



LIFE SCIENCES

ECOLAB[®]

**FOR LIFE SCIENCES.
FOR LIFE**

An Introduction to Ecolab Life Sciences



About Ecolab



CLEAN WATER



SAFE FOOD



ABUNDANT ENERGY



HEALTHY ENVIRONMENTS

A global leader in water, hygiene and energy technologies and services; providing and protecting what is vital, **Everywhere It Matters.**

3 MILLION
CUSTOMER LOCATIONS IN
170 COUNTRIES

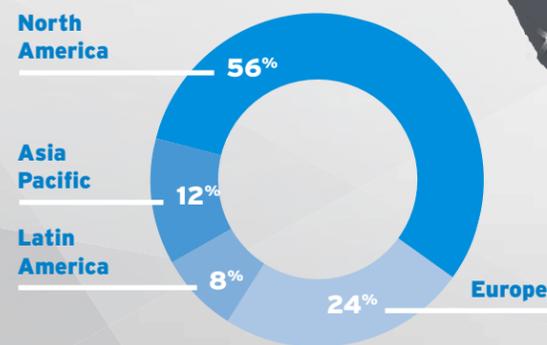
48,000
EMPLOYEES

1,600
RESEARCH, DEVELOPMENT
AND ENGINEERING ASSOCIATES
7,100+ PATENTS
\$197M INVESTMENT

25,000
SALES AND SERVICE
ASSOCIATES

A TRULY GLOBAL PARTNER

Proportion of Business



A LONG HISTORY OF SERVICE

1923

Economics Laboratory founded by MJ Osborn.



2003

Market expansion through acquisition of Adams healthcare - a UK based specialist in Infection Prevention, Contamination Control & Thackray Surgical Instruments.



2006

Industry and expertise expansion through acquisition of Shield Medicare - market leader in Contamination Control.



2011

Merger with Nalco to become the world's leading water treatment and energy efficiency company.



2017

Anios acquisition, a leading European manufacturer and marketer of hygiene and disinfection products for the healthcare and personal care industries.



WE ARE COMMITTED TO BEING A PARTNER YOU CAN TRUST



2018 World's Most Ethical Companies
12th Consecutive year
Ethisphere Institute



#3 in Chemicals Industry World's Most Admired Companies 2018
Fortune Magazine



WATER A LIST



100% Score
2018 Corporate Equality Index
Human Rights Campaign



#29 100 Most Sustainable Companies 2017
Barron's Magazine



#10 100 Best Corporate Citizens 2017
Corporate Responsibility Magazine



50 Most Community - Minded Companies



4th Consecutive Year
FTSE4Good Index
FTSE Group



#50 Most Sustainable Corporations 2016



2017 Best for Vets
Military Times



2017 Visionary Award



2017 North America Index



#43 Climate Innovation Index Leaders
Maplecroft



#36 2015 Best Companies for Leaders
Chief Executive Magazine



2016 Safer Choice Partner of the Year, Innovators Category



#31 Best Companies to Sell For

About Ecolab Life Sciences



COMPLETE SOLUTIONS For the Life Sciences Industry



Ecolab's Life Sciences division is dedicated to developing the best possible products and services to support our customers in the industry.

Our comprehensive solutions and technical expertise are focused on cleaning, sanitization and contamination control, all while ensuring safety, compliance and operational efficiency.

Our strategy is to stay focused on two core areas: Global Trends and Regulatory Changes that impact your operations, and develop solutions to keep you at the cutting edge.



PHARMACEUTICAL STRONG PARTNERS FOR THE CHALLENGES AHEAD

The pharmaceutical world is changing faster today than ever before. Pressure from patent expirations, regulations, affordable healthcare, and industry consolidation, as well as an increasing demand for more sustainable practices, creates a challenge. We understand these challenges and have developed tools to help you overcome them.

PERSONAL CARE UNDERSTANDING YOUR NEEDS IS OUR STRENGTH

The personal care industry is experiencing increased pressure from competition, changing consumer tastes, preferences and increased regulatory oversight. It is also being challenged to be more sustainable. With a full understanding of your operation, we can integrate our full suite of solutions where it makes the greatest impact on your business.



You need a trusted partner in the Pharmaceutical and Personal Care industries to take on these essential operational challenges so your resources can focus on what matters most – delivering safety, compliance and operational efficiency. Ecolab is that partner.



Expertise in Pharma



Ecolab provides our customers with complete cleaning and disinfection programs for external surfaces of manufacturing equipment and cleanrooms, and for direct product contact surfaces.

