

Continuity in Critical Knowledge is a Core Task for Every Organization

‘What keeps me up at night is how much institutional experience could walk out the door’

Loss of critical skills and talent is affecting operational performance across the industry. Almost 80% of company executives in a recent survey said that loss is either very significant (25%), or significant (53%). The survey was conducted by ChemicalWeek in conjunction with consultancy Efeso.

In the face of such realizations, it is surprising that only a third of company executives said their firm has formal documentation and manuals to capture and retain critical knowledge and experience. A bit less than a quarter had mentorships and training programs. Only 14% had succession planning. About 22% of company executives acknowledged that they have no formal process.

Industry leaders tell CW that leadership itself is the most important bulwark against talent loss. That starts with creating a performance environment in which everyone in the organization understands the value of work. That is supported with standardized work processes which free operators to think critically and creatively. Increasingly the work processes are being digitized so the resource is widely available throughout the organization.

In operations, performance-driven best in class standard work processes are essential, and when done properly they “are not a hindrance to creativity,” said Lanny Duvall, chief operations officer for Solvay. “We don’t want operators having to spend time thinking about standard operations and maintenance. We want them to focus on improving the process. Standard work processes are the foundation, and digital is the enabler to unlock the creativity through the organization.”

Duvall observed that operators with

decades of experience have seen four different distributed control systems come and go, while they remain. Automation has to be done in concert with the operators and mechanics. “Automation allows us to



CHAD ANDERSON: Chief Technology Officer, Indorama Industries.

reallocate resources. When we reduce in one area we expand in another area. That is not a barrier to recruitment or retention. For engineers and operators this is a great time to be getting into the industry. Data is so much more available than when I was running a plant.”

And while companies have a vast amount of capital and power, they can’t make anyone stay. “What keeps me up at night is how much institutional knowledge could walk out the door,” said Chad Anderson, chief technology officer and head of manufacturing in the Indovinya division of Indorama Industries. “We do our best to ensure that doesn’t happen, and when we can’t retain people we try to retain that knowledge. We have systems, but I always wonder what we might be missing.”

Anderson summarizes talent management in four elements: I want people to come to work, do their jobs well, represent the company, and want to stay with us.”

Operators in specialty chemicals work in complex production environments,” said Viviane Papa, senior vice president of human resources and talent management at Evonik. “They are hardly sitting there watching the machine do things. Process-control systems are good at steady-state operations, but there are often things happening that were not foreseen. Experienced operators can pre-assess the situation and then pre-empt problems.”

She added that “the charming aspect of process control is the combination of an operator with experience and a newer operator who has fresh eyes. Those together with sophisticated process control are the ideal combination. It is management’s job to bring that team together.”

Handover Sessions

In one particular case in which Papa was involved, one of the company’s most experienced applied-technology experts in high-performance polymers was retiring after a long career. Over the course of his last year he gave weekly ‘handover sessions,’ to colleagues. “We recorded the sessions, and provide the transcripts so he can continue to impart his knowledge.”

Papa noted that there are regional variations to career paths, and as a global company Evonik works within those conventions. “In the U.S. there has been more hopping around. In Germany there is still more of the ‘company’ person, but we have always pursued a mix of home-grown talent – we have a strong apprenticeship program – and we also want fresh blood and

perspectives. There are also the cycles of hard and soft hiring markets, so we flex with those as well.”

Ensuring continuity in critical knowledge and experience is a core task for an organization, especially in times of increased personnel turnover. “The ways of retaining this knowledge and experience may be very different along topics and content,” said Papa, “At Evonik digitalization supports this process through usage of shared drives, team files, management systems and our internal social network, allowing knowledge to be shared already in day-to-day work. We would strongly encourage any supplier without a formalized process to dedicate strong attention to this important topic.”

Another key element for Evonik is the Explorer talent program. “That is designed for employees with growth potential who demonstrate consistently strong performance and have the ambition to take the next step in their careers in the short term,” said Papa.

“Explorers have the opportunity to participate in attractive and exclusive development activities with a focus on business KPIs and strategy, personal development and increasing visibility,” she detailed. “Furthermore, talent management is strongly connected with the topic of succession planning, as the Evonik Explorers are intended to ensure a healthy succession pipeline for key functions on various levels.”

There are two aspects of innovation, said Anderson at Indorama. “The big ‘I’ is how a company innovates to be more competitive to meet the needs of the industry and the market. The little ‘i’ is how a company engages its workforce to do their jobs better, both for themselves and for the company. And between the two, the little ‘i’ is the one that is powerful.

“As we align for big ‘I’ innovation,” Anderson continued, “we can’t stifle the individual and lose the benefit of little ‘i.’ People can get lost in big ‘I.’ I think we are as good as anyone in helping people fit in.”

Integrating Acquired Facilities

Integration was “one of the challenges when I started this position,” said J. Bryan Kitchen, chief executive officer of Ascent Industries. “We had three different assets by acquisition, three different sites, and not much



VIVIANE PAPA: Senior Vice President of Human Resources, Evonik.

standardization. We knew it was vital in the near term to retain the talent and institutional knowledge we have, but in order to compete in our respective markets in the long term, we had to standardize, simplify, and optimize all that we do.”

The decision was made to do that through digitization. “A lot of the standard operating procedures (SOPs), quality processes, training, and compliance were still being done on paper,” said Kitchen. “We were not in the 21st century.”

That digitization “was not code for downsizing,” Kitchen stressed. “We have actually increased our headcount during a down market. Our operators know that the process is supporting them, and they are leaning in.”

