

**Worldwide Knowledge,
Local Expertise**

07

Large-dairy farmers face numerous challenges. Lely Dairy XL supports farmers with solutions and techniques to help them cope with these challenges.

**Work smarter with
proven routines**

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Our workflows, developed for robotic milking, offer the routines and disciplines that make a difference to your labor efficiency.

**The Red Cow
Community**

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The Red Cow Community consists of large-dairy farmers from all over the world. This closed, safe environment allows them to discuss common challenges.

Large farming solutions

Dairy XL



*People, cows &
technology*

www.lely.com





Our ambition

Global challenges such as climate change, a growing global population and a more demanding society will lead to new perspectives on how to run a viable dairy farm. In addition, dairy farmers face the impact of reduced availability of quality labor alongside a supply chain under increasing cost pressure. At Lely, we strive to find solutions to these challenges. We work together with our customers to improve our methods to create a sustainable, enjoyable and profitable future in farming.

Large dairy farms face all these challenges and more. As farms grow, it's no longer about duplicating the processes, working harder or upscaling. It's about efficiently applying diminishing resources while facing the challenge of retaining a suitable workforce and ensuring regulatory compliance.

Running a large dairy farm means coping with the challenges of adding value to the milk, managing slurry and nutrients effectively and – last but not least – ensuring society continues to accept our industry and our evolving methods.

It's our belief that many of those challenges can be faced with the proven concepts of Lely. By bringing automation and technology to your cows, repetitive work will be reduced significantly and you'll benefit from a smaller, yet more skilled workforce. At the same time, animal welfare increases when your barn is designed around the cow and gives her an environment to maximize her genetic potential.

Enjoy large farming by empowering the cow and your people with Lely.

"We knew that if we wanted to be in the industry, we needed to do something different and be more efficient."

**Jill and Brian -
Homestead Dairy, Indiana**

"Our employees like this type of work more than working in a conventional parlor."

Labor has been an issue at Homestead Dairy. It was harder to find, harder to keep and it became more expensive.

"No one really wants to milk cows anymore and that is why the robots have been such a help for us. It takes the milking process out of the equation."

Homestead Dairy is now managed by the 4th generation of the Houin family. Since the farm was founded in 1945, the family has grown their herd and now milks 4,800 cows.

They have continued their tradition of innovation by investing in 36 Lely Astronaut A4 robotic milking systems milking 2,200 cows. In the future, they plan to expand their robotic operation to 48 robots.

The addition of Lely robots has helped Homestead Dairy with labor issues, improve cow health and be a more efficient operation.

"The amount of data we get from the Lely robots is phenomenal. It allows us to take better care of our cows."



Scalable growth

Expanding your business via a traditional parlor set up can be logistically challenging and capital-intensive.

Automated milking with single cow units simplifies that growth since growth can be achieved incrementally and in planned phases. This avoids the need for future-proofing your development with surplus units and large collecting yards. At Lely, we help you build to manage instead of building to milk.

Lely Dairy XL

Worldwide Knowledge, Local Expertise

Automation and new technologies can help optimize your large dairy business and animal welfare while delivering against the growing social demand and legal regulations.

More attractive work

Worldwide, attracting and retaining a skilled workforce is becoming increasingly difficult. The repetitive task of milking can be seen as physically hard work. Automation offers a solution to this growing challenge by providing a more enjoyable working environment.

Automation can take away 50% – 60% of the repetitive work on your farm. In doing so, more time is available for proactive work, helping build a more sustainable dairy enterprise. Working with your Dairy XL team to build Standard Operating Procedures (SOP's) around your system, physically demanding tasks can be greatly reduced.

