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TRANSFORMATIONS IN A PANDEMIC

When we announced our intention to acquire Georgia-Pacific in 2005, it caught many people by surprise. After all, Koch was considered an oil company and had no background in pulp and paper. But as I explained in my booklet on virtuous cycles last year [see page 14], we believed GP fit with our process industries capabilities. More than 15 years of ownership have validated that belief.

Steve Feilmeier, our new CFO at the time, had a bit of fun explaining all this to the media and analysts: "Two things are for certain: death and taxes. But the next most certain thing seems to be toilet paper. We believe demand should be fairly steady, regardless of what is going on in the economy."

Never in my life did I imagine people would hoard toilet paper. But last spring, as fears of COVID-19 prompted lockdown orders, it seemed like every roll on every shelf vanished overnight. Canned soup disappeared, too, along with diapers, bottled water, hand sanitizer and disinfectant. The changes didn't stop there.

Fewer planes took off and fewer cars were on the road, lowering demand for FHR's production of gasoline, ethanol and especially aviation fuel. A steep drop in automotive sales did the same thing to INVISTA's air bag fibers and polymer businesses. The sudden halt in new commercial and industrial construction dealt a severe blow to the markets for Guardian's architectural glass and KES's design/build services.





Charles Koch, chairman and CEO, KII.

At the same time, the need for coronavirus testing technology soared, as did requests for PPE and medical equipment. Millions of people forced to stay home decided it was a good time to remodel or repair. A spike in online orders for home delivery heightened demand for packaging and boxes. These developments greatly accelerated demand for the products and services of GP, Molex and Koch Disruptive Technologies.

2020, the year that will always be remembered for the coronavirus pandemic, could have been disastrous for Koch Industries in so many ways. Instead, because of your diligence in keeping each other safe and your contributions at work, 2020 ended up being the company's third-best year ever. What made the difference? Time and time again, it was your demonstrated ability and willingness to transform.

I believe 2020 would have been a year of transformation for us even without the pandemic. But because of it, we were pressed to innovate even faster, to focus on bottom-up solutions more effectively, to improve and to empower more people in more ways.

Thanks to your efforts and transformations — especially those of you on the front line of our manufacturing sites — 2020 was far better than it might have been. That's something to be proud of and to perpetuate.

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2020 HINDSIGHT

This story does not start March 11, 2020. That's the day the World Health Organization declared a global pandemic. Nor does it begin Jan. 22, the day 160 Molex employees in Wuhan, China, began working remotely because of an alarming coronavirus outbreak. (Wuhan went into lockdown the next day.) Even going back to the summer of 2018, when Koch updated its Vision with an emphasis on technology–driven transformational change, isn't far enough.

Understanding how so many Koch company employees responded so effectively to the challenges of COVID-19 last year involves several years of preparation and transformation.

LAYING THE GROUNDWORK

"More than five years ago," recalled Richard Swan, president of Koch Global Services, "Koch Industries developed some core digital strategies that were highly transformational. We wanted Koch Industries to be more global as well as more integrated. We wanted to utilize a more efficient tech platform while simplifying our systems. And we wanted to rethink the way we manage our facilities."

According to Swan, those strategies led to a series of transformations that are still ongoing. "We transformed our IT infrastructure to be cloud enabled and more secure. We were finally able to integrate HR into a single platform. We've reorganized our facilities teams and built out our global service centers." As it turned out, implementing those and other transformations prior to 2020 made a huge difference when the world was suddenly plunged into a pandemic.

FORECAST: THE CLOUD

One of the biggest technology changes affecting employees was the migration to Office 365. That changeover, which some employees accepted grudgingly, began in 2015 and was largely complete by the end of 2016. Koch's senior management believed Office 365 would provide several important enhancements without sacrificing the familiar software so many employees were accustomed to using.

Because it is cloud-based, Office 365 enables employees to access their work account from anywhere – in the office, on the road, at home, on the go — easily and with far greater security. With Office 365, a change made while working on a mobile phone shows up when logging in at the office or on a different computer. Putting all Koch companies on the same platform for the first time also means licensing and maintenance are now more efficient.



The ability to work remotely in 2020 was made possible by changes Koch set in motion more than five years ago.

