

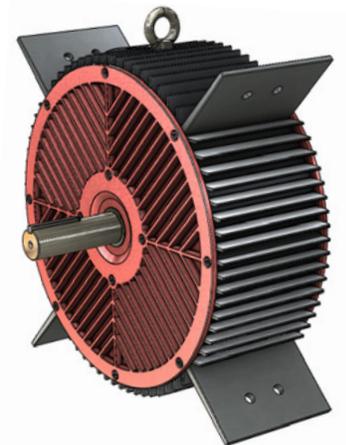
# Leading Innovator in Dairy Barn Environments Gains Technology, Operational, and Strategic Advantages Through Partnership with SMC

## Customer profile

- VES scientifically designs environmental systems that optimize cow health and comfort for dairies around the world.
- Founded in 2008 by veterans in agriculture and commercial ventilation, VES has been the leading innovator in dairy barn environments. Using the barn footprint and shape, climate, years of weather data, geography, cow health history, and other factors, VES's veterinarians and consultants create custom barn designs that they call Animal-Centered Environments.
- Based in Chippewa Falls, Wisc., VES employs 50 people and sells into 30 countries around the world.
- VES stands out as a technology leader in a space where people have been traditionally slow to change. Years of low milk prices have forced drastic change on the industry, and hundreds of smaller farms are consolidating into larger enterprises. In the US and Europe, consumer choices and technology have encouraged farms to promote animal welfare and cut their carbon footprints. Meanwhile, Asia and the Middle East are growing their own domestic dairy industries to meet domestic consumer demand and improve national food security. This has initiated a unique technology upgrade cycle that positions VES to grow rapidly.

## Nature of Partnership

- Software Motor Company engaged VES starting in 2016 because it recognized them as innovation standouts in an industry – agricultural supply – where competition is undifferentiated.
- SMC was able to provide technology advantages to VES.
  - SMC provided ultra-energy efficient motors that powered VES's first generation of direct drive dairy fans, eliminating belt failures and the the need for regular belt maintenance.
  - SMC also provided the IoT infrastructure. This robust integration includes the technology that powers DairyBOS, the Dairy Barn Operating System. DairyBOS collects data from environmental sensors in the barn to automatically adjust barn lighting, ventilation, and cooling, and provide 24/7 monitoring of components and conditions.
- VES will also be the first strategic partner to implement SMC's TX-series, a revolutionary "pancake" design optimized for fans.



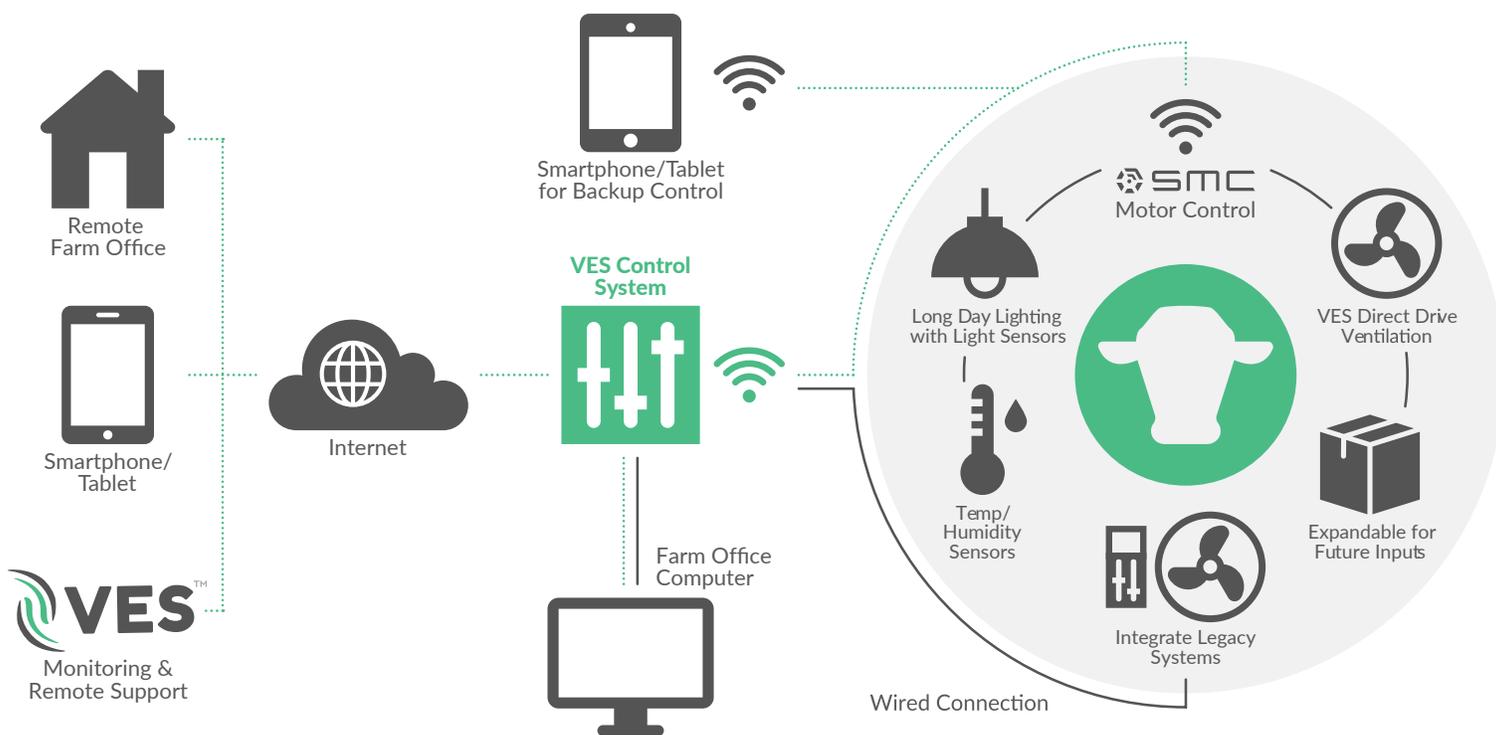
## Organizations and Operations

- SMC partnered closely with VES on product development and integration. VES's first generation of direct drive fans powered by SMC V-series motors resulted from deep collaboration between the two companies' engineering organizations.
- SMC provided additional support to VES in strategy, organizational development, training, and marketing, in order to successfully go to market. The two partner companies drove decisions collaboratively, with VES maintaining ownership of its IP and customer relationships.

## Results

- From initial pilots, VES has driven full installations with SMC Smart Motor Systems across three sites, with 178 fans installed and running.
- Three more projects are scheduled for Q1, comprised of 80 more SMC-powered fans.
- VES plans to ramp revenue significantly in 2020, driven by the V-series fans and the next generation of fans powered by TX motors, with DairyBOS as supporting cloud software technology.

## DairyBOS™ (Dairy Barn Operating System)



For more information on VES or Animal-Centered Environments,  
please visit [www.ves.co](http://www.ves.co) or call (715) 720-0800.



The Silicon Valley based Software Motor Company is setting a new standard of efficiency, reliability, and intelligence with the SMC Smart Motor System. SMC combines modern computing and software control with the proven reliability of switched reluctance motor technology to achieve an unprecedented optimal efficiency. The patented SMC Smart Motor System only uses energy when it is needed, thereby significantly reducing space conditioning and refrigeration energy costs. A fully programmable IoT controls package facilitates maintenance savings and easy integration with existing building systems.

**POWER IS VALUABLE. USE IT INTELLIGENTLY.**

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