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THE ORANGE ROSE OF TEXAS

A transformation of
people and technology

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*“We’re really breaking the mold
of what our industry would tell
you is best practice.”*

THIS YEAR'S FILM FEST WINNERS

Some of the most famous movies of all time have required a serious time commitment from viewers. “Gone with the Wind” (which premiered in Atlanta on the site of today’s Georgia-Pacific headquarters), “The Good, the Bad and the Ugly,” two of the “Lord of the Rings” installments and “Dances With Wolves” are all nearly four hours long.

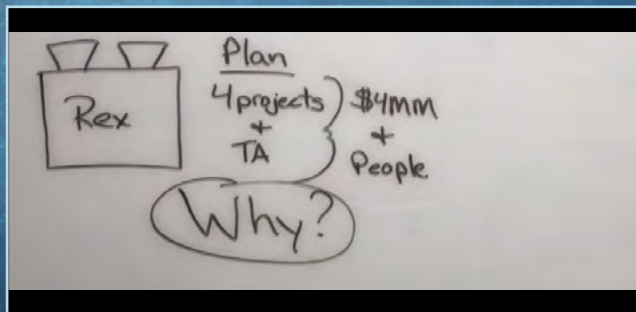
Imagine if Rhett and Scarlett only had a minute and a half to tell their story. That’s the approach Flint Hills Resources took with its first-ever FHR Film Fest.



Following the rollout of the new Koch Vision and Guiding Principles last summer, FHR decided to try something new. Employees were invited to create 90-second “films” that “creatively capture and share positive examples of MBM® in practice.”

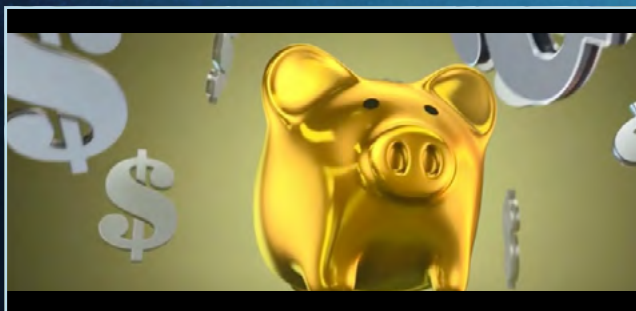
“We saw this as a new and creative way to reinforce, think differently about, and personalize our new MBM Guiding Principles,” said Jeff Ramsey, FHR’s president and CEO. “It’s all about collaboration and knowledge sharing, and reinforces our new FHR Vision.

“We want to cultivate a culture where all employees understand and continuously improve their application of MBM and internalize our new Guiding Principles. We also wanted some additional tools for helping leaders mentor and coach employees on how to apply MBM. When two of our learning services specialists, Jonathan Workman and



THE REX BET Corpus Christi Refinery complex

Using robotic vacuum cleaners in a cooling tower to save \$4 million.



90 SECONDS: A PIG STORY Pipelines & Terminals in Wichita

Maps, apps and a ticking stopwatch you’ve heard somewhere before.

Heather Adams-Wedel, proposed the idea of using a film festival as a way to capture and communicate our MBM success stories more effectively, we agreed it was worth a try.”

Prior to launching the event, the film fest team contacted a variety of subject matter experts. “We spoke with Paul Melory, the executive director of the Tallgrass Film Festival here in Kansas, and a company in Denver called Slalom that hosts internal learning festivals,” Workman explained. “We also spoke to people within Koch with related experience, like Glen Capek, the director of multimedia communications for Molex,” said Adams-Wedel. “Our very own Koch Communications Marketing team came up with the logo and created all of our digital and printed marketing materials.”

Social media played a big role in the communication



FILM FEST

2019 | What's your story?

[KOCH.link/FHRFilmFest](https://Koch.link/FHRFilmFest)



EXPERIMENTAL DISCOVERY IN DUBUQUE

Dubuque, Iowa terminal

Can you pronounce fisco-meter?
Let our animated employee help.



OPPORTUNITIES IN ASPHALT

Pine Bend Refinery

Marketing asphalt from Minnesota to the Mojave desert.



MARKER POST APP

Pine Bend Refinery

A sticky wicket: efficiently replacing legally required stickers on 15,000 right-of-way posts.

strategy for this event. Employees were told they could learn more, follow the process, or ask questions using Yammer and Stream as well as traditional email. FHR also created a specialized PowerApp to provide information about the film fest. It made it easy for employees to submit their films from right inside the app.

