heating and cooling services can all be quickly accessed and reconfigured to meet any layout.
- Service changes can be made with minimal disruption to the work environment.



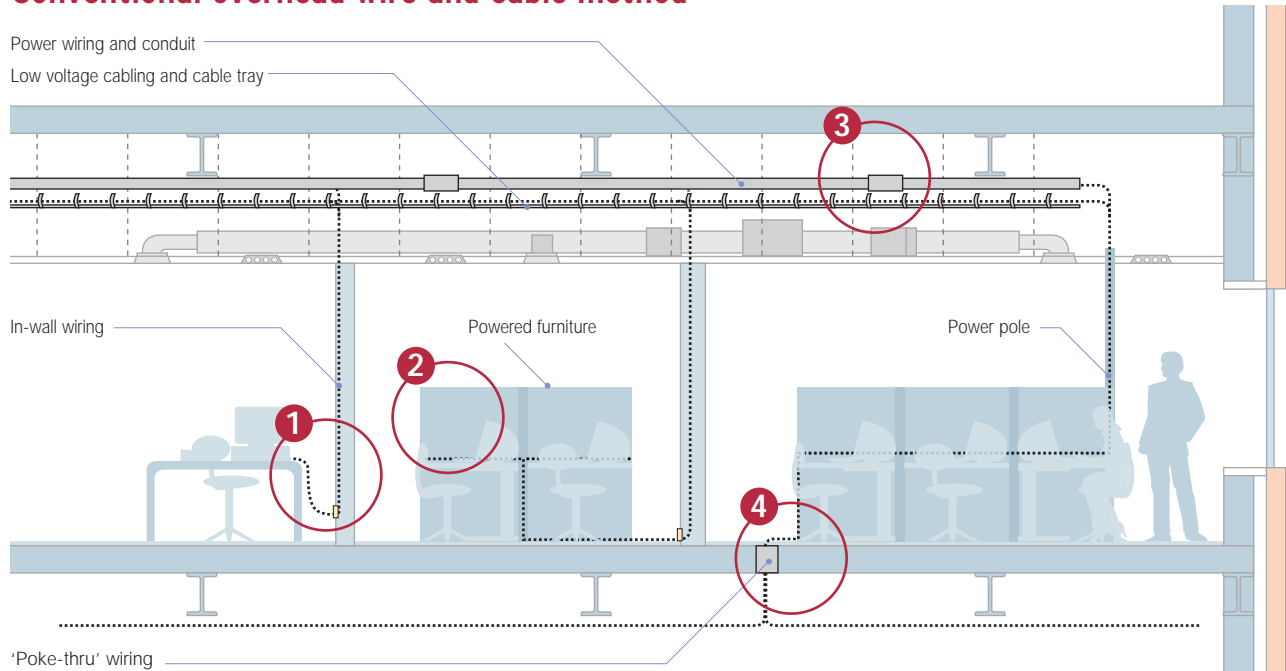
“ The raised floors allow for phenomenal flexibility with one of the major benefits being easy reconfiguration of space as needed ”

*Robert Smith, Project Director on Central City, PCL Constructors*

# Benefit from Tate's Wire & Cable Management System

Avoid the trap of using inflexible and expensive wire and cable systems in your building. With Tate's Wire and Cable Management solution, consisting of a Tate Access Floor with modular 'plug & play' power wiring and zone cabling solutions, you can be assured your building will provide ultimate flexibility that allows you to respond to organizational and technology changes quickly, easily, and cost effectively.

## Conventional overhead wire and cable method



### Rigid and non-adaptive

Wiring and cabling embedded in walls and columns is fundamentally inflexible, making moves/adds/changes to technology expensive, disruptive, and wasteful.



### Poor integration and wasteful

Ceiling pathway for wiring and cabling increases vertical run lengths, labor, and suspension material costs, making subsequent changes disruptive and expensive.



