

Discovery

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### DISCOVERY PERSPECTIVE FROM CHARLES KOCH

## DON'T KEEP YOUR KNOWLEDGE TO YOURSELF

You've probably heard the old question, "If a tree falls in a forest but no one is there to hear it, does it make a sound?" (This famous thought experiment is attributed to George Berkeley, an 18th century philosopher, although those words are not his.) It's a question that has prompted a lot of debate over the years; however, I'm much more interested in how you would answer a different question:

If a person has valuable knowledge and experience but no one else knows about them, is value lost?

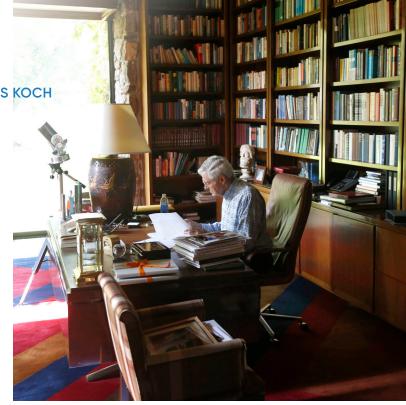
It's an important question, because Koch Industries has more than 120,000 employees worldwide who help us conduct business in at least 70 countries. Ours is not just a big workforce, it is a tremendously diverse group of people, all of whom have the potential to make a significant difference thanks to their varied experience.

But your potential to contribute and your ability to selfactualize will be unnecessarily limited if others in the company don't know about your capabilities. That's one of the reasons we created EverLearn. We wanted a more effective tool for sharing knowledge, building knowledge networks, improving communication and connections, and enabling people to make a bigger difference across all of Koch, regardless of role, company, location or tenure.

EverLearn reflects our Republic of Science model, which calls for all our employees and groups to share knowledge and help each other for the benefit of KII as a whole. The more we share and collaborate, the more innovations we will create, enabling us to succeed and self-actualize.

As you will read in the following pages, our results from EverLearn during its first year have already been impressive. But we can do better — much better. If you haven't yet, I want each of you to make a point of building a strong profile on EverLearn.

When you add specific information to your profile — such as details about your areas of expertise, capabilities,



background, interests and unique experiences — you make it possible for us to multiply the value of your expertise exponentially.

Building and maintaining knowledge networks outside our corporate walls is also vital. As I wrote in "Good Profit" six years ago: "A company must develop effective external networks to monitor ongoing changes in technology, methods, markets, politics, strategies, and people's values." Those who tend to work in silos and fail to learn new concepts — not just from outside Koch but from outside their own company or capability — are unlikely to make significant new contributions.

I look forward to seeing how you will use EverLearn to benefit the company and further realize your potential.

Clarke Vor

"I want each of you to make a point of building a strong profile on EverLearn."



# **BETTER ACCESS TO OPPORTUNITIES**

Coming up with innovations and hiring people with great insights have seldom been problems at Koch. What has been difficult is finding efficient and effective ways to share that knowledge.

How can an engineer at a float glass plant in Częstochowa best connect with an engineer at a different Koch company in Shanghai or Longview, or know which engineer to contact? How can an administrative assistant in Lisle get the solution to a problem that has already been solved in Bangalore — or even become aware it has been solved? How can an INVISTA employee who has been asked to make a sales presentation to a prominent company get some important pointers from someone at Koch who does business with that company?

Last year, Koch launched a powerful solution for challenges like these. It's called EverLearn.

EverLearn is an easy-to-use search tool loaded with specialized information provided by employees across all of Koch. (One Koch leader has described it as "Google meets LinkedIn.") It makes it easier for employees to find the person who may have the much-needed answers to their questions. Wondering about applying blockchain technology in your business? EverLearn lists dozens of go-to sources within Koch. Need someone who speaks Basque? You'll find them on EverLearn. Hoping to share your brilliant new idea? EverLearn makes it much easier for other employees to find out about you and discuss the possibilities.

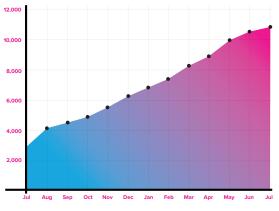
EverLearn is currently processing more than 185,000 searches a month — that's a new connection every 14 seconds — and the number is rising fast, which makes EverLearn the highest-performing knowledge network in Koch's history.

Consistent with our IP Compliance Standards, employees should bear in mind that confidential information learned from a prior employer, third party or even in working roles within Koch, should generally not be shared on EverLearn without the appropriate permissions.