Ramsey and the FHR leadership team were pleasantly surprised — and impressed — by the results. Dozens of employees across the organization — some working singly, others in groups — responded by making a wide variety of mini-movies that were “shot” using smartphones and edited using free apps available on their phones or computers. Some FHR employees used charts and graphs, others used animation. Some narrators were on camera, others were unseen. One group even used “3D acoustic pictures” to tell their story.

A panel of judges reviewed all the entries and chose five featured films. These films were screened for all Koch employees at Film Fest 2019 in Wichita on April 17. For those who could not attend in person, the event was streamed live to Koch locations worldwide, and later posted on D-Net. After each film was shown, its creators and participants were interviewed by Jonathan and Heather. Then the audience was given the chance to have a question-and-answer session with the creators. When the Q&A ended, the film was shown one more time.

When Charles Koch got wind of this unique project, he gave it two thumbs up. “What is great about this is that it required employees to focus specifically on their application of MBM, rather than their intellectual knowledge of our principles and mental models. This wasn’t about using buzz words, it was about getting real results. That’s huge.”

ORANGE, TEXAS

A STUDY IN TRANSFORMATION

 KOCH.link/INVISTAOrange

In 2015, the future didn't look very bright for INVISTA's Orange, Texas, facility. This plant, about 80 miles east of Houston, makes adiponitrile (usually called ADN), which is a key ingredient for nylon 6,6 polymer.

As a business, the plant's return on capital was far below expectations. Morale was low, too, especially after the decision to shut down the adipic acid unit that had operated there since 1946. Communication was poor, management was risk-averse, trust was lacking, performance reviews were infrequent, and front-line employees had extremely limited decision rights. Unsurprisingly, attrition and turnover rates were high. No INVISTA facility in the world scored lower on a 2014 cultural survey than Orange.

Unfortunately, troubles in Orange were nothing new. In 2004, the plant's previous owner gave up on efforts to develop next-generation ADN technology. A string of powerful hurricanes followed, forcing costly shutdowns. Then came an incident that injured two workers and caused a toxic release. The plant had such a bad reputation locally that it became tough to recruit new employees.



2008 - Hurricane Ike left INVISTA's Orange facility standing in five feet of water and severely damaged many employee homes. The plant was shut down for months.



Wendell Tilley, field service manager

And yet, despite all that, by last November, INVISTA's Orange site was celebrating milestones for productivity and profitability, and the EPA was holding it up as an example of best practices. Hundreds of applicants vie for open roles at the plant, which is now a world leader in ADN technology. For the 250 employees there, this transformation was not an easy journey, but the effort to apply MBM® was certainly worthwhile.

AN EFFECTIVE VISION

Plant manager Chris Brittain, who came to Orange in 2007, readily admits that "four years ago, we were a very different facility. We had a management-centric organization" where most employees "basically had no decision rights at all. Everybody was afraid to fail, because if they did, they weren't going to get a raise, or might be fired. It was clear that change needed to happen."

Although there were performance issues with employees throughout the plant, Brittain was convinced that transformation needed to start at the top. "Our leaders needed to go from speaking MBM to applying MBM." Only then could they convincingly implement it throughout the organization.



We told the business that we weren't in a good place, that we weren't doing well. So the challenge became coming up with a new vision and a plan to get to a better place. Then we worked hard to rally the team together and start moving forward.

"

WENDELL TILLEY



"Our vision was all about unleashing the power of hundreds of employees," said Chris Brittain, plant manager.

Looking at their issues through the lens of Koch's MBM framework, the leaders started with Vision. "We wanted to become an industry-leading operator, which required rethinking how we were doing things."

This was where the concept of an ownership-based work system started. "We said, 'Hey, we've got to have the employees who are closest to the product and processes more involved, versus having maybe 20 people making all the decisions and then expecting the rest of the organization to just go and do whatever they were told,'" Brittain said.

The leaders realized that the old management style focused mainly on assets, equipment and processes. The employees themselves had taken a backseat. "So we decided to break that chain and really start focusing on the people within the organization. Our vision was all about unleashing the potential of hundreds of employees."

One of the first big changes involved letting the employees effectively run the facility 24/7. This vision was summed up in five words: "The shift runs the shift."

In previous years, employees on separate teams, such as operations and maintenance, would not cross over. Operators didn't do maintenance, even if it was something simple. "That's just not how people act in the real world," said former plant manager Jay Johnson, who now runs INVISTA's Camden facility. "If you need to change a lightbulb, you don't call an electrician. If you need to change the tire on your car, you probably don't call a mechanic — but you'll probably hire one to rebuild an engine."