Your license to produce

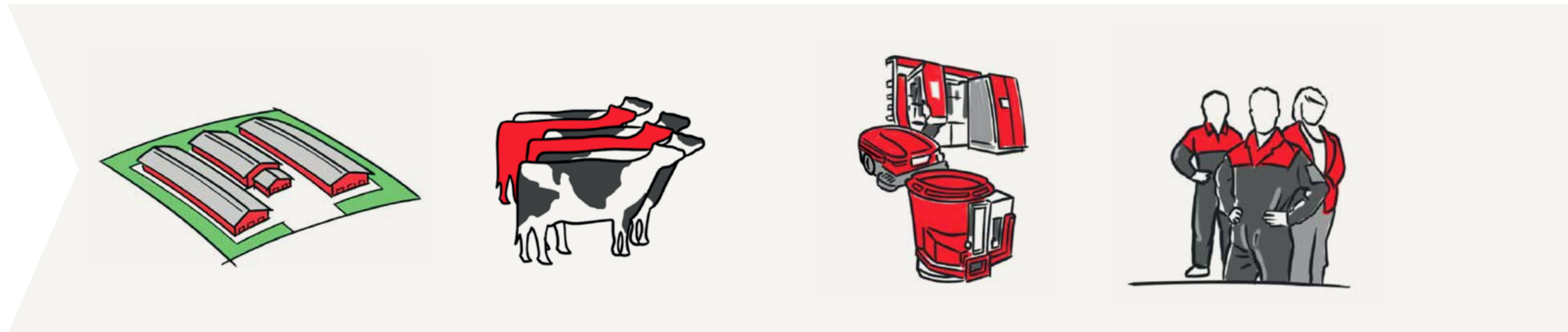
An increased societal focus on animal welfare and husbandry methods means a healthy and sustainable life for the cows is a prerequisite. Free cow traffic and milking robots support the cow's natural behavior. She can decide when to eat, rest, feed or be milked. An automated barn and barn design represent the cow's ideal world for optimal animal welfare.

A joint approach

The Lely Dairy XL team supports farmers in addressing the challenges in dairy. By offering solutions and techniques, while also offering a wide-range of dairy farming knowledge, the Lely Dairy XL team helps you face those challenges as a partner. Our goal is to ensure that our solutions fit in to your business. In the end you – as many other large-dairy farmers around the world – will benefit from a more efficient large dairy business that is ready for a healthy future in farming. Lely Dairy XL specialists are embedded in all our local markets. They meet frequently to capture and share insights and share knowledge on best practices.

Cohesion delivers results

Finding integration between the largest assets on the dairy farm can be challenging. Creating an environment where all your resources work together allows the individual assets to excel in their area. This will deliver increased results.



Workload = Cows + Technology + People

A dairy farm centers on the triangle: cows - technology - people. With a farm design based on the ideal lactation cycle, we embed the cow touches into a plan where the workforce can effectively execute routines and where technology delivers the most consistent experience through repetition. We multiply the optimal group size and incorporate technology in the SOPs. In this environment, cows behave naturally, robots collect data and management makes the right decisions.