### Expensive and inflexible

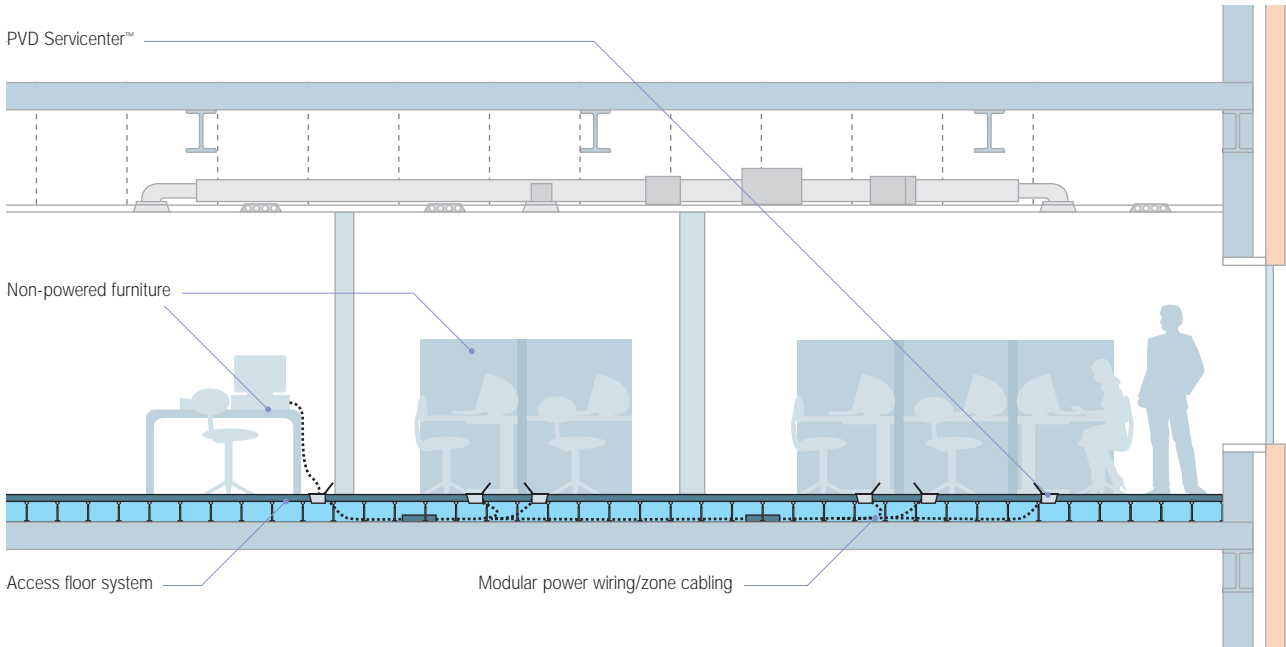
Running wiring and cabling in highly reconfigurable furniture is expensive, limits capacity, and severely compromises its reconfigurability.



### Disruptive

Fixed 'poke-thru' devices for wire and cable delivery cause disruption and security issues with occupants both above and below.

## Tate BTP underfloor wire and cable management system



### Complete flexibility and reconfiguration capability

An access floor with modular 'plug & play' power wiring, and cabling components provides complete flexibility. As your business needs change so too can your service distribution system – quickly, easily and cost-effectively!



### Reduced impact on base building

Access floors eliminate the need to embed wiring and cabling within concealed rigid structures such as walls and columns, thereby allowing tenants the freedom to access their wiring and cabling quickly and easily.



### Complete accessibility and unlimited capacity

An access floor provides you with access to your service pathway at any location on the floor plate, with finished floor heights that accommodate any capacity needs.



### Point of use services wherever you need them

PVD Servicenters™ with modular 'plug & play' connections provide point of use termination of power, voice, and data at any location on the floor plate for any type of workstation and application

# First-Cost Competitive

Lower installation costs are just the beginning of the cost savings and efficiencies that the Tate Building Technology Platform® has to offer your company's facilities. This system is equipped with a service distribution system that creates maximum value and flexibility.

You'll realize immediate benefits in regards to time and expense with this system. Advanced service distribution projects have reduced installation costs by up to 10% and achieve 15% faster build and completion times. The ability to reconfigure easily to meet future needs, controls and lowers costs incurred through adding new technologies or redesigning workspaces.

- Flexible design adapts easily to existing or new architectural features.
- Voice/Data cabling - Reduce cable run lengths, eliminate cable trays, and lower labor costs at installation.
- Power wiring - 'Plug & play' technology significantly reduces installation costs.
- Furniture - Eliminate dependency on costly powered furniture and improve space planning options.
- Air distribution - Significantly reduce trunk, branch, and discharge ductwork.
- Ceiling - Reduce or even eliminate suspended ceiling requirements.
- Time to occupancy - Underfloor services install quickly, allowing for earlier occupation.



# Operational Cost Savings

Tate Access Floors are not only easy and cost efficient to install; they significantly reduce the time it takes to bring your workspaces online. The underfloor design makes access to cabling, power, communication, data, and HVAC systems simple and straightforward. And the system's inherent flexibility keeps reconfiguration costs low with full floor access to all infrastructure services.