One of the biggest advantages is enhanced collaboration because internet-based chat, phone service and videoconferencing capabilities are built in. For the first time, newly acquired Koch companies and legacy businesses can access information and each other more easily and accurately.

"Great technology helps you do your job better without getting in the way or drawing too much attention to itself," said Laura Pickle, chief information officer for Koch Companies Public Sector. "Office 365 still looked and 'felt' a lot like previous Office products, but gave us so much more capability. That was essential during lockdowns."

When thousands of Koch company employees suddenly found themselves having to work remotely last year, the enhanced functionality of Office 365 made a world of difference.

The migration to Office 365 is just one example of a transformation made before the pandemic that made an



"Can you imagine COVID without Teams?" asked Laura Pickle, CIO for Koch Companies Public Sector.

essential difference during the pandemic. As the following stories show, individual employees, sites and entire businesses were better able to deal with the challenges of 2020 because of Koch's focus on knowledge sharing and networks, transformational change and other MBM® principles at all times in all areas.

The first Koch company to deal with the pandemic directly was Molex. It has the most employees of any Koch business, including 14,000 in China, 160 of whom work in Wuhan, where COVID-19 originated.

"In mid-November 2019 we started making plans to be in Wuhan for our business review and Lunar New Year celebration in late January," said Doug Busch, the business unit leader for the optical solutions group. "But during the



Molex has about 160 employees working in Wuhan.

first week in January — even before the government or global news media started reporting anything specific — our team had become very concerned with what was happening there.

"Thanks to good knowledge systems and a lot of sharing, we postponed our visit and quickly shifted our efforts into developing a plan for dealing with this unexpected challenge. About the only thing we knew for sure was that we had to move quickly and figure out ways to be agile in case working remotely became necessary."

According to Busch, the Molex team had two goals: "The first was to safeguard the health and safety of our employees. As soon as we realized what was happening, the decision was made for employees not to return to the office. This was done even before the local government ordered a lockdown. Our second priority was to figure out how to continue serving the needs of our customers if we had to work remotely." Given the challenging and detailed nature of the work, which involves complex engineering and systems development, "this was about much more than just sending someone home with a laptop."

In reviewing those efforts a year later, Joe Nelligan, CEO for Molex, had high praise for how employees responded to the challenge of COVID-19. "Our Wuhan team was absolutely the 'tip of the spear' for Molex with regards to figuring out how to innovate and stay operational in a remote context. They really helped set the pace for how we shaped our overall response in Wuhan, then Zhuhai and the rest of China. This is a great example of our global teamwork and I'm proud of the way the entire Molex team communicated so well early on. That shared knowledge made a huge difference."

ARRIVE WITHOUT TRAVELLING

Another Koch company with a significant presence in China is INVISTA, which started a \$1.2 billion construction project at its Yinglon site in Shanghai in late 2019. Work on that new adiponitrile plant looked like it would be significantly affected when international travel to and from China was suddenly shut down last February.

"Normally we would have flown 20 or 25 key people from Yinglon to our ADN plant in Orange, Texas [see August 2019 Discovery], so they could see how the new technology coming to their plant is configured and better understand how it operates," said Jerry Grunewald, INVISTA's vice president of operations transformation. "But that was no longer possible. We couldn't send leaders or subject matter experts from here to China either, unless we were willing to have them isolated for two weeks before they could maybe — maybe — set foot on the construction site. And then they would have had to quarantine again for who knows how long when they returned to the states."

INVISTA's solution to this unexpected problem was to ramp up the use of an experimental technology called Mira, which had been in test mode at several INVISTA locations in 2019.

"The concept of Mira is pretty straightforward," Grunewald said. "You attach a smartphone to the front of a hardhat, activate a customized video function, and then — kind of like a FaceTime chat — send a video feed to someone who can examine what's going on in real time. The remote team sees exactly what the device wearer sees and can draw on a screen that shows up on the wearer's hand-held display screen.

"The beauty of the technology is that the leader or subject matter expert who receives the feed can be literally anywhere — Texas, France, the Netherlands or even elsewhere in China. The only difficulty you might have to deal with is the difference in time zones."

Grunewald said INVISTA has gone from making a dozen Mira "calls" a week to more than 100. "We're now using it for lots of things, like inventory assessments, which our accounting team can now do remotely. It makes us much more efficient and saves a lot of money." The same is true for other Koch companies using this technology.