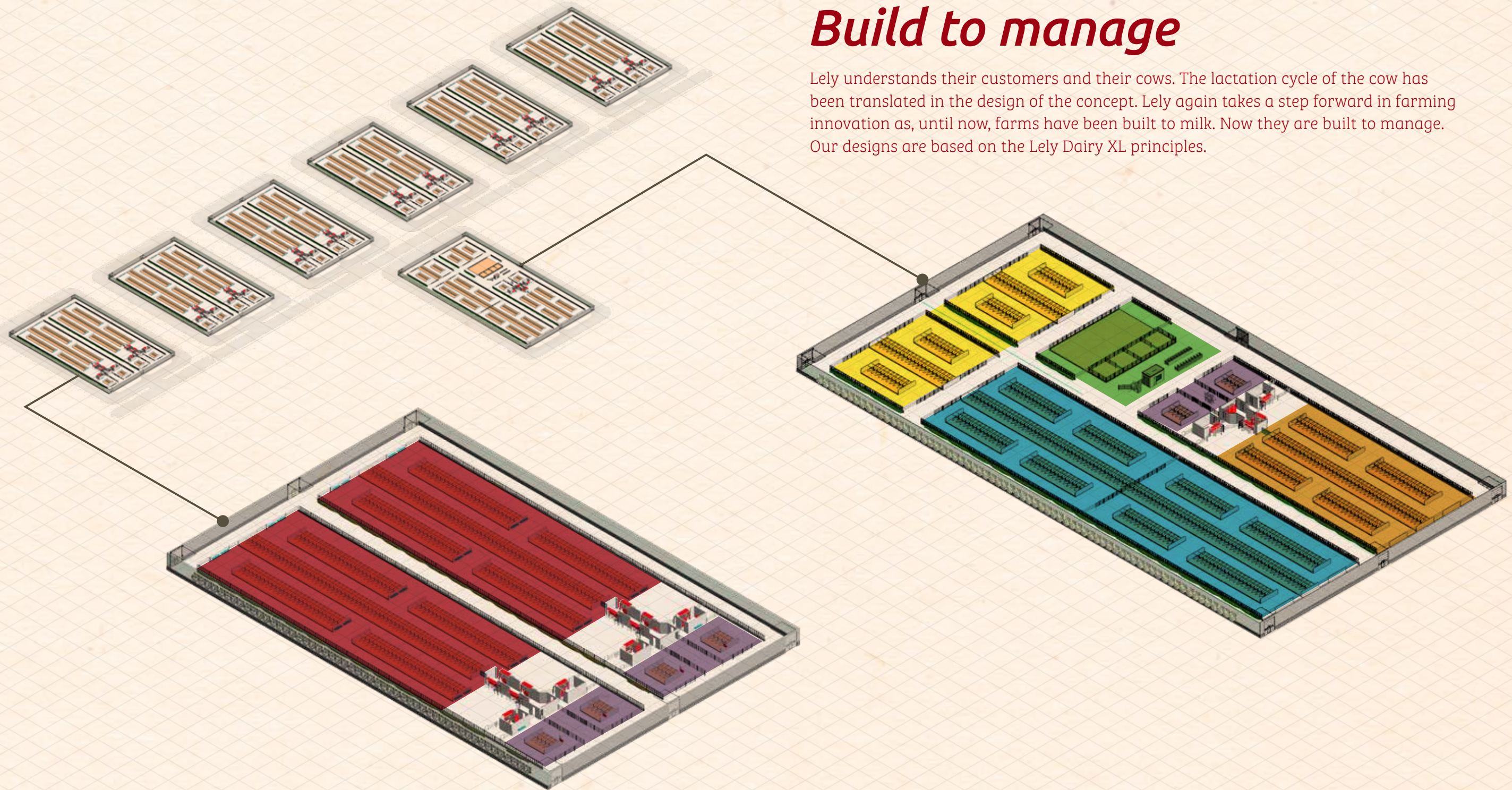
Cows are central to automation and to adapting day-to-day routines. We bring technology to the cows and not vice versa. By bringing automated milking or feeding to the cow, she can decide to either get milked, eat or rest. She does the work at her own pace and in a natural way. She works for you in the most efficient way possible.

By having cows and technology work for the farmer, time is freed up to focus on other routines. Additionally, robots work more consistently and with fewer mistakes. You will benefit from flawless and smooth working processes and from real-time data. Abnormalities are highlighted and direct actions can be performed. This enables you to make fact-based decisions and to really focus on those cows that need your attention.

Through smart technology and cows that work for you, you will benefit from a smoother workflow. Processes are easier to define and you can manage more cows per employee. The nature of labor changes from repetitive milking to specific treatments of those cows that need it. Your people work around the cow rather than 'under' her. They will enjoy getting the best out of both — the cows and themselves.

Build to manage

Lely understands their customers and their cows. The lactation cycle of the cow has been translated in the design of the concept. Lely again takes a step forward in farming innovation as, until now, farms have been built to milk. Now they are built to manage. Our designs are based on the Lely Dairy XL principles.



A

Cows don't have time

Cows have to produce milk, so we should let them get on with it! Cows should stay in their dedicated groups and we have to work around them.

B

Situate labor around the cow

The concept barn is optimal for both cows and people. Each part of the design is focused on a particular part of managing the lactation cycle of the cow. A pleasant working environment has been created by managing the herd and taking care of the individual cows in an enjoyable way.