The shift-based model called for building the maintenance capability into each operator's responsibilities, which created some anxiety. "There was a lot of concern from the maintenance organization about that," admitted field service manager Wendell Tilley. "They had lots of questions. If I teach operators how to do my work, then what am I going to do? Are you going to get rid of me? What's the real plan?"

In fact, the next step in the plan involved encouraging each maintenance specialist to help create a precision shop devoted to more valuable work. "It was a very positive approach across all the teams," Tilley said. "It helped show that not only did we want to train operators and raise their capability, we also wanted to train the day organization — a group that was very focused on mechanical work — to be more focused on precision and reliability rather than just task-oriented."

While it took time for some to embrace this new model, the effect on performance has been remarkable. Employees are empowered to make decisions at appropriate levels of the organization. Operators troubleshoot routine maintenance issues such as minor leaks, freeing up the precision maintenance team to do larger on-site equipment overhauls that used to be sent to off-site specialists.

ALIGNING WITH VIRTUE AND TALENTS

Just as the process of self-improvement sometimes requires tough judgment and introspection, the Orange transformation required some difficult decisions regarding personnel.

When human resources manager Maggie Zens transferred to Orange from a neighboring INVISTA facility in 2015, her first responsibility, after assessing the facility, was to improve the dismal culture. Zens found that anxiety about the future of the site was pervasive. So was the lack of trust. “After hearing those survey results, it felt like we got punched in the gut,” Zens said.

“It wasn’t fun, but there were things we needed to hear, things that needed to be said,” admitted Brittain. “We had to hold ourselves accountable. We were the ones leading the organization, and we were the ones who had settled for the culture that we had.” Consequently, a far greater percentage of leaders than hourly employees was eventually let go.



“Right after the adipic unit shut down, there was pretty big turnover in management, especially upper management,” said Damon Bishop, who started as an operator on the adipic unit in 2010 and is now a production team leader. “But honestly, that’s when things really started to change.”

Kristen Westbrooks, who started at Orange as a co-op in 2008, noticed a gradual but unmistakable improvement in the facility’s culture within a year of the leadership changes and “the shift runs the shift” implementation. “That’s when things really started to change,” Westbrooks said. “Getting all our folks in the same room and saying, ‘These are our goals. This is what we’re striving for. How do we get there?’ and then working as a team was pretty cool.”

SHARING KNOWLEDGE

It used to be that when employees asked questions, supervisors at Orange lacked the resources or knowledge to answer correctly. To address that problem, the leadership team began scheduling regular walkthroughs of the facility and made a point of finding an answer to every question — more than 200 in all — large or small. Leaders also issued a cascaded scorecard system, so that all employees knew how they were creating value, as well as the overall performance of the site.

“I think the value of doing those walkabouts was that it enabled us to better understand the concerns across the organization,” Tilley said. “We then had to make a point of answering all their questions and making sure we circulated that feedback.”

For Westbrooks, a production team leader at the time, the walkthroughs provided another avenue to discuss ongoing issues and share ideas with supervisors. “Having that transparency of communication definitely helped with the trust issues we were facing, so I think it was a very good exercise.”

“Today, our operators are able to help choose their teammates,” said Maggie Zens, HR leader for Orange. “They sit in on candidate interviews so that we can improve our selection process.”

ESTABLISHING DECISION RIGHTS

As site manager when the transformation began, Jay Johnson helped convey the importance of developing trust between the plant team and the site leadership team. Under the new Vision, the plant team was allowed to handle more day-to-day operations while the site leadership team focused on more strategic issues.

Johnson knew they had reached a turning point in January 2016 when Orange experienced a major power outage. To get the facility running again, Johnson told the site leaders that the plant team, not the site team, would develop the restart plan. In the past, the site team had always handled such tasks; in fact, they had already estimated it would take five weeks to recover from this incident.

“I remember the looks on their faces when I told them the plant leadership team was on point for this,” Johnson said. “They were going, ‘What?!’

The plant leadership team agreed that it would probably take four-and-a-half or five weeks to restart operations. But as they went to work on the problem, they managed to get the job done in just three weeks and one day. “They gave us a better result than we had ever dreamed of,” Johnson said.

“A large part of the improvement that we’ve seen here is a direct result of improving the economic thinking capability at each level of the organization,” said current plant manager Chris Brittain. “It’s also a key enabler for earning decision rights. We’re going through a discovery process here that’s really breaking the mold of what a lot of our industry would tell you is best practice.”

MAKING INCENTIVES COUNT

When the adipic unit at Orange was shut down, Damon Bishop, who had worked in that unit for years, was offered a different role in the facility’s ADN unit. Bishop’s group would set a new 12-month production record less than three years later —



BYE-BYE BENZENE

In 2009, the EPA ordered INVISTA to either upgrade its ADN control equipment in Orange or make major changes to the ways it handled benzene in waste streams. Most companies would have installed abatement equipment — an effective but very costly remedy. What INVISTA did instead, was develop a completely new kind of technology — one that eliminates the production of benzene.