The tight specification formulations of these programs meet the latest standards and are manufactured in fully auditable and traceable production facilities to meet your needs.

With years of industry experience, our Validation and Technical Support Teams will assist you in:

- ▲ Navigating the complex process of disinfectant qualifications in cleanrooms
- ▲ Evaluating and recommending methods to optimize time, temperature, mechanical action and chemistry of clean-in-place systems

THE COMPLETE APPROACH TO BETTER CLEANING AND DISINFECTION IN THE PHARMACEUTICAL INDUSTRY

Manufactured to the highest standards, Ecolab's Klercide™ and COSA™ portfolios, combined with monitoring and best practice training support, can help ensure a reduction in residues and the risk of batch rejection or potential shut downs.



Expertise in Personal Care



Ecolab has expertise to keep your plant on the leading edge of quality, safety, efficiency and sustainability.

Experienced, highly trained and backed by the full resources of the global leader in sanitization, our dedicated team will deliver the proven solutions you need to:

- ▲ Produce safer, high-quality products that exceed your customers' standards
- ▲ Continuously and measurably improve operational efficiency
- ▲ Help achieve your sustainability goals, including reducing water and energy consumption

We have extensive experience in developing sanitization programs for the unique composition of the pigments, emulsions, waxes and gels used in the cosmetics and personal care industries. Our cleaners, sanitizers and boosters are designed for the removal of these ingredients, especially the most difficult to clean soils.

OUR INTEGRATED PROGRAM HELPS IMPROVE SAFETY, COMPLIANCE AND OPERATIONAL EFFICIENCY

Along with our best in class sanitization programs, the Ecolab team also provides cleaning validation support, innovative engineering solutions and water and energy management services to provide an end-to-end offering aimed at exceeding your operational and quality goals.

Addressing Your Needs



SAFETY

Safety and integrity are critical to both you and your customers. It ensures both public health and brand protection.



PRODUCT QUALITY

Ensuring quality is vital to maintaining a successful brand and competitive product offering.



OPERATIONAL EXCELLENCE

Constant pressure of reducing costs demands higher operational efficiency and reduced downtime.



REGULATORY COMPLIANCE

Evolving regulatory requirements add pressure to ensure compliance across your facility network.



BEST PRACTICE & STANDARDIZATION

Being a global player, you are focused on standardizing your processes and sharing best practices across your facilities in order to develop a best in class program.



COMPREHENSIVE TRAINING

Changes in your workforce, the regulatory environment and product innovation generate the need for comprehensive training programs.



SUSTAINABILITY

You are committed to making your operations more sustainable by reducing your overall carbon footprint, optimizing your water usage, efficiently managing your energy needs, and reducing your waste.

