Locks serve two purposes—to keep someone or something in or to keep them out. Really, it falls under the category of security. Consider the word “safe.” It means both “secure from harm” and “a steel or iron box or repository for money, jewels, papers, etc.”

We take locks and keys for granted in our world, underestimating the roles these objects play in our daily security. Just ask Tony Hicks, the Lock Shop Foreman. Tony has worked in the university’s Lock Shop from 1986 to 1996 and from 2007 to the present. Tony’s shop oversees the more than 40,000 doors, and 17,000 individual keys on the Evanston Campus. Not included in this number are the 3,000 electronic locks, all maintained by 10 personnel. On the Chicago Campus, Steve Hopper maintains the almost 15,000 doors single-handedly. Steve will be with Northwestern 30 years as of October 1st, this year.

The Lock Shop is involved almost from the start of every new construction project. They work with the architects and project managers, reviewing building codes and legal standards for the doors in the design. What will lie behind the doors also affects the design. For example, rooms that will contain hazardous material must, by law, have biometric locks.

But along with making sure that new buildings adhere to codes, older buildings must also be modernized. For instance, one building on campus (which cannot be named for security reasons) will have its 450 locks converted to the high security variety this summer.

More about locks on page 4
COLLABORATION IN ACTION

FM’S STRATEGIC PLAN
Like Northwestern University itself, Facilities Management operates with a long-term vision and mission that helps us focus on our key objectives of serving the University and delivering exceptional value to our customers. And just as NU recently revised their strategic plan, the time is right for FM to do the same.

During this past winter, FM began an in-depth Strategic Planning Initiative, partnering with HighBar Consulting to ensure the plan was successful and impactful for our customers. Leadership wanted to make sure that we leveraged the full breadth of FM’s expertise, so over the past few months a strategic planning team was formed with representation from every function and every level of the organization. That team has worked hand in hand with HighBar to assess FM’s current performance, based on customer feedback, and an internal assessment of our strengths, weaknesses, and opportunities. This allowed us to understand where FM needed to be focused to serve the University and determine our strategic priorities.

What happened then?
The outcome of these sessions created a number of initiatives to be used as goals for performance, and tools to improve the culture of our organization. The group came up with five Strategic Priorities, which were then paired with a sponsor:

- Strategic Partnerships (Liz Schaps)
- Innovation (Rob Whittier)
- Customer Experience (Paul Weller)
- Stewardship (Bonnie Humphrey)
- Organization and Talent (Gary Wojtowicz and Steve Kindrick).

A group of up to seven participants was then selected to create a team for each of the Strategic Priorities. Team members consist of staff from FMO, FMDC, FMP, FMFA & FMS to represent the broadest cross section of the organization.

What’s happening now?
These teams are currently finalizing their first drafts of the Strategic Initiatives and will be reviewing them prior to the next Leadership Group meeting at the end of August, where they will be presented.

What happens next?
The next step in the process will be to work on the initiatives that have been identified with an even larger selection of FM participants. The next teams will take the initiatives and develop projects to achieve them. All the projects will then be prioritized and timelines determined for results. It is important to remember this is a five-year process. There will be short-term and long-term projects.

Need more information?
Bill Hellman and Kevin Grzyb were asked by the directors and Ron Nayler to act as liaisons between the teams. Additionally, Bill and Kevin are also involved as representatives for all FM employees and meet with the directors and the consultants regularly to voice any comments, concerns, commentary, or constructive feedback from FM employees to the discussion. If you are particularly interested in a specific Strategic Priority, have questions or comments about the process, call, stop by, or email Kevin (k-grzyb@northwestern.edu) or Bill (w-hellman@northwestern.edu).

PUZZLE CORNER
How many squares can you count in the drawing below?

Know the answer?
Send it in an email to fmnewsletter@northwestern.edu.
Prize: One NU Seal Pro-Weave sweatshirt blanket.
(Still up for grabs! No winner last time.)
Winner will be selected at random from correct answers received.
Deadline: August 19, 2013
(Winner/answer will be posted on the FM website.)
THE JOY OF SOCKS

The FM Customer Service (FMCS) department receives a copy of the Wall Street Journal each day. On Wednesdays, the periodical features a Personal Journal section that deals with health, fashion and leisure topics. In one of these sections was an article entitled, "Socks the new ties of men’s fashion" which stated that with the decline of men wearing ties in the workplace it was important for men to express their individuality through their sock choices.

