# Strang's Synchald Client, A Chance To Do Something Special

# Chemical REACTION

The Formula Leading Up To the Renovation And Addition At The University Of Wisconsin Chemistry Building

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Madison • Waukesha

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# SYNCHRONICITY



#### People, Places, And Spaces, In That Order

Yes, our new office building is amazing - c'mon, it's a synchronized design by Strang. Located within the Capitol East District of Madison, we join a revitalized downtown neighborhood experiencing a renaissance of built environments, both new and adaptive reuse. Each of these projects is uniquely special - a tip of our hat to the teams who brought them forward. Yet even with their wow factor, the built environments are merely a backdrop to what's really going on over here.

In our new space, we are at the center of Madison's augmented urbanism, a combination of experiences on a connected human-scale. We're embraced by housing, enterprise, entertainment and recreation, just steps away. As architects, designers and planners, it doesn't get much better. Here you will find a fusion of industries, some well-established, others forging exciting new fronts in commerce, healthcare, the arts, sports, energy, entertainment, hospitality and software. Here too, you'll find an inclusive mosaic of humankind, urban pioneers empowering an energy of renewal and resolve. Amongst us exists a kindred spirit of curiosity which ignites innovation, and a preference for collaboration that galvanizes confidence.

Now, this is not solely about reclamation of space. More importantly, it's a reclamation of place and possibilities – for commerce and community, alike. It's about pride in potential. Frankly, it's about locking arms with contemporaries and neighbors, then stepping forward to help realize the fullest potential of our businesses, neighborhoods and community, together. You see, we believe a strong and vibrant city centre benefits the entire Greater Capitol Region. Our structures, places and spirits rise together. We also believe the Cap East Corridor is an exceptional, distinctive place, and we are better for being here.

Yes of course, the buildings themselves are special. However, they are but one factor within a larger equation. What really matters most are the people who occupy these spaces and our Cap East 

in

TRANG

Larry Barton, President, CEO

# INSIDE SINCINGAZINE

#### **Chemical Reaction**

What the new UW-Madison School of Chemistry building means to the department and the university.

Building Information Modeling

&A

# **U**pdates

See our progress at Northern Sky Theater.



Valued Strang Assets Meet some of our most Valuable people.



Chemical School of Chemistry Building means for the department and the University of Wisconsin - Madison





A conversation with Professor Robert J. McMahon, immediate past Chair of the University of Wisconsin - Madison, Chemistry Department.

As a chemistry professor at the University of Wisconsin – Madison, Bob McMahon has always been adept at studying how substances interact, combine and change to form new substances.

But in 2009 Bob began to consider a different kind of chemical reaction – one that would transform his department's outdated lecture rooms and teaching labs into a state-of-the-art instructional facility.

The need had long been identified. As far back as 2000, when improvements were made to the Chemistry Department's research facilities, officials knew they'd need upgraded instructional facilities.

Leaky sinks, poor ventilation and battered lab benches were no setting for a modern-day science laboratory. The outdated facilities limited modern teaching methods. Safety was also a concern. In two of the three chemistry towers, there were no fire sprinklers.

Most sections of the Chemistry complex hadn't been improved since the 1960s. Nothing had been done since the Shain Tower renovation project in 2000.

Bob, who had served as chair of the facilities committee from

an emphasis on active, collaborative learning

groundbreaking research

diverse individuals and ideas

nationally recognized center of excellence

two chemistry alumni Nobel Peace prizes

exceptional research scientists



1995 to 2013 and department chair from 2013 to 2017, was well-versed with the need for improvements. But he could not have known how much STEM education enrollment would expand over the following 20 years.

The expansive general chemistry program would increase in size by 75 percent. And Organic Chemistry courses would more than double in enrollment.

"That's what's brought us to this need," said Bob, currently Co-Chair of the Facilities Committee.

But the University didn't have the property needed to expand until 2009 when UW finally acquired adjacent property. It was the critical step the department needed to move forward.





While many people were involved in tasks from fundraising to programmatic design, it was Bob who created the compelling case for the project by showing the scope and impact of the instructional activities in the chemistry department.

"There are various flavors to the chemistry department – physical,

#### A Busy Place Chemistry Building Use

- *12,000+ students/day*
- 7,000 undergrads/ semester
- 70 percent of undergrads utilize



# DESIGNSYNCHRONICITY

#### We've been constrained for decades by facilities. To be able to unleash the talents of our staff, that's really exciting."

Professor Robert J. McMahon

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analytical, organic, inorganic... These teaching programs function as autonomous parts. I pulled everything together and showed what we do within a single department," he said.

The \$133 million expansion and renovation project, newly under construction, will add a 188,000 SF eight-story tower, and







SYNCHRONICITY



*I've come to appreciate* the role of the architect as a representative of the project and as part of the team who could articulate the vision." Professor Robert J. McMahon



The Facts UW Chemistry Building

- 188,000 SF Tower
- 45.000 SF Renovation
  - \$133 million cost
- Est. completion: 2022

renovate another 45,000 SF of the Chemistry Building. The four-year project officially started with a groundbreaking ceremony on Sept. 14.