Augmented reality tools are also being used by Guardian Industries at float glass plant sites being built in Mexico and Poland. Doug Girdler, Guardian's CFO, said: "Getting the right wireless tools in the hands of our on–site employees is really driving value for Guardian. Capturing the right data and then sharing it through our knowledge systems means we get actionable insights we can implement immediately."

Mira is just one of several new technologies being used by INVISTA to transform its operations. HoloLens is an augmented reality tool that helps INVISTA train operators how to conduct operating tasks in the field. Much like a virtual reality game, it projects 3D prerecorded videos onto a face screen, giving trainees a visual experience that adds to their knowledge base in the real work environment.

Similarly, INVISTA is using technology and the principles of MBM to significantly enhance the skillset of 24/7/365 shift teams, helping them operate more efficiently and respond to operational issues immediately rather than waiting

hours or days for help. "For years, a lot of operations had the mentality of just trying to make it through nights or weekends until the regular weekday work crew showed up. By leveraging better technology, we can really get the best knowledge applied much faster, so that the shift really does run the shift."



Thanks to new technology, INVISTA's Yinglon ADN plant is on schedule to start up a year from now.

"We faced an amazing amount of challenges last year, and yet, thanks to the contribution mentality and can-do attitude of our employees, we did very, very well."

Christian Fischer, CEO, Georgia-Pacific

Tyler Woolson has been Georgia-Pacific's CFO for a long time. Fifteen years, to be exact. He has seen a lot of changes in the marketplace during his tenure, including plenty of financial ups and downs, but nothing quite like 2020.

GP started 2020 expecting improved performance over a poor 2019, but by April, with the pandemic in full swing, its results looked to be no better. By year's end, however, GP found itself up nearly 60% for the year, with Consumer Products up close to 50% and Building Products almost quadrupling, thanks to improved pricing, demand and great efforts from its operations.

Woolson gave "a big shoutout to our employees working at our operations in the field. We can have all the price and demand in the world, but if we can't make product and get it out the door, it doesn't really matter."

Christian Fischer, GP's CEO, credits an updated Vision, a renewed focus on four critical capabilities (customer experience, demand fulfillment, manufacturing and sourcing), and above all, the performance of GP employees, for that turnaround.

"We certainly exceeded a lot of our customers' expectations. We delivered them the goods on time and — in many cases — in unprecedented amounts," Fischer acknowledged in an employee broadcast. "If there's anything this pandemic has taught us and really brought home, it's the increased sense of urgency we all feel and need to have in order to transform much more rapidly to produce better results sooner."

GP's performance in maintaining products in stores, responding to severe weather needs and regularly communicating with the merchandising team for Lowe's landed GP on Lowe's Top Performing Vendor list.

What follows are stories from two GP businesses — Consumer Products and Building Products — and some of the transformations they experienced before and during 2020.



This patching unit, GP's first, was installed in 2014.

According to Pat Boushka, the leader of GP's Building Products business, "None of us anticipated what was going to happen last year. And none of us had ever had to deal with maintaining production during a pandemic."

The combination of homebound do-it-yourselfers and a very active housing construction market created an unprecedented demand for building products. "There was no way we could have come close to meeting such demand on both the consumer and the commercial sides of our business had it not been for transformations at our building products plants that have been underway for years," Boushka said.

One of the people most deeply involved with those plant transformations is J.T. Capps, technical services group manager-plywood and lumber, for GP's building products business.

"When I started my career at the Corrigan, Texas, plywood plant as a college kid in 1983," Capps said, "it took a lot of people to do all of the inspecting, sorting, routing and repairing by hand, which is not very rewarding work. We needed to find a better way." It took decades, but what Capps and the GP team eventually helped develop was a robotic patch unit that required just two employees to operate.

A patch unit inspects and sorts sheets of plywood as they come down the line, looking for flaws such as knotholes, cracks or other imperfections. If a problem is spotted, the affected area will be routed out and then filled with epoxy. Repairing these imperfections greatly increases the value of a sheet of plywood — and they make a lot of plywood in Corrigan. It's GP's highest-volume specialty plant.

"In 2014 we installed our very first robotic patch unit in Corrigan," said Capps. "It cost almost \$5 million and took up close to 3,400 square feet of floor space, but we were pretty excited about it because we helped develop the technology, which was the first in the industry."