#### **HOW DOES IT WORK?**

To create or update your knowledge profile, enter **koch.link/EverLearn** into your internet browser (Google Chrome or Microsoft Edge are recommended), then click on the menu icon (top right) and select "profile." You will be taken to your own profile page, where you can begin entering your "Knowledge Areas." These can include skills you have, applications you use, vendors or suppliers with whom you have relationships, industries or processes you're familiar with and so on.

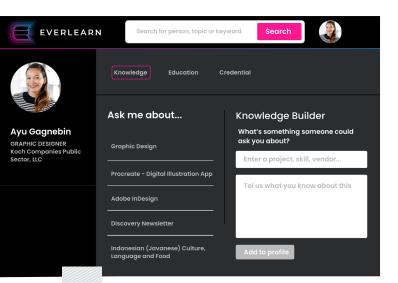
"It's helpful to think in terms of what knowledge you have that might benefit others in the company," said Zach Gray, product owner for EverLearn. "That includes knowledge you've acquired away from work as well as from your previous employers. The more knowledge you add, the more potential you have for creating value. And be *specific*!"



The number of employee profiles has rapidly increased. So has the quality of information being provided.

More than 11,000 employees have already built profiles on EverLearn and that number is growing rapidly. "Quadrupling the number of profiles this past year has been very exciting," said Brandon Dill, platform architect for EverLearn. "But the more knowledge we can capture, the more valuable connections that can be formed." The number of searches is also skyrocketing. "We're just getting started but searches have already increased sixfold. The connections that have been made that might not have occurred otherwise are already having positive effects on the organization."

"If we all do our part by creating strong profiles, EverLearn will make it even easier to find the right person at the right time to help solve a problem, vet an opportunity or respond to a customer," Gray said.



Creating a knowledge profile on EverLearn is as simple as navigating to your profile and adding your unique knowledge and experience.

### **TWO-WAY STREET**

EverLearn doesn't just help you find others with relevant expertise. It helps people find you. When that happens, you not only get to share your expertise, you're exposed to new connections, broader knowledge and new opportunities. When it comes to self-actualization tools, EverLearn is one of the simplest and most effective ever offered.

Zach Gray believes this idea of a two-way street should help shape the information you place on EverLearn. "The more effort you put into creating a strong profile for yourself, the more value it will provide," Gray said. He defines a strong profile as one that accurately reflects your talents, experience and uniqueness — not just things that are part of your role at Koch.

"Do you speak a foreign language? Put it on EverLearn. Are you experimenting with a new technology? Put that on EverLearn, too. When you add your specific knowledge to your profile, you make yourself more valuable to the company and open yourself up to new connections."

### **TIP FOR A STRONG PROFILE**

Think about what others should find for you when they search. Instead of listing something overly generic, such as "Communication Skills," or "Excel," try "speechwriter" or "V-Lookup."

# **EVERLEARN IN ACTION**

Here are just a few examples of the thousands of connections made through EverLearn during the past year.

#### **PYTHONS IN THE OFFICE**

Eyad Hailat is a senior software engineer who was hired last December to work at the Molex design center in Arkansas. "As part of my onboarding, I was asked to fill out an EverLearn profile. My new supervisor, Jacob Bock, said this would make it easier for me to be found and for me to find others." At the top of Hailat's listings was a mention of his work with Apache Kafka, an opensource tool for storing and retrieving data in the form of events.

"Kafka is like the ultimate high-speed bus," explained Hailat, who has used it for more than nine years to build systems and what he calls "data pipelines" for various projects.

"You load your data at one end and it moves everything quickly and safely to your preferred destination at the other end. It's super fast and scalable. The data can be from the shop floor or a welding machine or sensors. It doesn't matter. It will absorb the data even if the amount is huge. And whether you're consuming from one station or several stations, it will all be delivered very reliably and very fast."

Hailat's brother, Zeyad, happens to work at Guardian Industries, another Koch company, where developers and software engineers had already installed Kafka but had some important questions about the best way to integrate it into one of their applications. Zeyad advised them to use EverLearn to reach out to Eyad.

"Guardian was a little bit ahead of Molex as far as user integration but they needed to know more from someone who had used it extensively — someone who could help them elevate their use of it," Hailat said. "You see, installing it is one thing, but using it is another. Since Kafka is my favorite 'toy' for managing data, I agreed to share my expertise to effectively manage Kafka clusters in production as best as I could."