The new tower will be constructed first, followed by the renovation of the existing facilities. The project is anticipated to be finished by early 2022.

Besides important upgrades to ventilation and fire control systems the new and remodeled space will house lecture halls, active learning classrooms, offices and instructional labs for undergraduate general, organic, inorganic, physical and analytical chemistry. It will feature renovated chemistry labs and transform the Chemistry Library into an Information Commons.

The improvements will emphasize active learning techniques like small-group work. Spaces adjacent to labs will let students collaborate when analyzing lab experiments.

"I think our new facility and curriculum will be a national model," Bob said.

"The write-up rooms – the ability to work with a team and analyze data right there in a lab setting. Another thing is safety. That's immersed in all of this – from fire sprinklers to better ventilation and having two exits to every lab."

The department also benefited from some fortuitous timing: At the same time the facility



was being planned, the department was reviewing its curriculum. Each was able to inform the other, custom-fitting the improvements into the updated curriculum.

So just as the Shain Tower improvements helped with research, the improvements over



the next several years will benefit teaching at the Chemistry Department.

Bob couldn't be more pleased.

"I feel an obligation to the institution and to the next generation of students," he said. "I want this place to be as good as it possibly can."





# Technically Speaking

#### Here at Strang, Scott Fanello Leads Our BIM Team

Scott honed his expertise through 20+ years of BIM leadership. He is a passionate proponent of BIM and is often invited to speak at national conferences on the subject. SyncMAGAZINE caught up with Scott to discuss his role and responsibilities as Strang's BIM Director. Young Leaders' Series

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Within Strang, we practice a proprietary project management model entitled, *Design Synchronicity*.

This "by design" disciplined protocol integrates the vision, values and priorities of our clients with the combined skillsets of our architects, engineers, interior designers and ultimately, the contractor partners.

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# 1

BIM is an advanced 3-dimensional model-based process that generates and distributes critical data among key project personnel.

This tool presents an augmented information loop designed to explore and explain the complex corollaries of the design, construction, operation and maintenance of today's intelligent buildings.

# SyncMAGAZINE: So first off, how does a "Director of BIM" differ from say a CAD Manager and BIM Manager?

Scott: Great question! The role of a "BIM Director, BIM Manager or BIM Leader", comes down to relatively the same thing. We have a plethora of responsibilities based upon the needs of our respective staff. And since every operation is different, BIM roles are dynamic and diverse. Basically, we provide leadership throughout the organization to strengthen staff proficiency and productivity, ultimately helping to ensure optimal project outcomes. Depending upon need, BIM leadership may be focused on a technical role, whereas some organizations call upon BIM experts to helps direct the strategic path forward. We're prepared and ready to do both.







# SynchMAGAZINE: Could we ask you to summarize your responsibilities here at Strang?

Scott: At the moment, my primary function is to hone our core BIM procedures. That means developing quality practice standards together with resource materials that guide our staff to be as precise, consistent and collaborative as possible – that is very important to me. In addition, developing and maintaining project execution plans is also vital. Making sure all team members (internal and external) are in sync and have a mutual understanding and set of expectations is crucial for a successful BIM project. Another aspect I'm heavily involved in is educating our staff on utilizing collaboration and coordination powers of our BIM platforms. For example, running clash detection during design is a great asset, not only for ourselves, but for our partners and our clients.

## SynchMAGAZINE: What additional responsibilities might BIM leaders expect to assume?

Scott: Training and education is paramount, not only for staff, but also for management and our clients. The transition from hand drafting to CAD was fairly easy... same basic principles, just different, more efficient tools. Transitioning from CAD to Revit; now that was an entirely new process with all new tools which means a steeper learning curve.

Other key roles that need to be fulfilled include research and development into new technology, potential office strategies and process improvements, troubleshooting and assisting staff with technical issues, setting up project models, managing software (licensing, installs, etc.), analyzing and executing model health checks to ensure they are functioning efficiently, content creation and maintenance, and my personal favorite, clash detection.



# SynchMAGAZINE: What would you say are some of your challenges in this role?

Scott: Like many of us today, time management is my biggest challenge. Not so much project schedules but managing to get everything accomplished in a timely matter. Obviously, troubleshooting software or model issues will always be a priority. However, finding time to research new tools or processes while providing adequate service to our staff can be difficult. There are a considerable number of functions that need my attention, so being able to manage and prioritize what needs to be done is a crucial aspect of this role. That's true for most BIM leaders.



# SynchMAGAZINE: Have you found anything to help you in your day to day tasks?

Scott: Absolutely! I rely heavily on my "Power Users" within Strang. We have a large number of individuals with strong passions and desires for our BIM functions. Having individuals that can champion areas like virtual reality, content creation, document QC's, detailing, etc. has been a huge help for me. I cannot give those people enough credit for their contributions to our organization! I'm a strong believer in empowering those who have a passion for something... why hinder them from doing something they have a desire to advance in, it will only improve things for everyone involved!

