

INSIDE THIS ISSUE

- 1 When Presentations Fall Short
- 2 Romance and Commerce
- Jerry Allen and the Dick Tracy of IAQ
- 3 What's Building Science Got to Do With It?
- 4 The Newest Cars Are Taking Flight

HIGHWAYS IN THE SKY

THE NEWEST CARS ARE TAKING FLIGHT

If 2017 just doesn't quite feel like "the future" to you yet, you'll be pleased by the next two words you are about to read: flying car.



The age of sports cars in the sky may be closer than you think. A Slovakian company called AeroMobil first filmed the maiden flight of their "Flying Roadster" prototype in 2014, and says the amazing car-airplane hybrid will hit the market as early as 2017.

Popular Science dubbed the invention, officially named AeroMobil 3.0, one of the ten most brilliant inventions of 2015. The fascinating (albeit not so uncommon) idea was finally brought to life by Štefan Klein, who began working on the invention in 1989. The AeroMobil 3.0 is essentially a two-person sports car with wings that tuck in while on the road and fold out for flight.

The car-plane is a futuristic sports car on land, capable of reaching speeds of 99 mph. When in the sky, it can fly at a speed of 124 mph, and its landing gear allows it to land safely on flat, grassy surfaces. For this reason, AeroMobil co-founder and CEO, Juraj Vaculic, imagines a world where grassy runways will merge into highways, and no additional airports would be needed to accommodate the new form of transportation.



That's right, the day is near. And as if the Roadster wasn't enough, AeroMobil is already making plans to unveil the next prototype in its fleet — a self-flying car.

ANECDOTES AND THE SCIENTIFIC METHOD

WHEN PRESENTATIONS FALL SHORT

Historically, I tend not to travel much during April. As the weather starts to change in Houston, the phone can get pretty busy. However, this year will be different: I'll be visiting my daughter in Seoul, South Korea. Meanwhile, the business will be in good hands. I look forward to seeing my daughter and experiencing the South Korean culture. I'll have 10 days to enjoy the trip before I'm back on a plane to attend a conference in Orlando.

This will be my second conference in as many months, coming soon after the ASHRAE Winter Conference in January. I try to attend as many indoor air quality conferences as possible throughout the year, since the information I gain while attending these conferences is well worth the 16-hour flight back to the United States.

The ASHRAE Winter Conference proved to be a great source of information. One presentation showed how smoke from wildfires isn't just an outdoor air quality problem. Soot and buildup can become a serious health issue for nearby homes and buildings. Another presenter shifted the focus from wildfires in the U.S. to air pollution in China. A colleague of mine in China will be conducting research on air filtration systems, evaluating which ones work best for particular buildings.

At the end of both of these presentations, the speakers were able to answer a number of audience questions, and I left feeling more knowledgeable and excited about the future of IAQ. Unfortunately, I don't walk out of every presentation well-informed, and sometimes presenters leave a lot to be desired.

One presentation I was really looking forward to explored the potential dangers fiberglass presents in insulation around air conditioning systems. Though their application showed



Unfortunately, I don't walk out of every presentation well-informed and sometimes presenters leave a lot to be desired.

great promise, I saw a flaw in their science right from the start. The fiberglass particles they presented as having been blown into the air by the A/C were 3 microns in diameter and roughly 1/8 of an inch long. In terms of particles, that's actually pretty big — much too big to inhale without notice. A person would cough or sneeze them out right away. The fiberglass particles just weren't small enough to become embedded into someone's lungs and cause long-term harm like the speakers suggested.

Additionally, most of the evidence they presented was purely anecdotal, starting examples with phrases like "What we often

saw ..." or "Many of the people we spoke to said ..." Observations and secondhand information do not qualify as research. I'm not saying fiberglass insulation will never be a problem down the road, but the poor science used in that particular presentation isn't going to be what proves it.

The worst part was hearing the other people praising how "informative" the presentation was. I've been in the business for a long time, so my experience allowed me to see the holes in the presenters' logic. Unfortunately, a person who isn't familiar with how the human body reacts to different particle sizes could be very misled by their findings. This is the danger of presentations that aren't grounded in proper science. I would rather not see my colleagues being misled because of poor research.

I'm hoping the presentations I attend at the Orlando convention will be just as informative and helpful as the first two from the winter conference. I'll be very disappointed to have cut the visit with my daughter short only to sit through another anecdote-filled fiberglass presentation.

Train West

Romance and Commerce Go Hand in Hand

SURPRISING WAYS DATING IS LIKE BUSINESS

You're on your first date with somebody new. It's a nice Italian place, the mood lighting is perfect, the food is fantastic, and best of all, the date is going swimmingly — you're both glowing with new opportunity and the possibility that maybe, just maybe, you've finally found a match. The chemistry is palpable.

But then, your date leans back in their chair and, with as much nonchalance as they can muster, says, "So ... when do I get to meet your family?"

