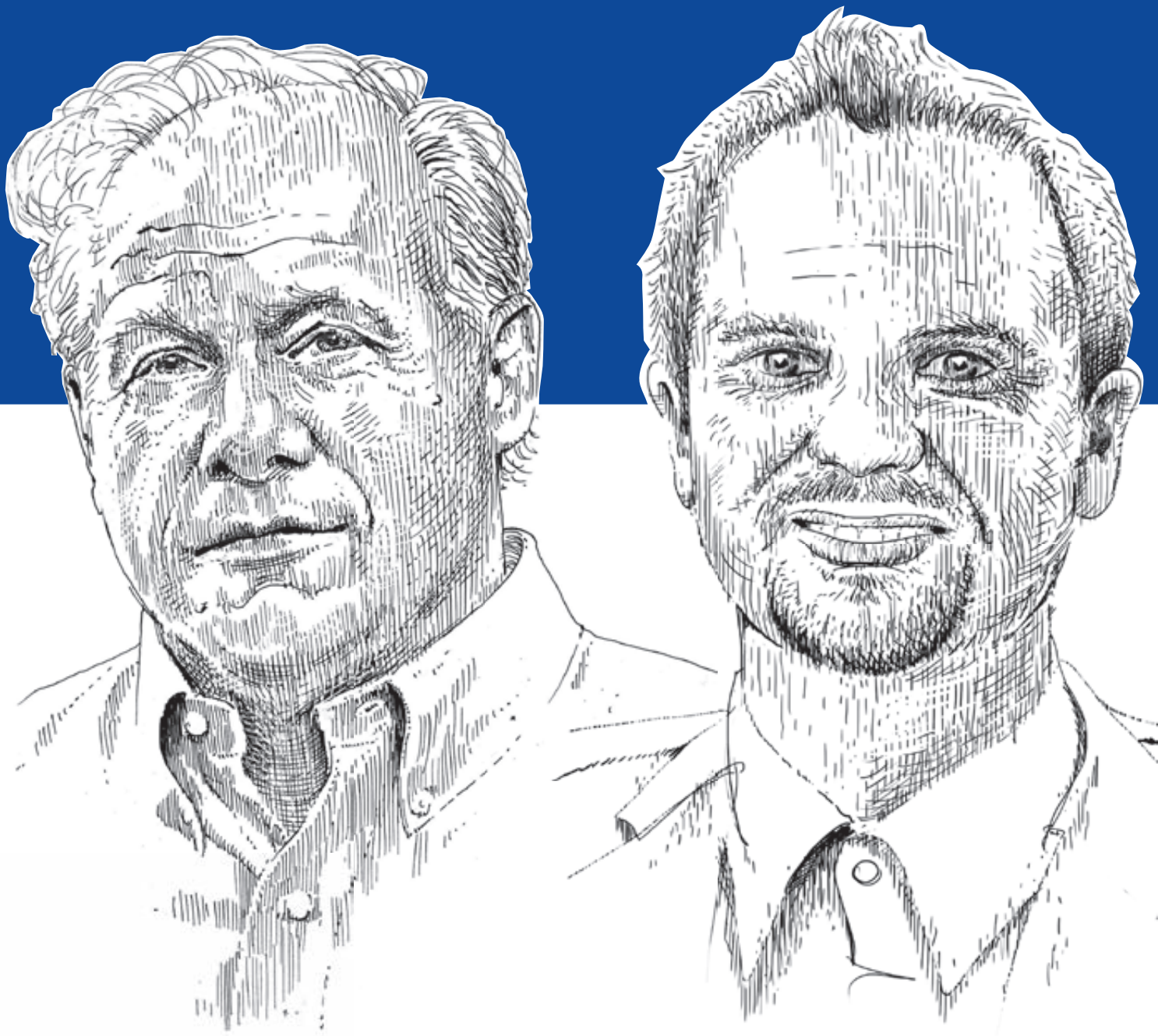


Changes can only be implemented successfully if they are properly communicated to all those involved. The larger the company and the greater its geographical site distribution, the more difficult this is. The large U.S.-based conglomerate United Technologies Corporation (UTC) is therefore training its own change specialists, who are known as Lean Transformation Leaders, or LTLs. These experts not only convey knowledge and methods; they also advance the process of transformation. Their job is to provide technical guidance and expertise to more than 200,000 UTC employees worldwide.