With built-in energy efficiency, improved indoor air quality, and enhanced personal comfort control, this space will continue to provide operational benefits well beyond a successful move-in.

- Energy – Lower fan power, extended use of economizer, and reduced outside air due to better ventilation effectiveness.
- Space churn – Reduce costs by at least 50%. With flexible and accessible wire/cable infrastructure and floor mounted plug & play components, changes are easily accommodated using in-house personnel.
- HVAC – Floor diffusers are not ducted to the air supply allowing for better comfort control, more flexible zoning strategies, and improved productivity.
- Tax Savings – Underfloor components may be considered personal tangible property and qualify for accelerated depreciation tax benefits.



# Tate's Integrated Cost Modeling Software

Tate provides an interactive cost modeling tool designed to evaluate the cost differences between traditional overhead service distribution and Tate's BTP® utilizing access floors and underfloor 'plug & play' wiring, zone cabling, and air. It has built-in flexibility, allowing the user to define many of the design parameters providing an extensive array of cost comparison options.

*The following cost analysis is for an 11 story, 250,000 ft<sup>2</sup> building in Baltimore, MD, comparing conventional service distribution with powered furniture and overhead air to access flooring for wire, cable, and HVAC distribution.*

*For an evaluation of the cost saving opportunities for your specific project using Tate's integrated cost model visit:*



[www.tateaccessfloors.com](http://www.tateaccessfloors.com)

or call us at: **1-800-231-7788**

## First-Cost Competitive

First Cost Comparison	Traditional (\$/ft <sup>2</sup> )	BTP® (\$/ft <sup>2</sup> )	Difference (\$/ft <sup>2</sup> )
Raised core	\$0.00	\$0.19	(\$0.19)
Access floor	\$0.00	\$5.25	(\$5.25)
HVAC distribution	\$6.61	\$5.12	\$1.49
Cable management voice/data	\$2.38	\$1.77	\$0.61
Electrical - horizontal feeds	\$2.11	\$1.16	\$0.95
Workstation electrification	\$2.53	\$0.81	\$1.72
Earlier owner occupancy savings	\$0.00	\$0.25	\$0.25
Ceiling finish	\$1.41	\$1.10	\$0.30
<b>Total</b>	<b>\$13.34</b>	<b>\$13.21</b>	<b>\$0.13</b>
<b>First cost savings for BTP</b>			<b>\$32,500</b>

## Operational Savings

Lifecycle costs	Cumulative cost savings by year (\$/ft <sup>2</sup> )				
	Year 1	Year 2	Year 3	Year 4	Year 5
Workstation churn	\$1.16	\$2.36	\$3.59	\$4.86	\$6.16
HVAC churn	\$0.33	\$0.66	\$1.01	\$1.37	\$1.73
Energy reduction	\$0.25	\$0.50	\$0.77	\$1.04	\$1.32
Accelerated depreciation	\$0.65	\$1.73	\$2.35	\$2.68	\$3.02
<b>Total</b>	<b>\$2.38</b>	<b>\$5.26</b>	<b>\$7.71</b>	<b>\$9.94</b>	<b>\$12.23</b>
<b>Operational savings 1st year</b>					<b>\$504,914</b>

## Improved Productivity

Staff productivity savings	Cumulative cost savings by year (\$/ft <sup>2</sup> )				
	Year 1	Year 2	Year 3	Year 4	Year 5
Absenteeism	\$1.30	\$2.64	\$4.02	\$5.43	\$6.90
Productivity	\$1.62	\$3.30	\$5.02	\$6.79	\$8.62
<b>Total</b>	<b>\$2.92</b>	<b>\$5.93</b>	<b>\$9.03</b>	<b>\$12.23</b>	<b>\$15.52</b>
<b>Staff productivity savings 1st year</b>					<b>\$730,710</b>

## Rethinking Construction - The Savings Add Up!

	First Cost Savings (\$/ft <sup>2</sup> )	Cumulative cost savings by year (\$/ft <sup>2</sup> )				
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>First Cost Competitive</b>	\$0.13	-	-	-	-	
<b>Operational Savings</b>	-	\$2.38	\$5.26	\$7.71	\$9.94	\$12.23
<b>Improved Productivity</b>	-	\$2.92	\$5.93	\$9.03	\$12.23	\$15.52
<b>Total</b>	<b>\$0.51</b>	<b>\$5.82</b>	<b>\$11.70</b>	<b>\$17.26</b>	<b>\$22.68</b>	<b>\$28.26</b>