As an example, the digitization of SOPs underpins a cross-training initiative that enhances safety and capability across personnel, and also advances the career paths of individual operators.

“We are focused on adding tools to our employees’ tool belt,” said Kitchen. “In addition to their technical skills and experience, we are also trying to boost their business acumen. That is very much a work in progress, but it can be as simple as involving them in capital projects or business development processes. We are also adding career development to the hiring process. Knowing where that potential new hire wants to take his or her career is very helpful in our long-term planning at the plant and company level.”

Many people who have been in the

industry for a while probably worked for several different companies, noted Paul Turgeon, chief executive officer of MFG Chemical. “Some of those were good places to work, some were great, and others, well, I’d best not say. Based on their industry experiences, MFG’s leadership team implemented their accumulated best practices. In my view the key to running a successful work environment is employee engagement and satisfaction. This helps drive broad team involvement.”

There are regular town hall and other meetings at MFG, but they are not management talking at employees. The staff make presentations, reporting to the other employees, summarizing developments and updating plans.

“With this approach folks want to engage,” said Turgeon, “and they enjoy seeing colleagues from different locations to catch up. This approach drives great engagement and collaboration. We make it fun, too, with food, games, prizes.”

Noting that the operational staff at MFG



PAUL TURGEON: Chief Executive Officer, MFG Chemical.

gets bonuses when the company meets goals, Turgeon added that “as we grow as a company, we are also developing programs to move people up through the organization.”

He stressed “that does not mean that an operator who enjoys working in production cannot have an enjoyable and rewarding career in production. We want our operators to have a meaningful career within production if that is their preference.”

About half of MFG’s production is



J. BRYAN KITCHEN: Chief Executive Officer, Ascent Industries.

proprietary, the other half is custom manufacturing. “We understand chemistries deeply and operate to very exacting standards,” said Turgeon. “Operators rotate through the businesses, and we map everyone’s career path. Our human-resources leader is fantastic with that. The employees know that MFG is making an investment in them.”

Training and career development are competitive advantages in regions where the presence of other chemical companies means there are always other places workers can go. MFG also offers a finder’s fee for employees who help recruit. “It just makes sense to have people you know and trust bring in other people they know and trust,” said Turgeon.

The company seems to follow a similar approach to acquisitions. “The firms we buy are not dramatically different from our current operations,” said Turgeon. “Even so, in each case we benchmark the acquisition. We also benchmark suppliers to help and learn from them.”

Noting that Solvay was founded on what was then a new technology that disrupted the existing soda-ash industry, Duvall said that “disruption is part of the DNA of the company.”

That said, he emphasized that “within the organization the key is engagement and collaboration. People know the difference between disruption being done to them and disruption being done with them.”

At a time when some companies are rolling back their commitment to ESG,

Duvall said that Solvay stands on its policy of leading on those matters as a competitive advantage in both retention of talent and profitability.

“We have a roadmap with projects that maintain or improve our competitiveness and adherence to ESG targets,” he said. “We use that as a pillar of recruitment and retention. The continuity of history and company culture is extremely important to us,” said Duvall.

“We are publicly traded, but we are also still 30% family owned. There is a city of Solvay in Italy, and there is an Ernest Solvay Road outside our plant in Dombasle, France. We have 45 locations worldwide, and our executive team has gone to almost every one. We have one more to go, a plant in Australia, and I am getting to that one in the first quarter of 2025.



LANNY DUVAL: Chief Operations Officer, Solvay.

“Nothing is better than seeing the facility first hand,” Duvall stressed, “and them seeing you.”

People Want to be Proud

Indorama has 18 manufacturing sites worldwide: North and South America, India, and Australia. Of its roughly 3,000 employees, about 2,100 are in manufacturing. The company has grown through acquisition, said Anderson, so it’s picked up a range of operating systems and organizational styles.

There is a front-line management

obligation in talent management. “If your immediate supervisors in the process can’t articulate in 30 seconds what’s in it for the operators, then you are stifling little ‘i’ which in turn will hamper big ‘I,’” said Anderson. “I am always asking if my people know our goals and objectives, not just for this shift or this month but for the next few years.”

He also emphasized two basic points that underpin retention. “First is safety. There are highly hazardous materials and processes in our industry. Operators and plant personnel have to know they’re safe. If an individual worker is having a bad day, that could affect coworkers, the organization, and the community. People want to be proud of the company logo they wear, not just at the plant but around the community, in their schools and social activities.”

The other is that “jobs are different, and people working the same job will do it differently. Management’s job is to build the operators’ individual and personal experiences, their senses and their sensibility, into the automation. I don’t want people to come to work just from the neck down.”

Kitchen, at MFG, credits talent retention and development initiatives with the company’s recent success. “The past three quarters have seen a very significant turn around, and that is 100% because of our people. They are our superpower.”

The knowledge of the process and the operations is inherent among operators, Kitchen explained, so the onus is on management to engage. “Operators may suggest capital to upgrade reactors or equipment because they’ve been seeing more excursions, or maybe they have ideas for business development.”

On a recent visit to the plant in Danville, Virginia, Kitchen said that the maintenance staff took him behind their shed and showed him a blue tarp covered with valves and other equipment. “They told me that it would be more cost effective to repair and recondition some components rather than always buying new ones. It sounds so simple, but that is real engagement at a fundamental level.”

As Anderson said, “we want to engage the workforce at the work face.”