UNITED TECHNOLOGIES CORPORATION

TRAINERS, THERAPISTS, DIPLOMATS

✍ DAVID VON BASSEWITZ, MICHAEL LUZ



Ron Fiddler, Scott Parkin, and Hervé Fontenille (from left to right) travel around the globe to accompany change processes. Wherever they may be—in the U.S., Asia, or Europe—the three take careful note of cultural differences.



**“I DON'T NEED TO GO
THROUGH ALL THE CHANNELS,
THROUGH MY BOSS, OR
MY BOSS'S BOSS”**

**Hervé Fontenille,
Lean Transformation Leader,
Carrier**

The employees are able to work without frustration.” This is how Scott Parkin distills the essence of lean transformation at Connecticut-based United Technologies Corporation. “The day goes as planned. You have what you need, when and how you need it to add value as an employee.” For the past two years, Parkin—who has worked at UTC for ten years—has been managing the program that trains LTLs (see also on the right). The LTLs guide the transformation processes that make factories leaner and more efficient. “We are good at solving problems quickly,” says Ron Fiddler, who is an LTL at UTC. Fiddler has been at the company for 20 years and has worked in nearly all of its divisions, including at Sikorsky Aircraft, a producer of civilian and military helicopters, and as a manager for lean production at Otis, a maker of elevators and escalators.

One of Fiddler’s latest projects has been to improve the performance of a production line for elevator doors at the Otis factory in the French town of Gien. He and his colleagues know from experience that communication—or rather, lean, efficient, direct communication—is a key instrument in the transformation process. So the production line employees in Gien were first given extensive information about the upcoming changes via the intranet and newsletters. And for months now Fiddler has been flying to Gien on a regular basis to optimize processes together with the employees. “The operators participate in every →

THE TRAINING PROGRAM FOR LEAN TRANSFORMATION LEADERS (LTL) WAS DESIGNED BY PORSCHE AKADEMIE IN CONJUNCTION WITH UTC.

**THE PEAK
OF THE PYRAMID**

When companies launch change processes, they are often doomed from the start. Such projects only have a chance of success when pursued sustainably and incorporated in the company’s organization and culture. The LTL program, developed by the Porsche Akademie and United Technologies Corporation, ensures long-term and effective improvements.

When Louis R. Chênevert, the Chairman & CEO of UTC, visited the Porsche plant in Leipzig in early 2010, he was very impressed by the lean automobile factory, which features a precise incoming component schedule, immediate processing, and minimal warehousing. He was determined to apply this concept to production at UTC. And so it happened that the big American corporation partnered with the sports car subsidiary Porsche Consulting. Since the 1990s, UTC had been working with its ACE (Achieving Competitive Excellence) operating system, which employs lean management principles. “UTC has an efficient production system thanks to ACE,” says Ronny Rudzinski, a Porsche Consulting project manager at the U.S. site in Atlanta. “But what was still missing was a lean—and above all need-controlled—flow of information and materials that permeates the entire value-added chain—above and beyond individual factories.” Scott Parkin, the manager of UTC’s LTL program, adds “It’s an ingrained part of the ACE culture that we’re always looking to improve in everything that we do. This doesn’t exclude the ACE operating system itself.”

So it was perfect for UTC that Porsche Akademie members had just designed the new training program for Lean Transformation Leaders in 2010. A division of Porsche Consulting, Porsche Akademie has specialized for years in training experts in continuous improvement processes (CIP). “The LTL program is designed for companies that already have long-term experience in lean production processes,” says Marc Zacherl, Leader of Porsche Akademie. “It’s what we might call the peak of the pyramid, and ensures further training for lean experts.”