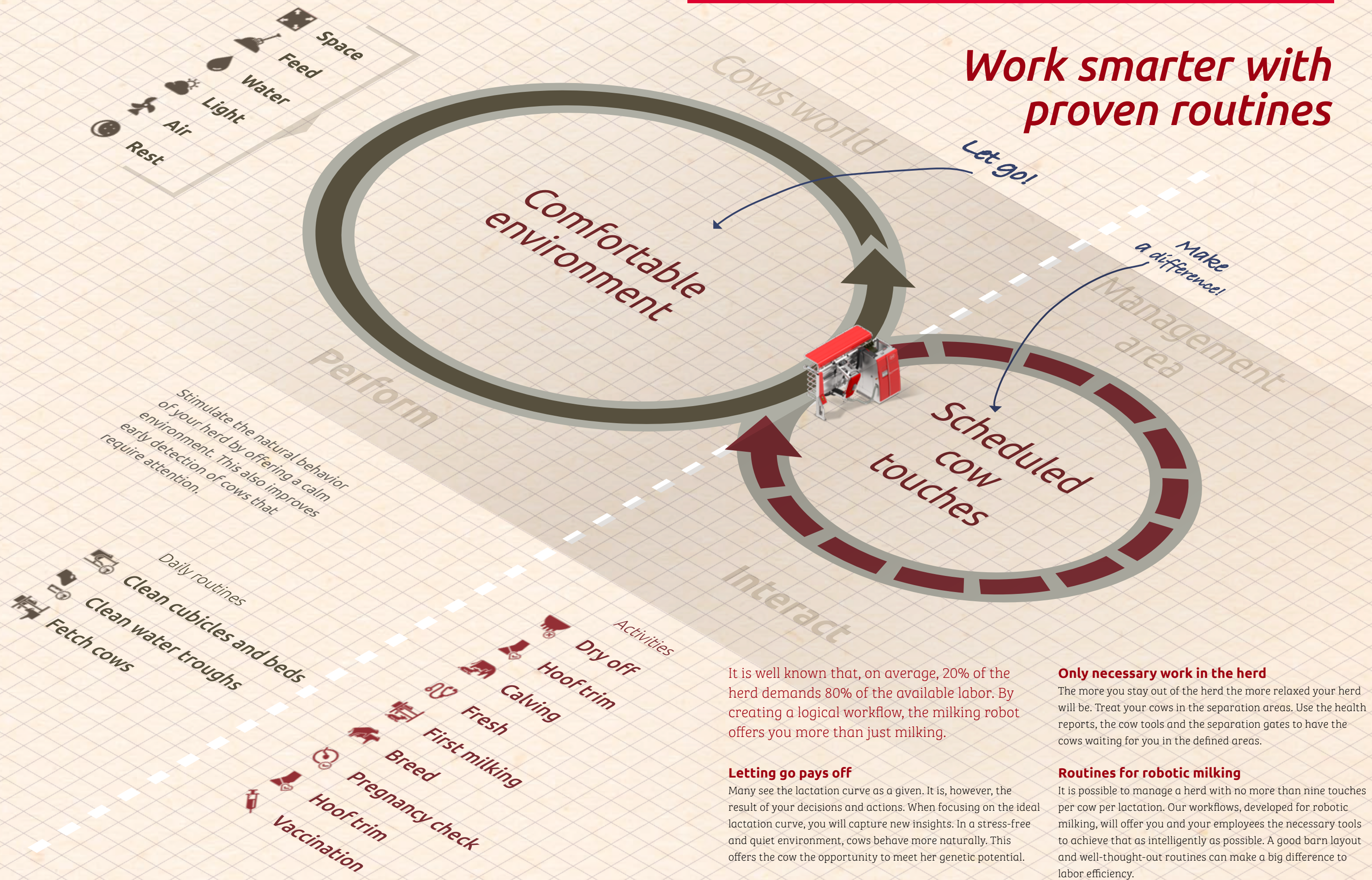
C

Management focus increases efficiency

Effective routines and SOPs for all key activities allows managers to manage their staff effectively. Enjoyable and high-quality working routines drive optimal milk production and ultimately enhance farm profits.

- Far off
- Close up
- Stress-free calving
- Lactation start
- Milk groups
- Separation treatment areas

Work smarter with proven routines



It is well known that, on average, 20% of the herd demands 80% of the available labor. By creating a logical workflow, the milking robot offers you more than just milking.

Letting go pays off
 Many see the lactation curve as a given. It is, however, the result of your decisions and actions. When focusing on the ideal lactation curve, you will capture new insights. In a stress-free and quiet environment, cows behave more naturally. This offers the cow the opportunity to meet her genetic potential.