When you try to prematurely push your customers into a sale, this is exactly how you sound: like an overreaching — or even worse, pushy — date. Like dating, securing a client or customer is an intricate, artful dance. There's a lot to be gained in both business and romance by acknowledging the similarities between the worlds of romance and commerce.

Make the First Move, but Don't Be Desperate

Just as it is in dating, confidence in your business is key. If you've ever approached a stranger at the bar, you've felt those horrible feelings of awkward apprehension. The same goes for cold-calling prospects or trying to check in with a potential connection at a business networking event. With a solid knowledge of your product and business, and maybe just the tiniest bit of swagger, you can learn what kinds of opening lines or conversations work most effectively.

While you should be the one to approach, it's important that you don't seem needy. No one will ever say yes to you because they sympathize.

Be a Person, Not a Brand

The person sitting across from you at the restaurant is looking to make a connection with you as a human being. If you have transparently shallow intentions — if you're thinking of them as a number — then they will immediately be able to read that in every word you say and every move you try to make. It's the exact same with business. Even though that other person is more likely to be looking for a solution to their problem, it's been proven that people do business with people they like. So, before you start robotically listing off the benefits of your service or your product, look your customer in the eye and ask them how they're doing. To be truly successful, you have to genuinely care about the human in front of you.

In the same vein, if you overstep and assume something about them or push the conversation too far too quickly, they will retract, and you will lose them as a customer forever.

Client Spotlight

Jerry Allen:

Transwestern Sr. VP — Engineering and Construction



Many years ago, I received a complaint from a client who, after spending hours in their office, started to feel sick in the afternoons. The client was a lawyer with an office located in a building maintained by Transwestern, the national real estate company for which I am the senior vice president of engineering and construction in the Houston area. The client suspected an indoor air quality problem was to blame, so I called one of the few people I trusted to handle the matter: Travis West.

This was in the 1990s, so IAQ wasn't as refined as it is today. When he ran his tests, Travis didn't find anything that could be making the client sick, and we were scratching our heads for a while. But Travis refused to give up and kept digging. Before long, Travis learned the lawyer happened to be a big game hunter who recently returned from Africa with some trophies. On a hunch, Travis examined the trophies now mounted in the office. Sure enough, he proved the agent used by the taxidermist was causing the client's troubles. This is why Travis is my Dick Tracy of IAQ.

Much like the Dick Tracy character has evolved over the decades, as scientific understanding improves, I've seen Travis's techniques and use of technology improve too. Travis has proven time and time again how knowledgeable he is in the field. Eighty percent of the time, Travis finds the cause of the complaint is tenant-related, meaning someone's perfume is reacting with the environment or the office plants are being overwatered, creating mildew.

My guys are good, but they're not perfect, and occasionally a building has a problem that requires special attention. On these occasions, Travis is the one we trust to solve the problem and prevent it from happening again. He even put together a protocol pamphlet we distributed to Transwestern offices across the nation which gives our team step-by-step instructions to address problems and numbers to call if they cannot solve an issue themselves.

I've known Travis for over 20 years and he's never failed to impress me with his work. When we have an IAQ concern, he's the first person I'll call.

What's Building Science Got To Do With It?

HOW BUILDING SCIENCE RELATES TO INDOOR AIR QUALITY

Building science, though often the responsibility of a project's architect, is a far-reaching field requiring a certain level of understanding of architecture, engineering, and construction. However, building science also has a more human element, quite literally, as so much of the practice focuses on how the many elements of a building impact the health and well-being of its occupants.

Due to this, the study of building science encompasses more than the materials or design of a physical structure. Competence in this field means being able to understand how the materials or design of a building relate to external phenomena such as weather, and how those items impact human physiology. Ultimately, these external phenomena can impact the state of the building and influence the building's indoor environmental quality, including indoor air quality.

Ideally, the concepts of building science are being implemented right from the start, during the design of a project. If a building is being constructed in an environment where moisture is a common problem, an effective moisture transport system will need to be implemented. Understanding the need to build using products with low-VOCs, or to provide an HVAC system that is correctly sized, can impact the building's eventual occupants. If these steps are overlooked, the building runs the risk of future mold and bacterial growth.

That being said, having a grasp on sound building science never stops being a necessity, even after construction is complete and a building has



been occupied for some time. An understanding of building science is essential to indoor air quality investigators because of how often the design, materials, or methods used in the construction of the building will impact the eventual air quality provided to its occupants.



SUDOKU

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1 | | | | | | |
| 9 | | | | | | | 8 | 6 |
| | | 8 | | 5 | | | | 9 |
| 8 | 9 | | 3 | | | 6 | 1 | |
| | 1 | 6 | | 4 | 9 | | 7 | |
| | | | | | | | 4 | |
| | | | 6 | 7 | 3 | | | |
| | | 5 | 4 | 8 | | | | 7 |
| | | | | 5 | 1 | 3 | | |