KURITA

LUMYN™

KEY PLATFORM COMPONENTS

LUMYN EDGE EQUIPMENT MEASUREMENT FEATURES & CONTROL IN FIELD

LUMYN COMMUNICATION SERVICES

LUMYN CLOUD BASED SOFTWARE FOR END-USER INTERACTION WITH EQUIPMENT & VISUALIZATION OF DATA ANALYTICS

KURITA AMERICA'S COMPLETE DIGITAL, ANALYTICS & CONTROL SOLUTION

Kurita America has an unwavering dedication to leveraging chemistries, equipment systems, engineering and services into holistic solutions that meet our customers' system performance and business goals at the lowest total cost of operation. Lumyn is the digital platform that enables intuitive and proactive system management that puts actionable information in the hands of the people that need it, when they need it, and in a form they choose to receive it. Lumyn users can visualize program performance, anticipate and address issues before they jeopardize operations. Communication and collaboration between engaged people reveals deep insights into the opportunities to be better tomorrow than today.

5. LUMYN LINK
Automated sensing of liquid levels in chemical storage vessels is wirelessly communicated to the cloud via the Lumyn Link. Visibility to chemical consumption rates and optimal inventory management are achieved.

6. LUMYN CLOUD
The Lumyn cloud provides a secure environment for connectivity, a data repository and analytics, creating a foundation for intelligence. Software updates are delivered automatically, eliminating the need for time-consuming manual updates, ensuring software always reflects the current features and functionality. Previous versions of controller configurations are auto-saved, allowing users to easily recall prior programs optimized for seasonal or other changes to the operating environment.

7. INFORMATION DELIVERY DEVICES
Based upon roles, responsibilities and personal preferences, "one size fits all" doesn't work for how people like to receive information. Lumyn makes the valuable and actionable information available to individual users that is important to them, when they need it, in a form they need it, and delivered via the device they prefer.

4. LOCAL WIRELESS COMMUNICATIONS
In cases where the Lumyn edge equipment does not have Internet accessibility, users may interface with the equipment with their mobile device through the Lumyn app over local, wireless communication.