Only necessary work in the herd
 The more you stay out of the herd the more relaxed your herd will be. Treat your cows in the separation areas. Use the health reports, the cow tools and the separation gates to have the cows waiting for you in the defined areas.

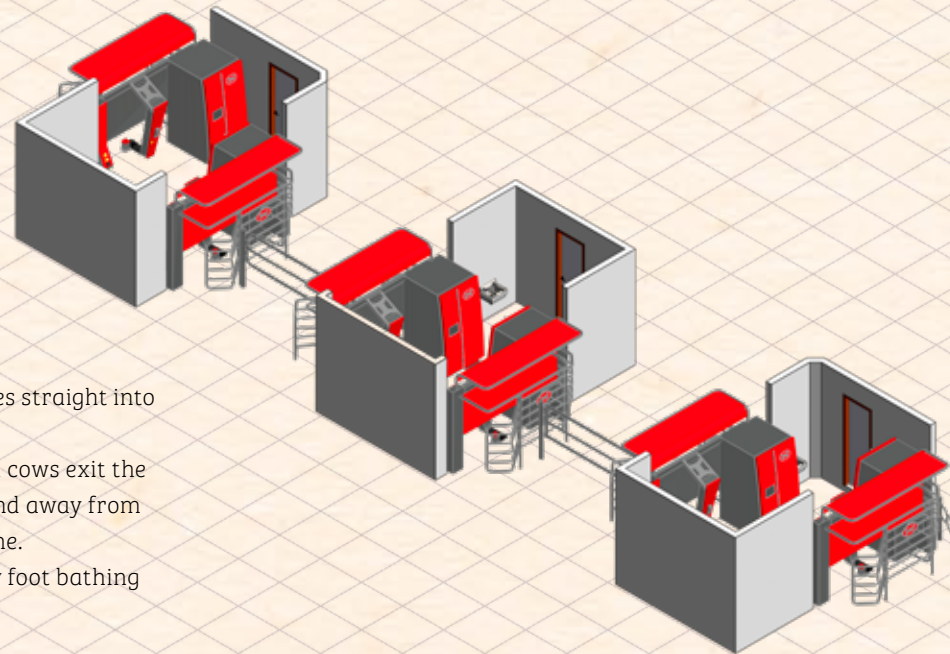
Routines for robotic milking
 It is possible to manage a herd with no more than nine touches per cow per lactation. Our workflows, developed for robotic milking, will offer you and your employees the necessary tools to achieve that as intelligently as possible. A good barn layout and well-thought-out routines can make a big difference to labor efficiency.

Robot layout defined according to your goals

With more than 35,000 of our robots in operation on dairies worldwide, experience has taught us a lot about barn design and robot configurations. Whether you are building a new barn or retrofitting an existing structure, deciding on the proper robot layout is a critical, yet enjoyable, process, where creativity needs to match with future goals and management strategies. There are several different options and configurations to select from.

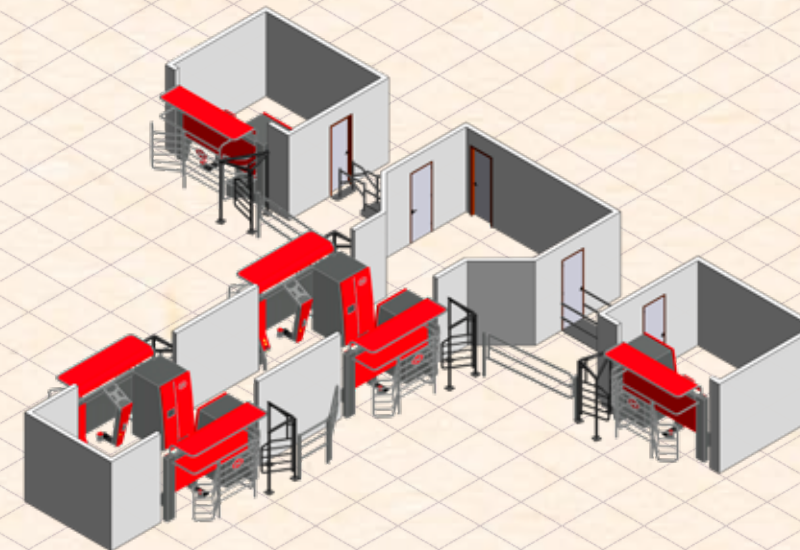
Toll Booth

- Easy access from the walking lanes straight into the robot.
- After milking or being refused, all cows exit the robots through a common lane and away from the robots, straight to the feed lane.
- The single return lane allows easy foot bathing and sorting options.