This new EPA-approved process not only does away with benzene, it costs less to operate than conventional abatement, improves yields (which lowers raw material costs), and increases reliability. Construction of the first retrofit using this technology was completed at Orange in 2014. Similar technology will be installed at INVISTA’s Butachimie joint venture in France by the end of this year,



A visit by Orange's leadership team to GP's Broadway Mill in Green Bay, Wisconsin, helped validate the decision to give front-line employees more decision rights in operating the plant.

 KOCH.link/GreenBayCulture

in Victoria, Texas, in 2021, and at the company's newest ADN plant in China by 2022.

"We began investing in this technology during the Great Recession, when many companies were cutting way back on R&D," explained Kevin Robles, senior vice president of global operations for INVISTA. "After two years of trying, we almost abandoned the technology as unfeasible, but then some new chemistry proved successful. The fact we didn't give up means we now have new technology that benefits our employees and the community by improving the environment. It also helps us increase our production volumes to meet rising customer demand, reduces the amount of raw material we need for processing and improves our margins.

"I believe," Robles said, "we've succeeded in creating a new virtuous cycle of mutual benefit."

not only because of the successful implementation of new technology installed in 2014 — but because of a profound cultural shift involving incentives.

"Each team is now looking at measures that they helped design and that are within their ability to control," Bishop explained. "When you're held accountable for — and rewarded for — metrics that are meaningful to your area, you are empowered to make better decisions."

Bishop and other operators knew the importance of being recognized, from a simple "good job" to an increase in base compensation. "Now that I'm in a leadership role, I see both sides," Bishop said. "Over the last several years, we have done a much better job at performance management, and recognizing and offering employees incentives for doing things to help drive the site to a better spot." In other words, "we've realigned incentives more effectively."

That change, said HR manager Maggie Zens, has enabled individuals to be rewarded for the value they create. "Every hourly employee is at an individual pay rate based on the value that they are bringing to the site. Strong performers are now better compensated for their marginal contributions, which motivates others to improve and create even greater value for the organization. Thanks to this change and a focus on supervisor effectiveness, the transition to performance-based incentive pay is finally a reality for Orange."

Kristen Westbrooks, who briefly left INVISTA before returning in early 2018 as a site innovation leader, is focused on helping employees develop and expand their own capabilities.



To watch videos detailing the transformation at Orange, visit [KOCH.link/INVISTAOrange](https://www.koch.com/INVESTAOrange)

“We have a lot of cool tools out here, and it’s not just the technology piece, but how you use it. If there’s something that you can bring to the table, we’ll help you with that,” Westbrook said. She envisions shift teams driving value creation. “And they’re really the best folks to do it, because they’re with the process 24/7.”

“Folks are realizing that, ‘Hey, just because I’m a process operator doesn’t mean I can’t put a DMF together and get something improved out here,’” Bishop added. “I think the support from site leadership for helping folks realize that they’re highly capable of driving change is one of the huge drivers of some of the new effects we’re seeing now.”

By the time he left Orange for Camden, former site manager Johnson said operators had been empowered to choose their own work orders in the system. “At first, I was nervous because I thought they were going to pick the easy ones, but they actually picked the harder ones,” Johnson said. “And they got better results.”

RESULTS TO BE PROUD OF

Although there will always be room for improvement, plant manager Chris Brittain says the facility is now at a point

where it is “blowing right past” industry benchmarks for performance. “That,” Brittain said with a smile, “is really, really cool to see.”

For Kevin Robles, INVISTA’s senior vice president of global operations, today’s higher production rate and improved environmental performance at Orange are connected. “A reliable plant is a safe plant and an environmentally compliant plant,” Robles said.

“We now have employees who share the same vision, trust each other, know exactly what they own and what they’ll be held responsible for. They are free to constructively challenge each other and much better prepared to further evolve in the face of whatever tomorrow brings.”

Jeff Gentry, INVISTA’s CEO, agrees. “It’s true that we’ve made some tremendous technological investments in Orange that are helping that plant stay competitive, but the real story here goes way beyond that. It’s all about individuals willing to take accountability for improving our culture, practicing Principled Entrepreneurship™ and enhancing the site’s performance by consciously applying MBM.

“What we’ve seen in Orange has been a significant cultural transformation — a transformation that really benefits everyone,” Gentry said. “We want to share that experience and help others do the same wherever we can.”



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