It worked well; however, due to its high cost and the unique configuration of the plant, a similar machine could not be installed elsewhere in GP. "The Corrigan unit has been a great machine, but nowadays it's sort of like an old Cadillac: big and expensive," admitted Capps. "We've known for some time we need something better."

As Capps has learned firsthand during his long career, creative destruction has a way of changing even the best of things. He is excited about the next-generation robotic patch technology GP is installing this summer at its Dudley, North Carolina, facility. The new unit is simpler,



Next-generation robotic patch technology is being installed this summer.

much smaller, less than half as expensive and will be totally automated.

Similar labor-saving improvements can be found across the business. Machines for stenciling products with the familiar GP logo, sorting sheets of plywood along the production line and stacking veneers have been installed. Some of those veneers are being moved to a warehouse by an auto-guided vehicle being tested in Madison, Georgia. The company is also investing \$300 million in a next-generation wallboard plant, scheduled to be operational in 2022.

HOME AND AWAY

"The pandemic really underscored the importance of accelerating our remote service capabilities," Boushka said. "We're investing heavily in DPO — digital process optimization. We're using sensor data to better manage our processes and asset health, developing visualization tools to turn data into useful information and building our capability to remotely monitor sites."

Remote monitoring devices and specialized sensors are being developed for adding to boilers, glue lines, lumber kilns and plywood veneer dryers, all in an effort to remotely monitor performance. Data analysis is helping evaluate and improve sawing operations, improving yield and recovery. And visualization tools are making it easier to supervise and operate remotely. "All of these new technologies," Boushka explained, "are enabling us to redirect employees into better, safer and more fulfilling roles."

"That benefit — being able to flex our people into other roles as we add these machines — was a huge help during the pandemic last year," Capps said. "COVID really did affect us. The number of folks who couldn't come to work because they were sick or had to isolate and quarantine was significant. Because we overstaffed and because we had these machines, we were able to continue operating safely, maintain our performance levels and keep our productivity near normal during a time of exceptionally high demand."

"COVID taught us a lot," agreed Boushka. "We learned we need fewer people on the road servicing plants. We're smarter about how we travel and manage workflow. Before, it took a week or two to get scheduled for a service visit.

Now we can provide service almost immediately." Building remote capability, he says, "means exceptions and problems can be dealt with more efficiently."

Capps likes the way "Koch has this need to innovate and do things differently, leveraging capabilities across the platform rather than in silos. Before, we didn't look at things as an enterprise."

He believes Koch's ownership of Georgia-Pacific has meant more than just the funding of new technology on the shop floor. "The biggest thing I've seen in the evolution of this company with Koch has been opportunity," Capps said. "We've got a lot more latitude to develop, personally and professionally. We strive to design roles that enable people to excel. And because we recognize individual capability more, the fulfillment factor is huge."

"The biggest thing I've seen in the evolution of this company with Koch has been opportunity."

J.T. Capps, process improvement manager, Georgia-Pacific

TISSUE ISSUES

One of the most surprising responses to the COVID-19 pandemic was the sudden hoarding of toilet paper by millions of households. Since Georgia-Pacific's Consumer Products group is a leading producer of bath tissue in the U.S., responding to that extraordinary demand became an all-hands-on-deck priority.

Jeff Fleck, GP's chief supply chain officer for Consumer Products, led a three-pronged strategy for dealing with such an unprecedented challenge.

"First," Fleck said, "we had to transform how we did things on the manufacturing side. You can't just up your output by double-digits overnight, especially when you're committed to doing things safely and in keeping with all kinds of added COVID protocols."

GP started by reducing its SKU complexity 50%. "We focused on producing just the core products that were in highest demand.



"We've taken considerable extra precautions in our workplaces to make sure we have a safe and secure environment. We're following COVID guidelines, practicing social distancing and doing all the things we need to do with hygiene, with sanitation and then really relying on our people to make good decisions. They've done a tremendous job."

Jim Hannan, CEO - Enterprises

Since so many of our GP PRO customers (hotels, schools, restaurants, theaters) were shut down, we also decided to shift a portion of our away–from–home production capacity over to the retail side. It sounds simple, but both of those changes were unprecedented in our company."