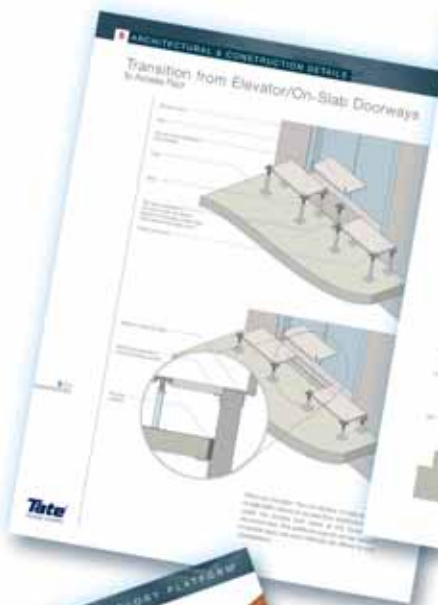
# Integration

## Incorporating Access Flooring into Existing Buildings

Incorporating access floors throughout a building is not difficult or costly if this need is considered early in the building's renovation design phase. This process helps to minimize transitional steps, ramping and difficult interfaces with other architectural elements. When proper integration measures are taken during this critical stage, maximum investor and tenant value is achieved.

Maintaining maximum flexibility and accessibility throughout the building requires access floors to be placed in areas such as service rooms and main service pathways to provide critical 'connections' to the main office environment. These areas include, but are not limited to: main lobby, corridors, elevator lobbies, and mechanical, electrical and telecom rooms.

Tate has developed a complete set of construction details which consider the requirement of designing the core and shell with access floors.



Please call the **Tate Technical Hotline**  
**1-800-231-7788** or visit  
**[www.tateaccessfloors.com](http://www.tateaccessfloors.com)**  
for further information.

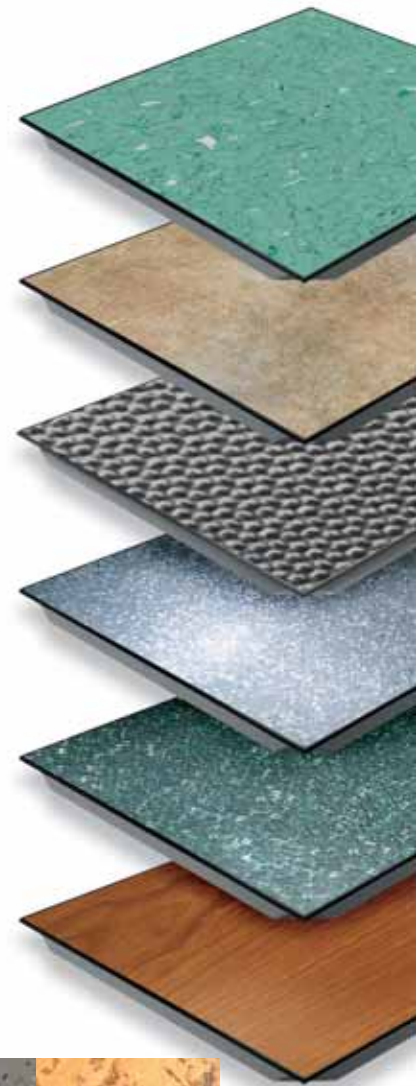
# Floor Finish Solutions

## Solutions for Every Application

Access Floors have emerged as a practical solution for numerous building types, not just the traditional office and data center settings with which they are most often associated. Tate Access Floors has made a commitment to service the needs of today's modern renovations by expanding our product offerings to include new and exciting finishes such as luxury vinyls, wood veneers, cork, rubber and stone as well as the traditional high pressure laminates, static control vinyls and freelay carpet and hard tile finishes.

These finish options give architects and designers practically unlimited freedom to create a look that is unique and coordinated to their specific project, while still maintaining the versatility and convenience that an access floor offers.

**Interchangeable panels with a variety of surfaces**



## Floor Finishes



*Hard finishes, textures, and effects*



*Soft finishes – carpet or carpet tiles*

For further details on the full range of finishes contact Tate Access Floors and request the Floor Finishes brochure.

**Note:** Precise color should be judged from the actual material. All finishes are subject to availability.

# Tate®



## Tate Access Floors, Inc.

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[kingspan.com](http://kingspan.com)



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A member  
of the  
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