When the session began (Hailat said they scheduled an hour), he was surprised to discover how many people from Guardian were participating. "It had gone much higher up the ladder than I expected. There was a director, a data scientist and a few managers and engineers. I'm almost embarrassed to think about it now because I hadn't developed any slides or visuals or anything like that." The Guardian team didn't mind. They wanted a conversation, not a presentation. They peppered him with questions about security, customization and how to operate the program better. Hailat was able to anticipate almost every question. "I had been in their shoes and knew exactly what they were trying to do."

It wasn't long after their connection when Hailat began to receive a stream of thank-you notes. "Using me as a resource became a huge benefit for Guardian," he said. "I not only understood their operational challenges, I understood their corporate culture, their Guiding Principles. We also avoided waste because they didn't have to spend money on consultants or sign contracts or hassle with nondisclosure agreements and all that. We could get right to it.

"That," Hailat said with a smile, "was one of my best collaboration meetings ever."

### PLUS ONE

Eyad Hailat's supervisor, Jacob Bock, has been with Molex for 10 years. He leads a software team that includes dozens of developers in the United States and India. He explains their role this way: "Our group is all about helping the company improve its processes. For example, we build a lot of manufacturing testing equipment. Our role is a little weird because we don't sell software. That's not our focus. Instead, our goal is to leverage software in ways that help other areas of the company."

When updating his EverLearn profile last year, Bock mentioned his experience with Python packaging. (Despite its name, it



has nothing to do with snakes or containers. It's a programming language that helps coders write clear and logical programs for projects of any size.) He

estimates there are hundreds of developers working for Koch companies around the globe who use Python for applications, such as creating signal integrity.

Thanks to EverLearn, Bock was able to share his knowledge about Python with a programmer from Koch Global Services, who in turn shared "super helpful" knowledge about AWS (Amazon Web Services) with Bock, helping him solve a problem for Molex he had been trying to figure out. "So that," Bock said, "was a double win for Koch."

Bock often emphasizes how EverLearn is a powerful two-way street: "It not only helps you find the subject matter experts with answers to questions you may have, it helps others become aware of you and your capabilities. That kind of visibility is essential for creating opportunities and furthering self-actualization."



**Another knowledge network** — Jacob Bock presented his team's work with Python at the recent Modern Application Architecture Development conference led by John Prytulka and Jason Drumright of Koch Global Services. Check out this and other presentations at koch.link/MAADCon.

# Discovery

#### **ARTIFICIAL INTELLIGENCE**

Last summer, Brendan Pousett, a technology developer at Genesis Robotics in Canada, reached out to Earl Carlisle and Vamshi Mugala, two of his counterparts at INVISTA in Wichita, with questions about machine learning and artificial intelligence. Pousett, who found the data scientists via EverLearn, wanted to know if AI was expensive, resulted in a lot of redundancies and if the "learnings" were tough to interpret — especially regarding predicting performance.

The INVISTA team's responses went beyond answering the questions of the Genesis team. "Talking to INVISTA on EverLearn helped us understand not only the best solution to our problem but to refine the scope of our project and connect with other subject matter experts around KES," Pousett said. "This helped us avoid re-inventing the wheel so we could focus on applying existing data analysis infrastructure to our specific application."

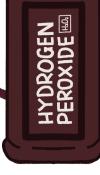
### POUR IT ON

Most of us think of hydrogen peroxide as a common antiseptic or bleach and use it without thinking very much about where it comes from or how it's made.

Earlier this summer, INVISTA'S R&D team was investigating other uses for this common chemical as well as the factors affecting its pricing. As they did their research, they began wondering if anyone else at Koch had better knowledge or had ever thought about innovating ways of making the chemical.

Sure enough, EverLearn helped Kelly Carvalho, an associate in INVISTA's strategy and business development group, find not one but a group of experts on hydrogen peroxide at Georgia–Pacific. (GP has long used hydrogen peroxide as an oxidant to bleach the fibers going into tissue and other paper products.) Andy Balliet, a research associate, and Jeff Lee, a senior engineer and research fellow, were among those at GP who provided INVISTA with important context regarding the market for hydrogen peroxide, its pricing factors and the history of its development and uses.

Once this connection between GP and INVISTA was established, the conversation evolved into a discussion of whether hydrogen peroxide could be electrochemically created (a process that involves running electrical current through a solution or substance). As it turns out, less than two months



earlier, a GP team from across the U.S. had been discussing the same concept. The answer was "yes."

"It's amazing to think how quickly our two companies were able to connect and share knowledge on

this issue," said Balliet. "We've got people here who have been working at GP for more than 30 years and they tell me they are absolutely blown away by how much easier it is to make connections now."