The next transformation, which involved distribution, was even more complex. "We increased the shipping capacity at our warehouse locations by 25%, which is huge, and upped the amount of product we shipped directly from our production locations by even more, probably 30%," Fleck said. "That meant we had to secure a lot of additional freight carriers early on to make sure we could haul so much product."

Although it may sound counterintuitive, GP lowered the amount of product in each truckload slightly while increasing the number of shipments. "We call that increasing inventory turns," Fleck explained. "It meant we could restock empty shelves more often, which was better for customers than leaving them with nothing for days at a time."

The third portion of GP's strategy focused on customer service. "We had to set up extra lines of communication immediately so we could find out what was needed, where, and how to get there." Fleck is especially proud of the Consumer Products group for meeting every commitment for product allocation made during those stressful times. "We lived up to our promises every single month. We weren't short even once." The company also arranged to send direct shipments from GP's plants to customers' stores, saving time the product would have spent going to and from distribution centers.

"I am extremely proud of our response," said David Duncan, head of GP's Consumer Products group. "Our



planning, inventory and SKU management, warehouse system, transportation and logistics efforts enabled record levels of product deliveries to our customers. As an integrated team we stepped up to the challenges and opportunities of 2020 and outperformed our competition."

WHEN DEMAND FOR BATH TISSUE SOARED, GEORGIA-PACIFIC...

Serviced customers better

Got product to market faster

Got more product to market

Responded to consumers faster

...THAN THE COMPETITION.

SEEING DOUBLE

Ike Brackin is a senior process engineer for Flint Hills Resources. He's been with Koch more than 40 years. He's also the proud owner of a small ranch near Sinton, Texas, about 35 miles north of FHR's refinery complex in Corpus Christi. Ike's house, just off the county road, is a nice place, with a couple of pickup trucks parked in the driveway and an occasional airplane overhead taking off from the nearby San Patricio County airport.

You'd never know it from driving by, but Ike's ranch house played an essential role in helping keep the Corpus Christi complex up and running during the COVID-19 lockdown last year. Thanks to software FHR rolled out in 2019, Ike was able to log in to the process control network securely, analyze process variables in real time and discuss adjustments to control schemes with operators on-site in Corpus without ever having to make the 70-mile round trip.

"Remote interfaces like that which also meet our critical cybersecurity needs have become a big thing for us," said Brook Vickery, plant manager for the FHR complex in South Texas. "It's like having an encrypted tunnel so people can remotely interact with the control system when necessary." Vickery noted a similar arrangement with engineers at the John Zink facility in Tulsa, Oklahoma. (John Zink is a Koch Engineered Solutions company). "They can monitor, program and adjust our thermal oxidizer unit, which they designed and built, from hundreds of miles away."

"Transformational technologies like these are redefining how we maintain, operate and support our processes," said Paul Houslet, FHR's vice president of transformation and services. "For years and years, we constrained ourselves to what we could do at the site. With remote technology, we can integrate the best capabilities regardless of location."





For decades, FHR has worked hard at improving reliability and efficiency at its operations. Thanks to new technology, Houslet said FHR was taking those efforts to a new level: "We can now create a 3D scan of a plant that allows employees to do a 'job walkthrough' without ever stepping outdoors. That's a pretty big plus when you're working at our Minnesota refinery in the middle of winter or trying to practice social distancing during a pandemic."

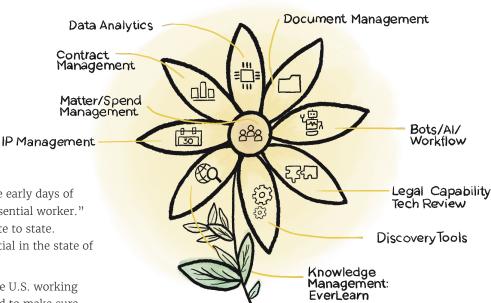
Like every Koch facility considered to be an essential enterprise, FHR's Pine Bend Refinery, near St. Paul, Minnesota, had to rethink how to operate during the pandemic. Since there were plenty of things that couldn't be done remotely, the team there came up with the idea of setting up a second control room. Alternating shifts between the two meant one control room could be cleaned and sanitized when the next shift showed up for work, minimizing exposure. "The team at Pine Bend put their new capabilities to work right away," Houslet said. "They had it up and running in just 10 days."