It was a program made to order for UTC. The core of the LTL training process consists of “individual, intensive, and on-the-job coaching on-site—at the customer’s factories,” explains Dr. Thomas Scheib, Senior project manager

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at Porsche Akademie. The first step is to select the factories whose production processes should be improved, and also the candidates who will be trained. “An LTL should have solid technical skills as well as operational experience in improving processes,” says Scheib. Interpersonal qualities are also important. “The candidates need to have empathy, energy, and the ambition to challenge their teams and bring them on board. They have to be good communicators as well—they have to be able to talk with management as well as with foremen and workers.”

In one case, improvements to the processes had reduced throughput times by three-quarters, increased the quality rate fourfold, and raised productivity by a third.

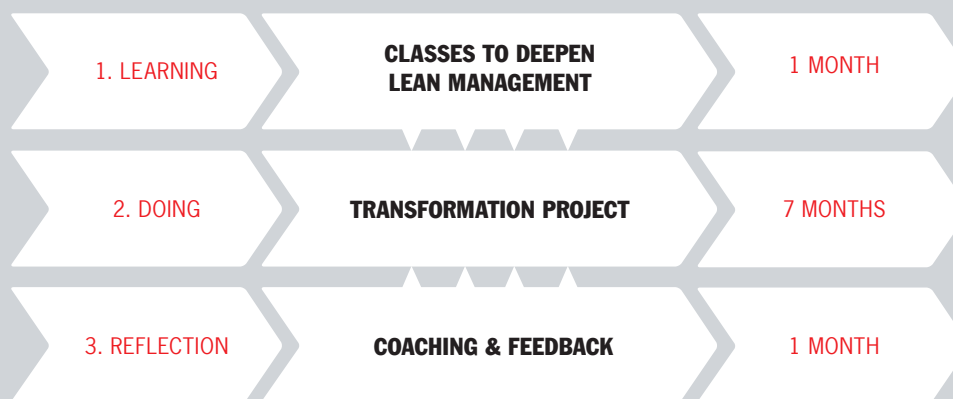
Following a lab simulation at the Porsche model factory in Leipzig—in the midst of production for the Porsche Panamera—the actual training itself begins. This process consists of a Porsche consultant coaching two future LTLs. The program has three stages. Sessions that focus on case studies have a high classroom component. This content is then applied to project work on-site, and is also analyzed and improved

in the course of team workshops. The Porsche consultants supervise the LTLs and provide feedback, ideas, and specific recommendations for action. And finally, plans are drawn up in which the future LTLs stake out precise profit-margin targets for the years during which their factories or production lines will be transformed.

Over the course of nine months, the Porsche experts coach the LTLs for 30 days on-site throughout the training program, with a 20-day core emphasis on coaching their project work. After successfully completing their training, the LTLs have “a comprehensive grasp of the company’s processes,” says Zacherl. They also make a crucial contribution to changing the attitudes and behaviors of the managers and staff involved—an indispensable part of sustainable transformation. This ensures that the company will continue to pursue what it has learned, even after the consultants “take off.” As Zacherl observes, “The basic idea underlying the program is that the Lean Transformation Leaders should implement change processes at their companies in an effective and long-lasting manner.”

The greatest motivation for the LTLs during their training lies in the visible and measurable successes made along the entire value-added chain. In one case, recalls Scheib, within just a few months improvements to the processes had “reduced throughput times by three-quarters, increased the quality rate fourfold, and raised productivity by a third.” The training program generally pays for itself within a year.

Training program for Lean Transformation Leaders



The Lean Transformation Leader training program comprises three components. Training sessions and case studies enable the future LTLs to further their knowledge of lean management (“learning”). They then apply this knowledge to a transformation project at a specific location (“doing”). Porsche Akademie consultants are regularly available to provide feedback and recommendations for action (“reflection”).

workshop and training session.” He adds that it’s crucial to make sure they have enough ways to provide feedback, for the simple reason that “they are the most important voice. They show us what’s not running completely smoothly yet.”