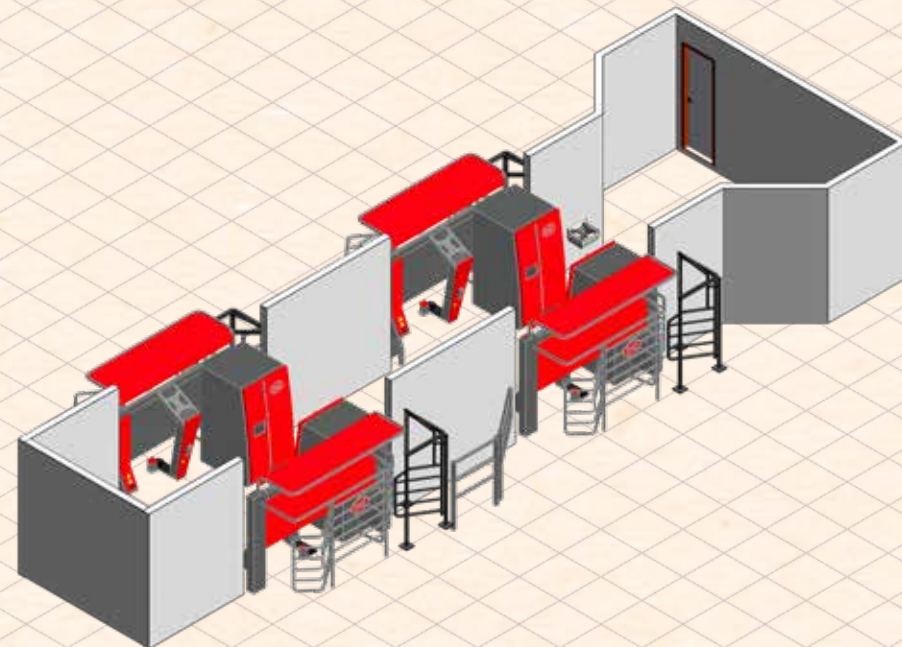
L-Shape

- Allows cows from the management area easy access to a robot to be milked and then return back to the management area.
- Sorting from all three robots is ideal. Each robot can sort to the management area.



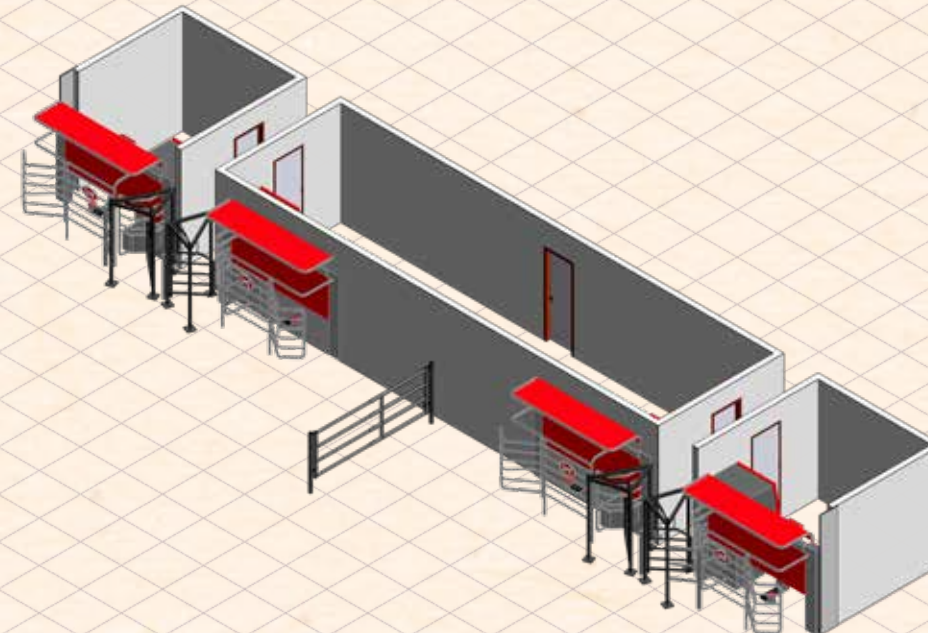
In-Line

- All robots in the same robot room.
- Ideal for cleaning and servicing.
- Sorting to the management area is possible, but having cows in the management area re-milked is not easily achieved.