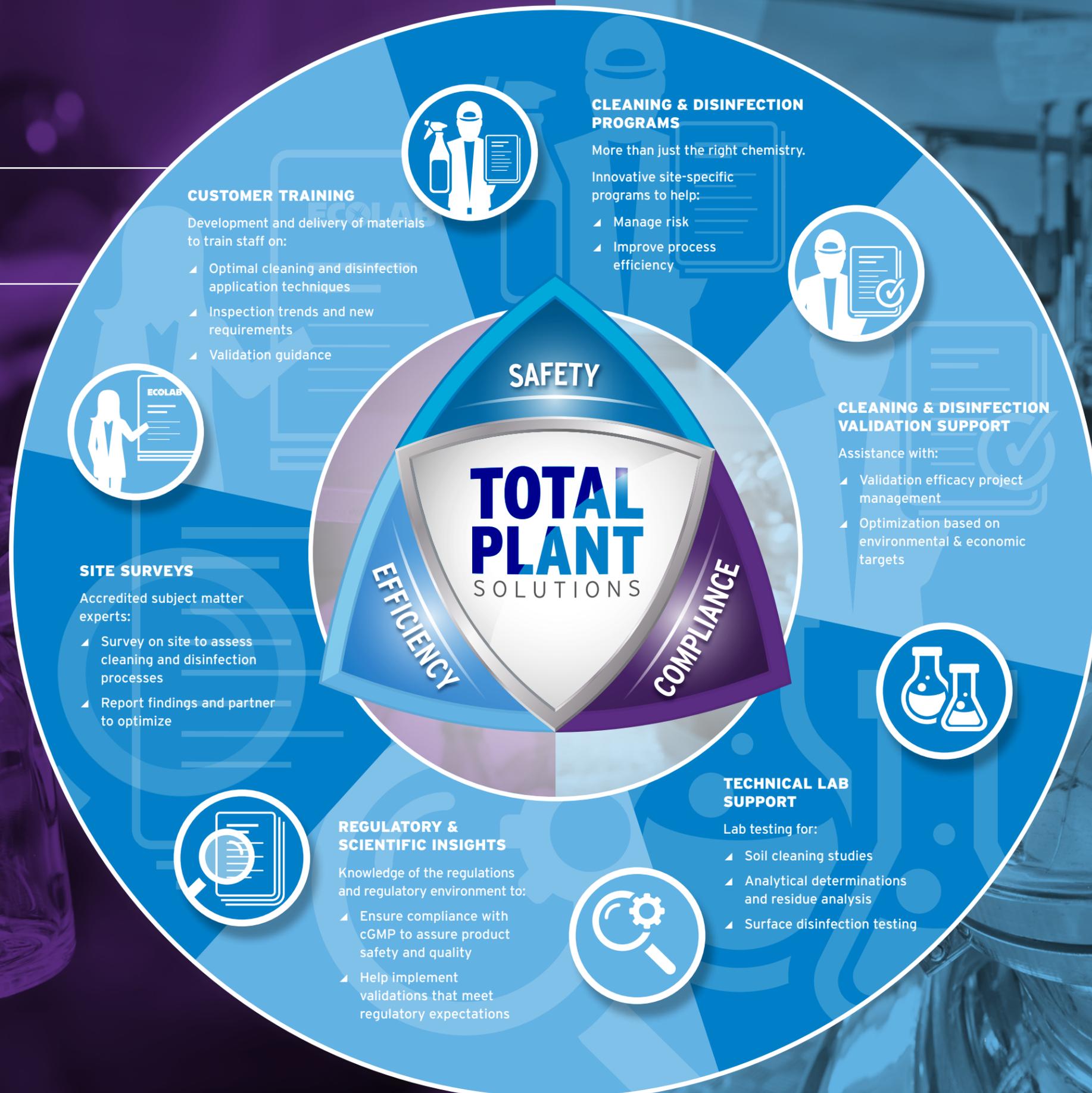


INNOVATION

Your constant focus on innovation adds complexity in the manufacturing environment and the need for new cleaning, disinfection and sanitization programs.

How Can We Achieve This?

By identifying our customers' specific needs, we are able to provide the best way forward with our Total Plant Solutions offering.



SITE SURVEYS

Accredited subject matter experts:

- Survey on site to assess cleaning and disinfection processes
- Report findings and partner to optimize



REGULATORY & SCIENTIFIC INSIGHTS

Knowledge of the regulations and regulatory environment to:

- Ensure compliance with cGMP to assure product safety and quality
- Help implement validations that meet regulatory expectations



TECHNICAL LAB SUPPORT

Lab testing for:

- Soil cleaning studies
- Analytical determinations and residue analysis
- Surface disinfection testing



CLEANING & DISINFECTION VALIDATION SUPPORT

Assistance with:

- Validation efficacy project management
- Optimization based on environmental & economic targets



CLEANING & DISINFECTION PROGRAMS

More than just the right chemistry.

Innovative site-specific programs to help:

- Manage risk
- Improve process efficiency



CUSTOMER TRAINING

Development and delivery of materials to train staff on:

- Optimal cleaning and disinfection application techniques
- Inspection trends and new requirements
- Validation guidance