#### TO BUY, OR NOT TO BUY?

Valuable perspective can be found using EverLearn.

Last year, Koch Disruptive Technologies was given the opportunity to invest in an artificial intelligence application developed for mining (as in gold mining, not data mining). "KDT receives a lot of different ideas every day," explained Natalie Gibson, who moved from KDT to Infor earlier this year. "A lot of those ideas are way outside our area of knowledge. This particular deal was certainly in that category."

All it took was a quick keyword search — "I think I used 'Artificial Intelligence mining,'" Gibson said — for her to discover Junda Zhu at John Zink Hamworthy Combustion. Zhu used to be the leading AI scientist at the largest gold mining company in the world.

"I reached out and asked him if he would help us assess this company and he said he would." After about 30 minutes together on a Teams call, it became clear KDT should pass on this investment. "Altogether, start to finish, I spent maybe an hour on something that, in the past, might have taken us days," Gibson said.

Just as interesting is the fact Junda Zhu wasn't the only mining expert listed on EverLearn. Antonio Papes, director of specialty sales for Koch Fertilizer in Brazil, has six years of experience in mining processes such as beneficiation of iron, phosphate and potash ores.

Easy access to experts like these allows Koch businesses and capabilities to make much more informed decisions in a shorter amount of time while helping avoid the expense that comes with hiring expert analysts from outside the company.



"If you think about it," said Dave Dotson, president of Koch Engineered Solutions, "KES probably employs more engineers and more different kinds of engineers than any other Koch company. We've got hundreds of them: civil engineers, mechanical engineers, metallurgists, separation engineers, application engineers, sales engineers and all kinds of chemical engineers specializing in things such as combustion, mass transfer and pollution control.

"Engineers," Dotson observed, "are, by nature, problemsolvers. But for years, we couldn't solve the problem of poor communication and collaboration. It's embarrassing now," he admitted, "to look back and see how much of a struggle we were having with sharing knowledge — not just engineering knowledge but all kinds of knowledge.

"The No.1 question I would get at town hall meetings was always 'How can we do a better job of sharing knowledge across KES?' or 'How can we better connect with the rest of Koch Industries?' I'm happy to say we now have an answer to those questions. It's EverLearn."

### **RESPECTFUL CHALLENGE**

One of the KES employees who spoke up to Dotson was Mike Clampitt, a development engineer for John Zink Hamworthy Combustion in Poole, a coastal town in southern England. JZHC has dozens of engineers assigned to this site in the United Kingdom (many of whom have been forced to work remotely due to extended lockdown orders).

Following the launch of EverLearn and several early success stories, Clampitt and the Engineering Learning & Development team felt it was an opportune time to push for much higher participation rates. They asked Dotson to consider issuing a KES-wide challenge: doubling participation rates from 30% to 60% within six weeks. "We knew we needed to get knowledge to engineers quicker and we also needed a more efficient way of identifying





### "I had been working on better ways to connect and collaborate for 10 years. EverLearn was our answer to that problem."

subject matter experts," Clampitt said. "EverLearn is very good for both, so we felt the sooner we pushed broader adoption, the better." Dotson agreed with their logic and sense of urgency. He quickly arranged to work with Koch Communications Marketing on recording a video message for all of KES promoting the EverLearn challenge.

How did KES respond? In just four weeks its participation had almost doubled. By the end of week six, the group had exceeded its goal, achieving a participation rate of 65%. That's an impressive percentage for a global organization with nearly 5,000 widely dispersed employees.

"KES has done better at embracing EverLearn than any other Koch company our size," Dotson said. "But frankly, I know we can do even better. Now that Charles Koch has made it clear he wants all of Koch to participate in EverLearn, I'm confident that a much higher percentage is likely."



## LEARN. PURSUE. APPLY.

MBM Go is a combination of online and offline activities designed to help employees learn and explore some key aspects of MBM. It is foundational to what you are already learning on the job and from your supervisor.

"The sessions introduce in a clear, entertaining and direct way, the main concepts of MBM. I appreciate the combination of videos, guizzes, games and text." Delia, SRG Global | Llíria, Spain

> "Really happy to explore MBM concepts in such an innovative way of learning." Anil, Infor | Hyderabad, India

"As a team manager in a company acquired by Koch and new to very different mindsets, I found it a helpful and easy way to start talking about and understanding these concepts." Katerina, Eco-Tec | Pickering, Canada

# koch.link/MBMGo

The digital version of Discovery has been updated, making it more convenient to read on your desktop and mobile devices.



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GP Georgia-Pacific

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