Head-to-Head

- All robots are visible and in clear sight throughout the entire pen, cows are more at ease when seeing other animals.
- Lowest footprint in square meters.
- Allows cows from the management area easy access to a robot to be milked and then returned.
- Works best with a slatted floor in front of the robot or with robotic scrapers as it shuts off the alley scraper lanes.



DairyWise

DairyWise is a farm management optimization program guided by 'lean' principles to improve farm performance. The program focuses on target setting, observing the current situation and implementing improvements.

DairyWise stimulates this efficiency by focusing on staff engagement, optimizing value-adding activities and eliminating waste in processes.

DairyWise is an initiative by Nestlé & Lely to introduce the Lean Approach for a bright future in dairy farming

"Our employees are more engaged and we increased milk production per staff hour by 28%."

Clayton, Hemdale Farms, New York



Effective farm processes

Once the farm design and technology setups have been decided, focus turns to the organization of daily management. For this specific step, we make use of proven concepts for tailored advice and smart software. Our software manages the robots, cow routines and with our applications, we can manage the people routines. This integrated approach supports you in structuring the new routines with robots on the farm.

Whole farm approach

The software is designed to combine data from different robots into cow actions and employee routines. It brings useful management information and gives insights for better management decisions. A clear dashboard with key performance indicators gives a real-time overview. Smart reports are shared frequently for the management teams and can be sent to your trusted advisors to help in the growth of the established goals of the farm.

Improved efficiency

The production of milk in a sustainable and profitable way requires farmers to embrace new ways of working. Farm engagement, labor efficiency and continuous improvement are key elements to overcome challenges and secure farm succession. Applying a Lean Approach requires identifying and removing all waste or inefficiencies through the creation of new processes and a better workflow. This approach can be applied to any type of activity on the farm, such as feeding, pen routines, animal health and reproduction tasks, and employee management.

Data for fact-based decisions

Barn automation delivers real-time data on each cow in the herd. The data is presented to you via a single screen through Lely Time-for-Cows (T4C), our management system. T4C shows you how your farm is running, wherever you are. It highlights the cows that need your attention and offers you clear reports and tasks. The management system is unique in its set up because it originates from automatic milking. T4C is also able to connect and exchange data with other systems for improved efficiency. Each farm has a different approach to managing their business. By choosing your most relevant Key Performance Indicators (KPIs), you build your own dashboard. The clear display of the KPIs enables you to quickly see that the dairies performance is matching the established goals.





"I love the robots system of feeding. It is very efficient as we can provide nutrients to every individual cow according to production, efficiency and cow health needs. It provides us with a lot of tools we have not had in the past."

Ron, Nutritionist of Sweetwater Valley Farms, Tennessee

Sweetwater Valley Farms

In 1987, John and Celia Harrison founded Sweetwater Valley Farms in Tennessee. Sweetwater Valley Farms was Tennessee's first Dairy XL farm. Today, the Harrison family milks 500 of their 1,500 cows with eight Lely Astronaut A4 robotic milking systems.

Five years ago, John Harrison never thought robotic technology would work on a large scale. Continuing to see other Dairy XL farms doing well got him thinking.

"We had to replace part of our facilities and after watching the technology develop for a number of years, it convinced the family to move in this direction."

Sweetwater Valley Farms started milking in their new facility in 2018. They have never milked cows better than they do today, milking 102 lbs (46.3 Kg) consistently. Kevin Cornett, herdsman of Sweetwater Valley Farms explains: "It all comes back to training. In the beginning, we spent a lot of time training our cows in order to have an efficient and economical barn."

