# **IOWA STATE UNIVERSITY**

Center for Industrial Research and Service

# C S NEWS

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## AT A GLANCE

### Life Line Emergency Vehicles

**FOUNDED: 1985** 

**OVERVIEW**: A maker of quality custombuilt ambulances and emergency vehicles.

#### EMPLOYEES: 176

IMPACT: Projections call for more than \$1 million in new or retained sales because of the motorized sliding side door.

FOR MORE: www. lifelineambulance.com



# **Capstone Project Helps Life Line Open New Door**

A Sumner, lowa, manufacturer of emergency vehicles believes it's on the cusp of a major innovation after lowa State University engineering students helped the company develop a new design for a side-entry ambulance door.

Life Line Emergency Vehicles, a maker of custom ambulance bodies since 1985, expects to go to a national trade show this fall with a working prototype of its first ambulance with a motorized sliding side door—a new feature that's expected to make it safer and more convenient for emergency medical crews to operate in tight spaces or along the side of a highway.

"Any time an ambulance pulls over to the side of the road on a restrictive street, getting the side door open becomes an issue," said Jacob Spiegel, Life Line's head of research and development. For

example, hinged doors that swing open near traffic have a tendency to block views of the road and may create a hazard for EMS workers.

Other ambulance makers have been selling sliding side-door models for years, but Life Line's new patent-pending entry appears to be the first motorized offering.

"We have always tried to be a leader in the industry," Spiegel said. "We've always tried to be out in the forefront.... I think this is going to be a very big deal because it gives us something that the rest of the industry doesn't have."

The new product is arriving roughly two years after the privately owned Life Line was sold to Folience Inc., an employee stock ownership plan that purchased the ambulance firm in July 2017 (see page 3), making the company 100 percent employee owned. To help Life Line grow, Folience reached out to CIRAS and Iowa State University for assistance.

The sliding side door was "something that people had been talking about in the industry, so it was a good starting point," Spiegel said. "There are a lot of things that have to be addressed in a sliding door. It's a complex mechanism, but this

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On the Cover: Ambulances under construction at Life Line Emergency Vehicles in Sumner.

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is a good fit for a bunch of engineering students."

"We didn't want to be an 'us-too," said Randy Smith, Life Line's director of operations. "We wanted it to be unique and to challenge us."

Eight mechanical engineering students visited Life Line in the fall of 2018 to begin roughing out the new door's design as part of a senior capstone project—a requirement that lowa State engineering

students must complete before graduation to demonstrate that they can apply what they've learned to real-world problems. A second group of capstone students then developed the design even further the following semester.

Life Line engineers took over the project in May and began working it through the final tweaks of becoming a productionworthy design.

"The students were magnificent, but they ran into some problems that modeling it on a computer doesn't

predict," Spiegel said. "They did a bang-up job; but until you build the first prototype, you don't really know how it's going to work."

Life Line plans to publicly unveil the new ambulance in October at EMS World

> Expo 2019, a major trade show in New Orleans. After that, the new vehicle still will require it may take another year before the company will see significant

safety testing-meaning new sales.

But Spiegel said Life Line is confident that the industry's future includes sliding side doors. It's simply what the customers want.

"We are a custom-built manufacturer," he said. "Everything we make is custom. We take great pride in the durability and the longevity that people get out of a Life Line ambulance. I think this will dovetail nicely with our existing product line."

"If we deliver something that is a benefit to the customer and it's seen as value added, then it'll sell itself."

For more information, contact Carey Novak at cenovak@iastate.edu or 515-408-4257.

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— Jacob Spiegel

Iowa State University engineering students check wiring, switches, and software during construction of a prototype motorized side ambulance door.





## The Folience Formula: Diversification That Boosts Family Businesses

A 133-year-old newspaper company's path to diversification is simultaneously sparking innovation among the employee owners of the businesses it's purchasing.

Folience Inc., a Cedar Rapids-based

holding company, has acquired two manufacturing firms in the past three years as part of a concerted effort to broaden the company beyond its media industry roots.

"These companies, when they're on their own, are working really hard to have the success that they've had," said Folience president and CEO Daniel Goldstein. "Joining Folience gives them more resources and more capacity than they would have had on their own....lt's a very clear example of 1 + 1 = 3."

Folience, which serves as an umbrella organization for an employee stock ownership plan (ESOP), evolved into its current form at the beginning of 2017 because The Gazette Company, publisher of the Cedar Rapids newspaper, wanted to find new ways to invest its resources. The Gazette, which has been 100 percent employee owned since 2012, received a windfall when it sold KCRG-TV for \$100 million in 2015.

Four years after that sale, Folience has a total of 620 employee owners. That figure includes the newspaper and a commercial printer; Fusionfarm, a Cedar Rapids advertising agency; Life Line Emergency vehicles, a Sumner ambulance manufacturer that Folience purchased in 2017 (see page 1); Cimarron Trailers, an Oklahoma trailer company purchased last year; and a Shared Services division that helps all the firms run payroll, human resources, and other support functions.

Goldstein said Life Line and Cimarron both started as family-run businesses, with owners looking to depart without harming those they would leave behind. In both cases, controlling families eventually sold to an ESOP. Long-time managers thus could keep their jobs while simultaneously taking advantage of the new resources that a parent corporation could provide.

CIRAS account manager Sean Galleger believes the ESOP structure, when run properly, can help a company make better choices. "There's no guarantee," Galleger said. "But in most instances, I feel companies become stronger over time because the culture changes. You've got more diversity of thought in strategy and decision making."

It was Folience, through a board member's connections at lowa State University, that helped Life Line begin a relationship with CIRAS, thus helping the company find engineering resources to develop its long-wanted sliding side-door ambulance. Life Line, recently transformed to a 100 percent ESOP, now is working with CIRAS on a strategic plan to help the company set the correct priorities for its new future.

Randy Smith, director of operations for Life Line, said Folience facilitates growth.

"Basically, their job is to just let us do our thing," Smith said. "It kind of frees up some of our time to go out and work on the projects that we want to."

For more information, contact Sean Galleger at galleger@iastate.edu or 515-290-0181.

## AT A GLANCE

#### Folience Inc.

FOUNDED: 1884 (2017 in its current form)

**OVERVIEW:** An ESOP holding company that includes Cedar Rapids' The Gazette, Life Line Emergency Vehicles, and Oklahoma-based Cimarron Trailers.

**EMPLOYEES**: 620

FOR MORE: www.folience.com



## **PTAC Receives Awards**

CIRAS government contracting specialists were praised by their peers earlier this year for having a tremendous impact both on the lowa economy and on the communities where they live.

The CIRAS Procurement Technical Assistance Center (PTAC) was lauded by its national organization in March for fostering local coordination in the state's Home Base Iowa program. The Association of Procurement Technical Assistance Centers (APTAC), a group of more than 94 PTACs around the country, presented CIRAS PTAC program director Leah Barton with an Economic Impact award at its annual meeting in Reno, Nevada. APTAC praised work by government contracting specialist Andy Alexander to coordinate Home Base Iowa efforts in Pottawattamie County and "set the standard" for regional collaboration.

Alexander additionally received the Becky Peterson Human Impact award for helping the Council Bluffs Police Department strengthen ties to its community after two officers died in the line of duty in 2017. Alexander worked with Council Bluffs to boost community participation in the National Night Out and Citizens Police Academy and helped the town with construction of a new \$20 million police headquarters.

APTAC says the Human Impact award recognizes those who go beyond normal PTAC duties, "making a difference in the lives of others and the communities we call home."

Congratulations to Andy and the rest of the PTAC team.