All the FMCS reps have an eye for fashion and two have a fashion retail background, having worked for Nordstrom Corp., shared the article with their colleagues, and the “2020” fashion challenge was off.

Soon it became a daily occurrence to have workers stop by FMCS and proudly display their ankles. The craze did not stop with socks. Some even added colored shoe laces to their ensembles.

A recent “sleeper” that has entered the sunny sock scene is Jay Vaught. Can you guess which is his?

-Contributed by MaryPat Pyles.
Ms. Pyles is a Customer Service Rep in FM.

FROM THE OFFICE OF SUSTAINABILITY

Evaluating energy: NU gets a checkup

There are 118 buildings on the Evanston Campus that share in the consumption of over 170 million kilowatt hours of electricity and more than 12 million therms of natural gas for heating and cooling. At the heart of all this is Northwestern’s Central Utility Plant (CUP) that sits East of Swift Hall near the pond. CUP is the heart of the Evanston Campus, pumping steam and chilled water through the University’s circulatory system to provide heating and cooling as far North as SPAC and as far South as Crown Hall.

NU’s Facilities Management team has been hard at work looking for opportunities to make our system, as efficient as possible—finding ways to deliver energy efficiently as possible, to conserve energy where it’s used, and to make sure CUP’s four boilers and five chillers are being run as effectively as possible.

“We looked at a variety of technologies in isolation and in combination and at scale, cogeneration just makes the most sense for reducing our utility cost and our greenhouse gas emissions,” said NU’s Director of Sustainability, Rob Whittier.

Cogeneration is the use of a turbine to simultaneously generate electricity and useful heat. Northwestern already has a highly-efficient CUP which utilizes boilers, steam, and electrically driven chillers to provide heating and cooling (through steam and chilled water) to a majority of NU’s facilities in Evanston. Converting to cogeneration would mean adding a gas turbine to generate electricity, meeting as much as 50% of the Evanston campuses electricity demand and producing highly efficient steam for heating and cooling.

Conventional central coal or nuclear-powered power stations convert roughly 33% of their input heat to electricity. The remaining 67% of energy from the turbines is wasted. If you’ve ever seen a cooling tower billowing steam, you’ve seen this in action. Cogeneration plants are designed to use almost all of this waste heat resulting in much higher efficiency and substantial financial and environmental benefits.

While there are many potential benefits, both economically and environmentally, it’s not a decision to be made lightly. For example, the cost of natural gas and electricity can have a significant effect on the viability of cogeneration and forecasting either can be difficult. But early studies clearly suggest that some of these options are viable and NU is currently reviewing the results with experts with the hopes of a decision by this Winter.

If you would like to learn how you can contribute to a more sustainable NU, visit the Office of Sustainability's new website at:
http://www.northwestern.edu/sustainability/
BEHIND THE LOCK

The earliest lock, created by the Egyptians around 4000 B.C., was basically a pin-tumbler lock, in which a hollowed-out bolt in the door was connected to pins that could be manipulated by insertion of a key. When the key pushed upward on the pins, they slipped away from the bolt shaft, allowing it to be withdrawn.

In 1848, Linus Yale, Sr. invented the modern pin-tumbler lock. In 1861, Linus Yale, Jr. was inspired by the original 1840s pin-tumbler lock designed by his father, invented a lock which used a smaller flat key with serrated edges as well as pins of varying lengths within the lock itself. This design of the pin-tumbler lock remains in use today.

Without a key in the lock, the driver pins (blue) are pushed downwards, preventing the plug (yellow) from rotating.

When an incorrect key is inserted into the lock, the key pins (red) and driver pins (blue) do not align with the shear line; therefore, it does not allow the plug (yellow) to rotate.

When the correct key is inserted, the gaps between the key pins (red) and driver pins (blue) align with the edge of the plug (yellow).

With the gaps between the pins aligned with the shear line, the plug (yellow) can rotate freely.

SECURITY LAYER

In many instances, what’s inside a door is more exciting than what’s behind it. Take for example the types of doors that we have here at NU. They could not be more extreme in their differences, but all are quite exceptional. A biometric lock (below) is one that is activated by biometric features, such as voice, retina, signature or in this case, a fingerprint.

A PDF version of this newsletter is available online at www.northwestern.edu/fm/fm-staff/newsletters.html

One of the septuagenarian locks on campus.

The Lock Shop determines the level of risk to a building or room, then implements appropriate combinations of equipment and policies to create a security layer that exceeds the reasonable gain of an intruder. In some instances, when there is no risk of theft of vandalism, aesthetics and stewardship prevail.