Lely equipment	
Number of robots	8
Type of robots	A4

Other equipment	
Number (in milking)	500
Breed	Holstein Friesian
Yield	102 lbs/cow/day (46.3 Kg)
Fat (%)	3.5
Protein (%)	2.85
Somatic cell count	250,000

Building/land	
New / old (year)	New 2018
Milking with robot from	2018
Bedding	Deep-Bedded Sand
Land (Acres)	2,500

Staff	
Staff on robotic dairy	4.5 total (Manager and feeder included)

The Lely Center your partner for today and tomorrow

The Lely Center in your area is your local partner in dairy automation. Over the years, Lely has built a comprehensive network of specialists, combining their experience in dairy automation with local knowledge. Their main goal is to help you get the most from your Lely equipment.

Get it right the first time

All Lely Center facilities worldwide are supported by national or regional organizations that monitor the quality of the service offered. These organizations are available and, in the case that your query requires escalation, will make sure potential issues are dealt with quickly and effectively by the right people. They have the skills and experience to get it right the first time.

A joint journey

When you begin the transition phase, you will be following in the footsteps of more than 15,000 farmers. Your local Lely Center has a world of experience at their fingertips that will enable you to go through a flawless installation and start up.

Regional knowledge and experience

The farm management advisors at your local Lely Center keep an eye on the bigger picture – starting with a smooth transition to robotic milking followed by checking in with you regularly to ensure your herd is performing to its potential. Because they have other systems installed in your area, they are up to speed with any regional challenges or issues and are able to address your needs.

Dedicated automation support

Remember that you will have full access to Lely's certified technicians through your local Lely Center.

Their knowledge, help and support is available 24/7 to ensure that your Lely Astronaut plays an integral role in optimizing the productivity and profitability of your farm.

Dairy farming is in our blood

Many of Lely's staff come from a farming background themselves. They understand how farms work. By partnering with Lely and the local Lely center, you will have access to high level expertise to assist you 24/7.



Milestones to success

After deciding on the ideal barn layout, several contact and advice milestones will be met before the actual start-up of the barn will take place. A successful large dairy farm will need to focus on three important factors: Feed Management, People Management and Cow Management. For example, training staff and preparing the herd for changes will be addressed. As the startup period ends, we begin the next step. On an organizational level, we seek contact to work together on the optimization of your farm, with a service level of your choice.

- 1 Determine long-term goals and objectives
- 2 Analyze management and integration of robotics
- 3 Determine robot set-up and barn design
- 4 Product and services determined
- 5 Sign sales & service agreements
- 6 Alignment with all stakeholders - set the timeline
- 7 Delivery and installation
- 8 Preparation of the herd
- 9 Education of staff
- 10 Handover and start-up
- 11 Evaluation start-up
- 12 Continuous development plan



Red Cow Community

Connecting large dairy farms for a better future

Large dairy farms worldwide face the challenge of building a future-proof company, while maintaining social support. Thanks to the Red Cow Community - a partnership based on providing inspiration, connections and networking - our

Dairy XL customers gain new insights to

improve their business results by distancing themselves from existing structures.

More than just upscaling

Owners of large dairy farms with more than 500 milking cows are in a different position than the average dairy farmer. It is no longer about duplicating the same, or working harder, nor about upscaling alone. It's about efficiently utilizing the available and diminishing resources, like land and water. This makes large dairy farms extremely suitable for applying new technologies and methods.

Collecting valuable new insights

The collaborative environment of the Red Cow Community makes it possible for members to look at common challenges from various angles, and sometimes make sensitive subjects open for discussion. By sharing knowledge, members of the Red Cow Community are able to collect valuable new insights for their business.

Events, knowledge base and advice

Members of the Red Cow Community meet every two years for an inspiring Lely-hosted event centered around knowledge sharing and dairy farm visits. In addition, the members keep in touch through online media and the Dairy XL team. It also includes weekly updates on the daily operations of their milking robots and advice on further optimization of their business.

*“Robots gave us the opportunity
to grow in phases.”*

Brian, Homestead Dairy, Indiana

Are you expanding the bright way?

Expanding your dairy farm is something you plan and implement over a long time. You can do it gradually, so that it remains manageable in terms of financing and labor. However, as nobody can see into the future, you also want to retain a certain degree of flexibility. Milking robots fit this strategy perfectly, as milk capacity and investment can grow in line with the increase in the number of dairy cattle - no matter how high that number is.

Expanding starts with your local Lely Center.

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