Thanks to laptops equipped with VPN (a virtual private network), almost all of FHR's office-based employees were immediately able to work remotely when lockdowns and stay-at-home orders were issued. "We had distributed those laptops as part of our business continuity planning," Houslet explained. "To be honest, we were thinking more in terms of how we would operate after a tornado or hurricane or some other natural disaster. The idea of a pandemic was something we never saw coming.

"Thank goodness we had distributed those before we ever knew we were going to need them. It ended up being pretty seamless."

"I had never worked remotely before, but now, whenever I leave the plant, I take my laptop with me, just in case. If last year taught me anything, it's that you just never know."

- Ike Brackin



The legal tech portfolio.

WHO IS ESSENTIAL?

One of the urgent issues arising during the early days of the pandemic was the definition of an "essential worker." The rulings on this varied widely from state to state. Massage therapists were considered essential in the state of Washington but not in California.

With tens of thousands of employees in the U.S. working in hundreds of different roles, Koch needed to make sure the best knowledge was leveraged when making decisions regarding many COVID-related issues, including the definition of an "essential worker."

"In the past," said Koch's general counsel, Ray Geoffroy, "we might have had seven different lawyers' opinions about a question like that because we had seven different legal teams with seven different legal Visions among our businesses and capabilities. Each legal team was a closed system, operating separately from the other legal teams. Knowledge sharing was limited and each team had its own Vision and priorities."

Two years ago, the general counsels of each of the Koch companies worked together and developed a single, shared legal Vision for all Koch companies. "We use the phrase 'borderless capability,' which is a great description of the way we operate now. We've become more cohesive as a capability and much better at applying comparative advantage and aligning knowledge and decision rights with incentives," Geoffroy said. "Our results have improved and cycle times are faster, too."

In keeping with that way of thinking, Geoffroy made one attorney responsible for "owning" the issue of essential workers and then sharing that knowledge throughout the organization. The legal department also collaborated with several other Koch capabilities to develop and implement recommendations with respect to essential workers. Since then, individual owners have been assigned to areas such as human resources, trademarks, patents and contracts.

Another big change was the effort to streamline the number of external law firms being used. "We went from more than 700 firms to a panel of 14 preferred partners who could work with us in a mutually beneficial manner," Geoffroy said. "That reduced friction and led to much lower transaction costs because we could negotiate volume discounts. Our goal is for 80% of our outside legal costs to run through these preferred partners."

The legal team favors partners who are willing to disrupt the traditional law service model in ways which are mutually beneficial to the Koch legal capability and its preferred partners. Having a smaller panel offered the legal team the opportunity to inform its preferred partners what is valuable to Koch, with a strong emphasis on creative thinking and experimentation. The preferred partners have been encouraged to experiment with alternative fee arrangements and creative legal service delivery models to reduce costs and increase the speed of legal services.

Using the word "transformation" when talking about a legal capability may seem unlikely, but Geoffroy insists that Koch's legal team is embracing change in other big ways — including the use of technology.

"There has always been a lot of legal work that was rote in nature, such as filing of routine registrations and licenses with government authorities. We now have bots that can do that. They can also track down information for patents and trademarks, and eliminate much of the the repetitive work we used to do for due diligence and contract reviews.

"We process at least 10,000 nondisclosure agreements a year. Being able to automate much of that work makes life more enjoyable for our team."

"Legal spend has decreased 35% in the past six years despite increasing investment and acquisition activity."

- Ray Geoffroy

PERSONAL TRANSFORMATION

Ray Geoffroy points to Christine Cason, an associate general counsel for KCPS, as an example of the kind of self–actualization and continuous transformation that often happens at Koch. "The transformation of Christine's role



was an experiment," Geoffroy said, "and it was her success in a new kind of role that led to similar changes across our entire capability."

Cason is the Koch attorney leading the legal team responsible for trademarks, copyrights and domain names. When she started with GP in 2002 as the division counsel for its Dixie business, the norm

was for each business to handle its own trademark issues separately. "A paralegal and I handled as much of Dixie's trademark and copyright legal matters as possible in-house," Cason said.

As more and more work came in, Cason helped to form the trademark group within GP's intellectual property team. "Around 2006, we realized we could do this work in-house for all of GP, not just Dixie and the Consumer Products business, so my role expanded and I began supporting all other GP businesses as well." The trademark and copyright team grew, hiring another attorney and more paralegals.