SAFETY

TOTAL PLANT SOLUTIONS

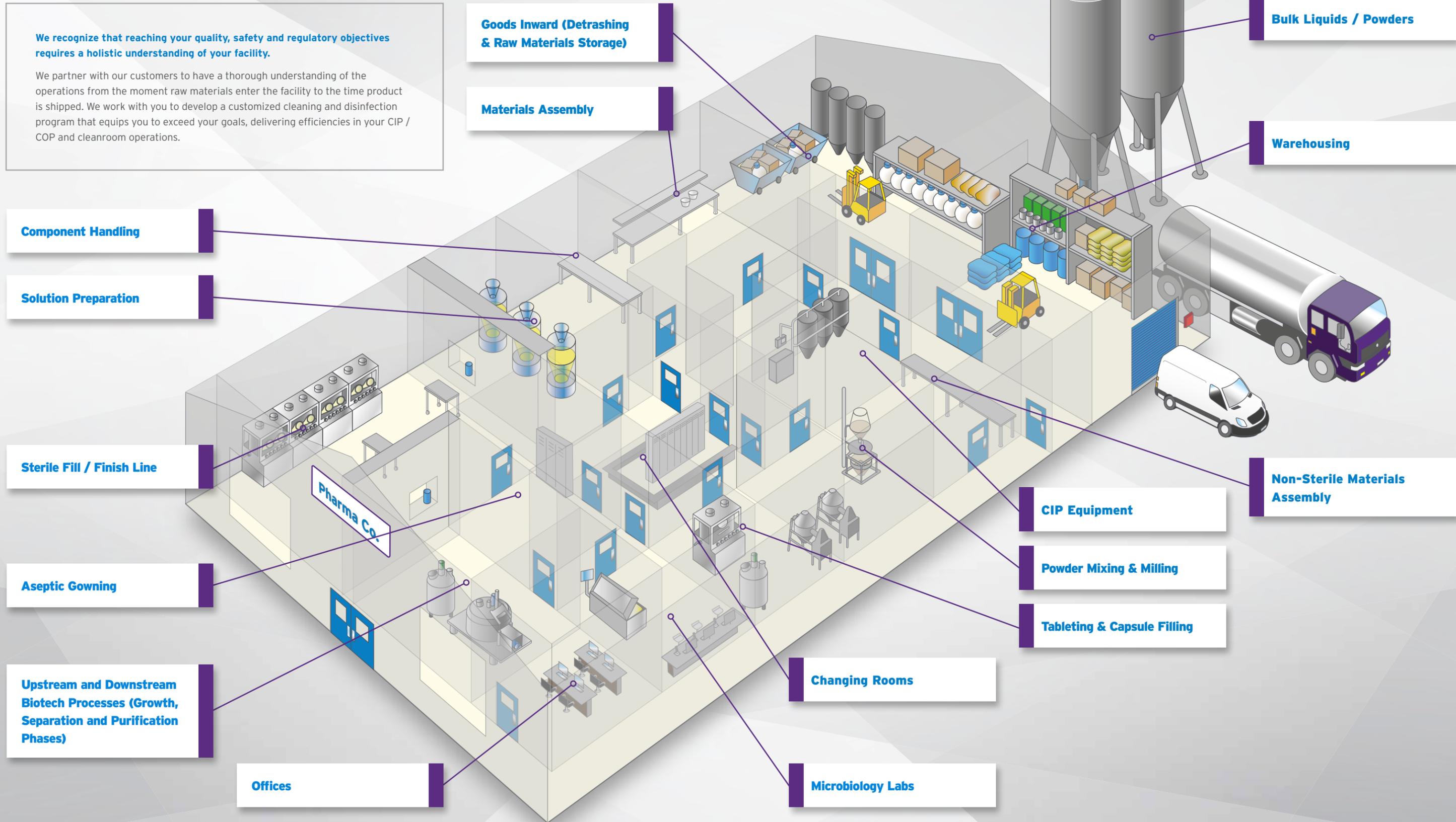
EFFICIENCY

COMPLIANCE

The **Ecolab Solution** for the Whole Pharmaceutical Facility

We recognize that reaching your quality, safety and regulatory objectives requires a holistic understanding of your facility.

We partner with our customers to have a thorough understanding of the operations from the moment raw materials enter the facility to the time product is shipped. We work with you to develop a customized cleaning and disinfection program that equips you to exceed your goals, delivering efficiencies in your CIP / COP and cleanroom operations.



Goods Inward (Detrashing & Raw Materials Storage)

Materials Assembly

Bulk Liquids / Powders

Warehousing

Component Handling

Solution Preparation

Sterile Fill / Finish Line

Pharma Co.

Aseptic Gowning

Upstream and Downstream Biotech Processes (Growth, Separation and Purification Phases)

Offices

Changing Rooms

Microbiology Labs

CIP Equipment

Powder Mixing & Milling

Tableting & Capsule Filling

Non-Sterile Materials Assembly

The **Ecolab Solution** For the Whole Personal Care Plant

We understand that achieving your safety, compliance, operational efficiency and sustainability goals requires a holistic view of your facility.

We work closely with our customers at every critical point in the operation from the moment raw materials enter the facility to the time product is shipped. We work with you to develop a comprehensive cleaning and sanitization program that equips you to exceed your key goals and comply with regulatory standards.