#### SynchMAGAZINE: Any big ticket items you're looking forward to in the future?

**Scott:** I'm highly interested in the development of augmented reality (AR). AR is more fluid and natural. I like the idea of visualizing abstract components as you move around them, rather than those elements moving around you. It's one thing to walk your client through their potential facility in a virtual realm, but a whole different experience to take them to their site and show them what their facility could look like in real time!





## SynchMAGAZINE: Any last thoughts?

Scott: Regardless of technology advancements or cool tools we get to utilize on the job, remembering there is a human element involved is still important, and in my opinion no software or process will truly eliminate that completely. Communication and collaboration still needs to happen on a personal level and should never be replaced or taken for granted.



#### SynchMAGAZINE: Is BIM leadership your only passion?

**Scott:** I would be less than honest if I said yes. I do have a passion for many things actually. For instance, I'm a big diesel truck enthusiast, I like to play the drums, and most importantly I love spending time with my family.

Aside from being Strang's Director of BIM, I still enjoy being involved in the design of projects. Staying involved in the design process helped me earn my professional license as an electrical designer. Both roles surprisingly work hand-in-hand and I've learned so much by doing both. The BIM leadership aspects have taught me about general building construction - from equipment layouts, to system coordination, to construction timelines. The design aspects have taught me ways that I can help others improve the BIM process and day-to-day tasks. Plus, there's just a certain credibility and trust you earn from your staff when you're down in the trenches with them.



STRANG



Six Consecutive Years. In Business Magazine, Executive Choice Winner, Commercial Architectural Firm.

> Your Continued Vote of Confidence Is Sincerely Appreciated.



Summit Credit Union, Headquarters

UW-Madison Chemistry Building

Gebhardt Building





MADISON WAUKESHA www.strang-inc.com

Beneath the White Cedar, Beech and Birch canopies, Peninsula State Park is the summer home to some magnificent wildlife, like

#### bald eagles, deer, fox and coyotes.

Oh, and Northern Sky Theater too.

#### And Soon, Experience Northern Sky Theater's Entirely New **39-Acre Creative Home Campus** At the intersections of County Roads A & F in Fish Creek, WI

**New Autumn and Winter Home** Intimate 245-Seat Indoor Theater, Rehearsal Space, Preproduction Facilities And Administrative Offices

Take a closer look at the videos for the latest developments.







NORTHERN / SKY heater

**Progress Update** 

Jobsite Tour

Door County's award-winning Northern Sky Theater has announced its 2019 Summer Season. We Like It Where?, Dairy Heirs, Windjammers will play in rotating repertory. Fall season will feature world premier **Dad's Season Tickets** for an extended run at the company's new Creative Home Campus. Tickets will go on sale March 1st in the Northern Sky box office at the Green Gables shops in North Ephraim, via phone at 920/854-6117, or online at www.NorthernSkyTheater.com.



ESIGN



Enjoy Delightful And Frivolity

Their Cast Silly Laughs **Antics** Aplenty Nonstop **Nightly** 





3,700+ hours of hard work, but who's counting?

Meet Alec Hembree, a Senior Architectural Designer here at Strang. Alec recently achieved the certification of Architect after successfully completing that many hours of work in six categories of architecture. Congratulations, Alec!

Matt Matson has more than 25 years' experience in engineering, marketing, business development and strategic consulting. Now he's brought his skills to Strang as our Vice President | Strategy and Client Services. Matt will focus on advancing new business development for Strang.

### Meet the new kid on the block. (Well, he's new to us)





STRANG



Hebron House is thankful for our partnership with Strang professionals. We truly appreciate your commitment to community service.

Since 1982, Hebron House has been here to help uplift people out of homelessness within Waukesha County.

The mission of Hebron House is to provide shelter and services to help individuals and families overcome their homelessness.

www.hebronhouse.org | ajsimms@hebronhouse.org

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# SYNCHRONICITY

### Hey kids: Thanks for the cards!



When we presented the use of Virtual Reality in architecture at FutureQuest (hosted by the Dane County School Consortium in conjunction with the Madison Metropolitan School District in December), we expected to see 5,000 students. But we didn't expect their thank-you notes!

Pear Entrure Quest Architect, those for For your time and attention The VR was Cool.	
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Dear Strong. Thank you for show me and Internal others your curve and mages tar is to be the same something. The VR madel, hence was also a great heads. Thanks again. Isaac Goecks, McForland	

### STRANG

#### VOLUNTEER. DONATE. CARE.



Be part of the solution to end homelessness in your community.

Support The Beacon.

The Beacon is a homeless day resource center. Open 365 days a year. Helping over 200 people daily including families with children.

> Make A Difference. Impact A Life.



Learn how you can help at www.TheBeaconHelps.org



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