Knowledge sharing is as important to Koch's legal capability as it is to any other Koch capability or business. But as Cason soon realized, "we still weren't working as a team across all of Koch. We had great relationships and productive knowledge sharing with other legal teams, but each company tended to handle its work separately."

That was the situation in 2018 when Tye Darland, Georgia-Pacific's general counsel, and Ray Geoffroy, general counsel

for Koch Industries, announced an experiment involving combined legal teams from KII and GP. Their concept was to establish a team based on comparative advantage rather than business unit and then ask it to support all Koch companies. "They wanted to see what would happen if we had a 'borderless' team for trademarks," Cason said. "We were one of the first groups, along with real estate, to try this."

After sorting through all the different docketing systems used to track trademarks and copyrights, the team consolidated everything onto a single system and moved all paper files into an online filing system. "That was a painful process," Cason admitted. "It meant scanning thousands of files and transferring them online. But the timing was excellent because when COVID hit and we all had to work remotely, everything we needed was accessible online."

Bottom line: The experiment is no longer an experiment.

Based on Cason's success, other specialists within the KCPS Legal Capability are following the same model. Meanwhile, Cason's role expanded to include not only more Koch companies, but also providing general counsel support to Koch Global Services Group, which has opened up yet another new range of experiences and challenges.

"I've now lost count of how many times my role has transformed," Cason said, "but each time has been tremendously rewarding. I enjoy being a lifelong learner, I enjoy tackling something new. And I've discovered I enjoy leading teams.

"There is so much opportunity here at Koch that it's easy to think beyond your original area of responsibility. When I run into my law school classmates they are amazed I've been with the same company this long.

"But then I tell them: It's the same company, but it's not the same *job*."

IS THAT REMOTELY POSSIBLE?

Throughout much of 2020, opening a new office was a challenge for almost any business. Construction materials were hard to get and restrictions often made it tough for crews to work in close proximity. Besides, why open an office when millions of people were avoiding their offices and working from home?

For DarkVision, a Vancouver-based acoustic imaging technology company, waiting was not an option. "We've had all kinds of people in the states asking for our help," said Stephen Robinson, CEO of DarkVision, "but we couldn't do much outside of Canada until we got an office set up in the U.S."

Koch Engineered Solutions acquired a majority interest in DarkVision last May. "We're really excited about their technology," said Dave Dotson, president of KES, "but COVID made for a strange set of circumstances. We have yet to visit them in Vancouver and they have yet to visit the U.S. Everything has been done remotely."

Even before KES's investment, DarkVision had wanted to open an office in Houston, the epicenter for America's oil and gas industry. It needed to hire sales reps and field technicians who could serve the U.S. market the same way its team in Calgary (the energy capital of Canada) did. After Houston, plans are to open more offices based on demand.

But when the pandemic shut down most air travel between Canada and the U.S., DarkVision was forced to figure out how to acquire, staff and equip an office almost 2,000 miles away without being there in person — a challenge no one had anticipated. "For the first time in my life we had to interview people remotely rather than in person," said Robinson. "Training was another challenge since much of what we do requires hands—on experience. And because of COVID, everything was taking longer than we had anticipated."

Fortunately, DarkVision was able to leverage several capabilities within Koch. "KGS set up the payroll for our American employees, HR provided a benefits program and





DarkVision's signature product can "see" inside oil and gas wells, providing high-resolution 3D images to help diagnose a number of problems.

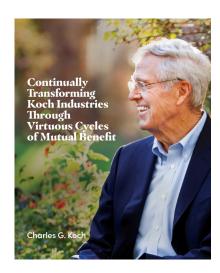
the tax department walked us through the requirements for getting a U.S. tax ID number. Koch's legal team was also a big help with patent work and filings, and some pretty complicated contracts." LIFT (Koch's Land, Infrastructure, Facilities and Transactions group) helped arrange security, janitorial services, mechanical inspections and HVAC installation. "They got us set up quickly in a good location with good, quality people — all without our team ever setting foot in the U.S."

About one-third of DarkVision's Houston space is devoted to a sales office. The remainder houses a storage area for inventory and test equipment, and a shop space for calibration work and maintenance. There are currently six employees. "We just had our first successful run in Texas of a new product line called HADES-F. It's designed to address new types of problems in wells, such as casing collapses, which our current offering can't do."