Parkin emphasizes that as transformation experts, LTLs have to be able to reach all levels of the company. The most important factors in bringing the employees on board are sincerity and trust. As he explains, “The LTLs tell or show the employees the ‘WIIFM’ [what’s in it for me], and tell them the truth. They help people to be more efficient and make the business better, which is beneficial for everyone.” Talks with managers are even more strongly fact-based. The positive effects that the changes will have on productivity, profit, and costs are illustrated with key metrics.

Hervé Fontenille, another Lean Transformation Leader, works at a location more than 6,000 kilometers from Connecticut in the town of Montluel near Lyon, France. An ACE (Achieving Competitive Excellence) coordinator for Carrier, a UTC subsidiary that makes air-conditioning systems, Fontenille notes that “comprehensive communication is key.” He notes that LTLs encounter resistance from

time to time, especially from mid-level managers. “When we were starting the lean transformation and changing things, engineers worried that they wouldn’t be able to keep up with adding training to the daily workload,” he says. “Sometimes it takes a lot of lengthy one-on-one conversations, plus a good deal of tact.” In explaining these change processes, Fontenille places a high priority on transparency. He is constantly inviting trade union representatives to participate in the training sessions and optimization workshops. “If the employees work against us, change is almost impossible to implement,” he says. If there is overwhelming resistance to the change, the transformation experts get personally involved—leading by example. This means that LTLs are simultaneously trainers and therapists, motivators and doers, guides and diplomats. “A good LTL has to balance technical expertise with leadership skills,” says Parkin. “The best LTLs know the science of lean, but practice the art of change management. Probably the most important skill for this job is being able to convince people at all levels of the need for change and progression.”

It’s a job for which airports are one of the few constants. Lean Transformation Leaders are always on the move. They visit production sites

**Lean Transformation Leaders
are on the move all around
the globe to advance the process
of transformation itself. Like
chameleons, they try to adapt as well
as possible to different cultures.**





United Technologies Corporation (UTC) is one of the largest industrial conglomerates based in the U.S.

Its five business units include: Otis—an elevator and escalator maker; UTC Climate, Controls & Security (CCS)—an HVAC and security company that includes brands such as Carrier, Kidde, and Chubb; Pratt & Whitney—a jet engine maker; UTC Aerospace Systems, which includes the legacy Hamilton Sundstrand business as well as recently acquired Goodrich; and Sikorsky Aircraft—a producer of commercial and military helicopters.

UTC employs 218,300 people at more than 4,000 sites in 71 countries around the world. It reported net sales of \$57.7 billion in 2012, with international sales accounting for 60 percent. Contracts from the U.S. government brought in \$10.1 billion. United Technologies Corporation is headquartered in Hartford, Connecticut.

throughout the world in order to train colleagues and to supervise change processes. Fiddler is on the road for more than six months of the year. As they work around the globe, the LTLs are frequently confronted with cultural challenges. “In the U.S. and Western Europe it’s standard practice to include operators in the transformation processes,” says Fiddler, whereas “in Eastern Europe, you often see managers making all the decisions alone.” Like chameleons, the transformation experts try to adapt as well as possible to the environment of their hosts. “You have to be cognizant of how direct your approach is,” says Parkin. “In some countries a direct approach is considered transparent and is encouraged, while in others it can be perceived as aggressive. Ultimately if you’re respectful, open, and honest, I don’t find the culture or country to make too much difference.”

Wherever they are in the world, the LTLs have quick and non-bureaucratic access to UTC headquarters in Connecticut. “I don’t need to go through all the channels, through my boss, or my boss’s boss,” says Fontenille. “If I have questions or need approval for something, I can communicate directly. That makes life a lot easier for me.” The two LTLs Ron Fiddler and Hervé Fontenille as well as program manager Scott Parkin are satisfied with the initial results of their transformation processes with Porsche: capacity increased by 60 percent; lead time was reduced by 40 percent; on-time-delivery increased by 30 percent. In addition, productivity increased by 20 percent and inventory was reduced by more than 30 percent. As Scott Parkin sums it up, “Ultimately we have achieved very powerful business results that are delighting customers, shareholders, and employees.” ←