Mixing & Making Homogenizing

Filling Area

Bulk Liquids / Powders

Minor Liquids (IBCs, Drinks Containers)

CIP / SIP System

Automation

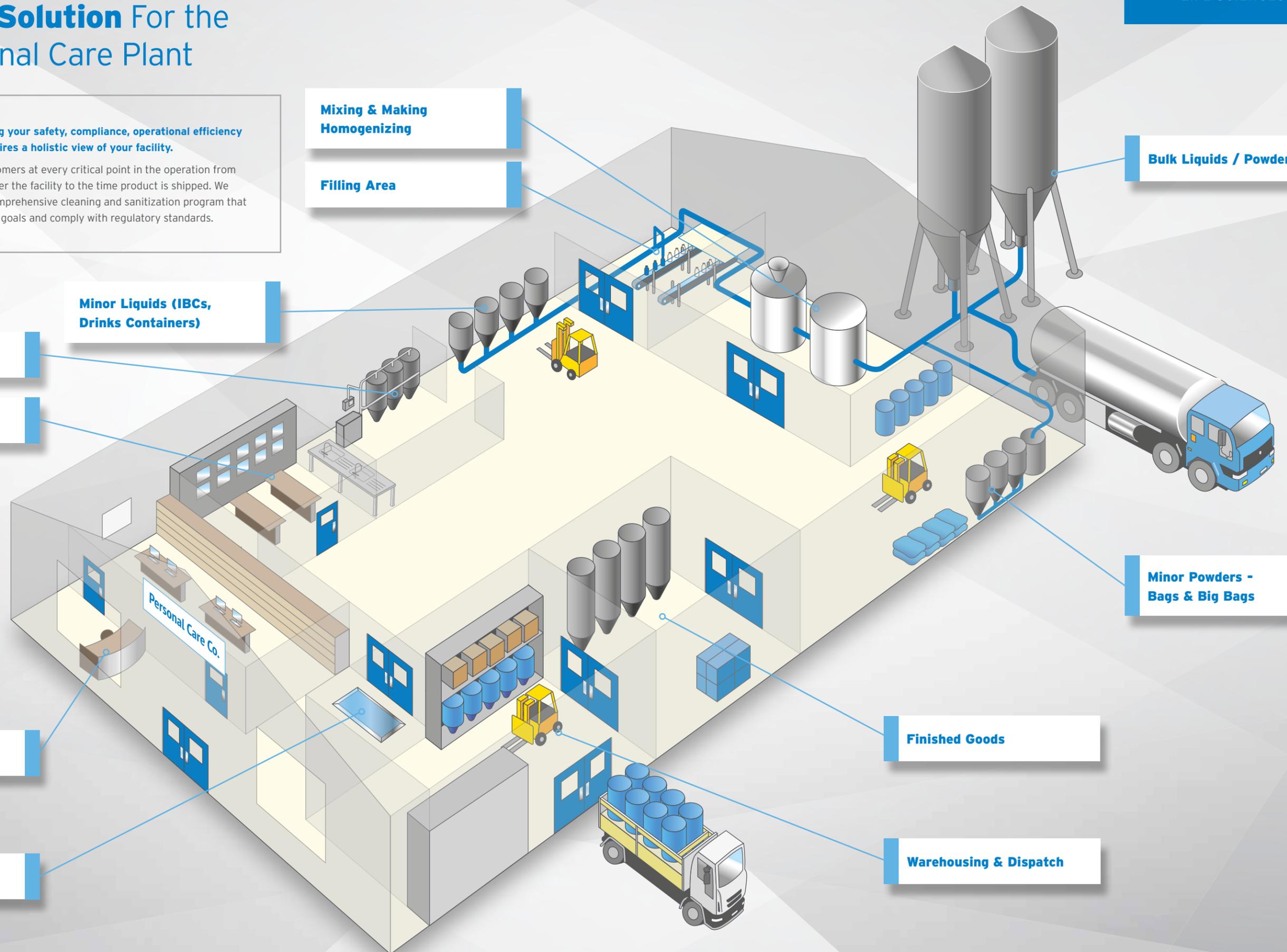
Minor Powders - Bags & Big Bags

Offices & Reception

Finished Goods

Personnel Sluice

Warehousing & Dispatch



OUR ASSURANCE

Ecolab is committed to providing exceptional service, total plant solutions and unsurpassed industry expertise to help you achieve your business goals.

Our breadth of resources and integrated business model ensure consistency across your operations. We look forward to the opportunity to partner with you on your transformation journey.

PLEASE SPEAK TO YOUR ECOLAB ACCOUNT MANAGER FOR FURTHER INFORMATION

WORLDWIDE HEADQUARTERS

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www.ecolab.com/pharmaceutical