DarkVision's current focus is on oil-field producers, "but that's just the first chapter in what we believe will be a very long story," Robinson said. "Our technology is almost universally applicable to all kinds of industrial assets. It can be adapted to water line inspections, facility inspections and even aerospace, where it has the potential to improve safety, reliability and quality control."

So what's next on DarkVision's agenda? "Training. Our executive team is signed up for a year of MBM® training. We started in January and our next session is next week. We've been told Charles Koch himself will be participating, so we're really, really looking forward to sharing knowledge with him. Even if it has to be remotely."

To help accelerate your own transformation and self-actualization, review these suggestions from Charles Koch's 2020 book for employees.



Above all else, this survey of virtuous cycles at Koch Industries proves one thing: **Amazing things are possible when people self-actualize.**

None of our progress would have been possible without employees who discovered their innate abilities, developed them into valued skills, applied them to maximize their contributions, and then did it all over again. When individuals create these virtuous cycles at a personal level, they become engaged and develop meaning in their lives by continually taking their ability to learn, grow, and contribute to a higher level. That process has become an essential aspect of who we are as a company.

Yet what can be improved, must be improved. For Koch Industries to continue to create virtuous cycles of mutual benefit and succeed in this new world of rapid and fundamental change, we must do a better job of enabling our employees to create their own virtuous cycles. By becoming contribution motivated, they will not only enable the company to succeed, they will realize their potential and have much more successful, fulfilling lives.

Building the foundation for a happy and fulfilling life takes time and effort. No government, organization, friend, or family member can do the heavy lifting for you. If you are serious about pursuing a path of self-transformation and want to create or contribute to virtuous cycles of mutual benefit, here are some quick and easy reminders to help keep you on track:

1 KNOW YOUR TRUE ABILITIES

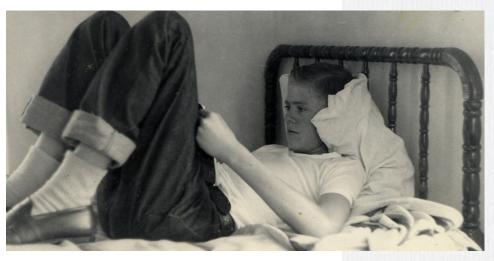
Constantly explore to discover your aptitudes — what you naturally do well — then pursue whatever you enjoy that will enable you to contribute. To succeed, we must be realistic about our abilities and where they can create value. Take note of how you spend (or waste) your time.

2. WORK HARD TO DEVELOP YOUR ABILITIES

You must master the application of your gift if you want to make the greatest possible contribution. At the age of 85, I'm still striving daily to enhance my abilities to create more value. Don't waste your life trying to succeed in a role you're not good at.

3. APPLY YOUR ABILITIES IN WAYS THAT BENEFIT OTHERS

True success comes from benefitting others as the way to benefit yourself. As you encounter obstacles to self-actualizing and creating mutual benefit, don't give up — find the right occupation and then dedicate yourself to it. As Maslow warned: "If you deliberately plan to be less than you are capable of becoming, you'll be deeply unhappy the rest of your life."



My parents were both lifelong learners, and they raised me to be the same.

4. CONTINUALLY TRANSFORM YOURSELF

Continuous improvement is not a process, it's a way of life. No matter how much success you achieve, be dedicated to lifelong learning. Don't let success destroy your initiative or willingness to embrace change — and don't let failures cause you to give up. If you see something that is wrong or wasteful, even (or especially) if it's a policy from on high, challenge it. And, if at first you don't succeed, keep challenging.

5. HAVE A PURPOSE IN LIFE

What is your North Star? What guides your actions? The desire to make money, be popular, enjoy life's pleasures, or live as long as possible is not the same as having a true purpose. I believe your greatest rewards will come from becoming contribution motivated in ways that draw on your gifts.

I wish you the very best in this journey, knowing full well that as you succeed, all those around you will be better off, too.

To order hard copies of this book, or download electronically, visit **koch.link/MBM**.

"We can learn from self-actualizing people what the ideal attitude toward work might be under the most favorable circumstances ... the need for meaningful work, for responsibility, for creativeness, for being fair and just, for doing what is worthwhile and for preferring to do it well."

- Abraham Maslow



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