8. VISUALIZATIONS
Lumyn outputs a deep and rich set of visualizations of overall system status, or specific aspects of performance. Views can range from a single Command/Command+ controller, to a series of controllers within a given plant or facility, to an entire fleet across multiple, geographically dispersed plant/facility locations. Users can configure the visualizations that are most meaningful to them, simply and intuitively.
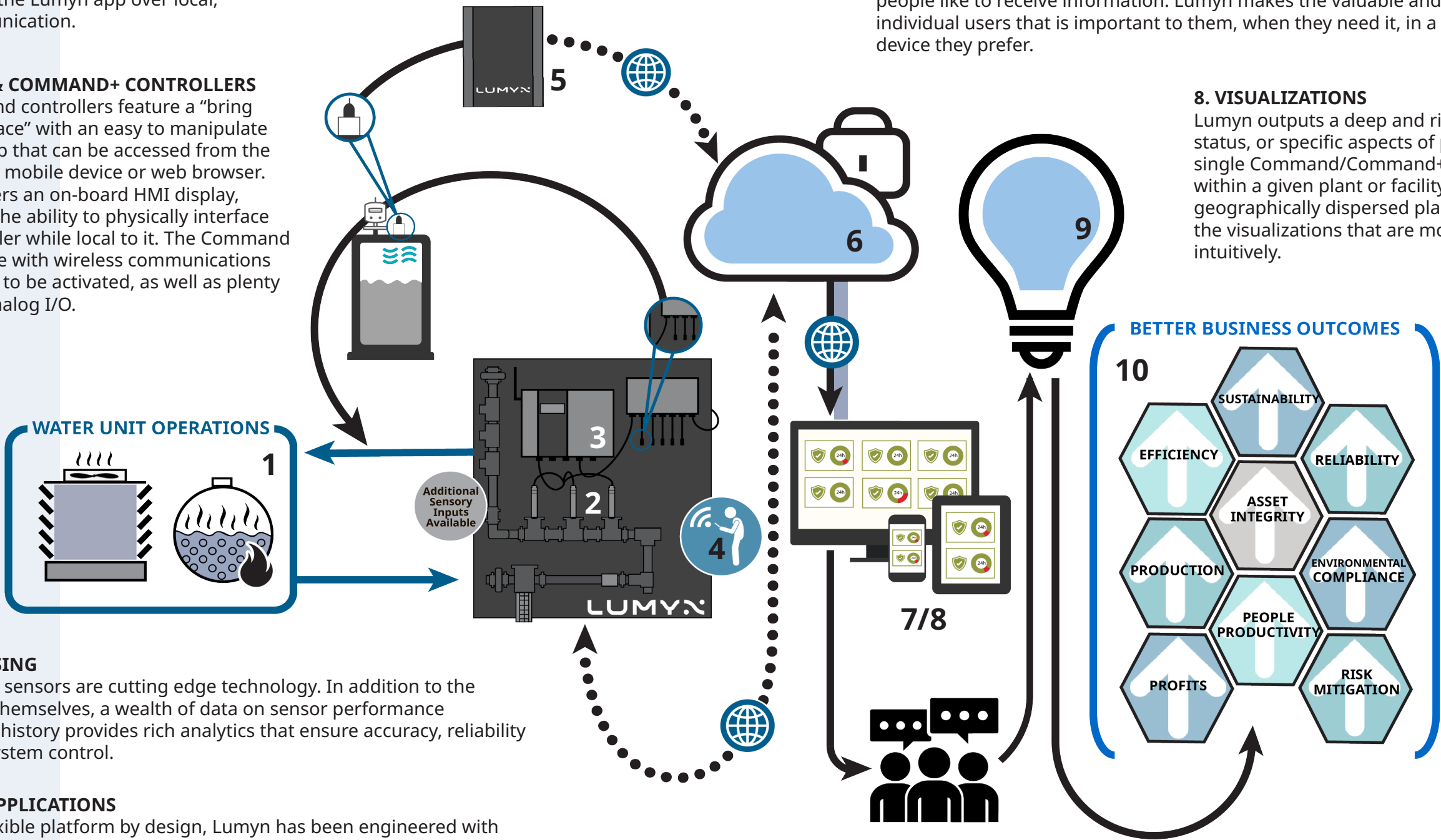
3. COMMAND & COMMAND+ CONTROLLERS
Lumyn Command controllers feature a "bring your own interface" with an easy to manipulate and intuitive app that can be accessed from the user's preferred mobile device or web browser. Command+ offers an on-board HMI display, granting users the ability to physically interface with the controller while local to it. The Command controllers come with wireless communications hardware ready to be activated, as well as plenty of digital and analog I/O.

9. ENGAGEMENT & COLLABORATION
The technology, features and functionality of the Lumyn system enables people to be the best and most productive they can be with actionable information that:
- Facilitates communicating and working together
- Achieves technical performance and minimizes waste
- Quickly addresses problems when they're small and correctable
- Reveals non-obvious system insights to the opportunities for improvement

WATER UNIT OPERATIONS

1

BETTER BUSINESS OUTCOMES

10

SUSTAINABILITY

EFFICIENCY

RELIABILITY

ASSET INTEGRITY

PRODUCTION

ENVIRONMENTAL COMPLIANCE

PEOPLE PRODUCTIVITY

PROFITS

RISK MITIGATION

3

2

Additional Sensory Inputs Available

4

7/8

5

6

9

LUMYN

2. DIGITAL SENSING
On-board digital sensors are cutting edge technology. In addition to the measurements themselves, a wealth of data on sensor performance parameters and history provides rich analytics that ensure accuracy, reliability and confident system control.

10. BETTER BUSINESS OUTCOMES
The Lumyn system is a core element of a fully integrated solution that produces better and measured business outcomes. This enables people to make data driven decisions for control and enlightened recommendations for operational improvements.

1. CUSTOMER APPLICATIONS
A robust and flexible platform by design, Lumyn has been engineered with multiple applications in mind such as cooling towers, boiler systems, and an expanding set beyond those.

KURITA AMERICA ADVANTAGE

TARGETED INDUSTRIES

- Automotive
- Biofuels
- Commercial & Institutional
- Food & Beverage
- General Manufacturing
- Healthcare
- Microelectronics
- Oil & Gas
- Power
- Primary Metals

Intelligent System Management

Lumyn's comprehensive digital platform brings intelligence to your water treatment applications. Each component is designed to provide a robust foundation of data to ultimately provide a wealth of analytics allowing data-driven decisions for control and enlightened recommendations for operational improvements.

A Foundation Built on Data

While traditional sensing inputs, such as analog, are supported the native sensor suite offers expanded data collecting abilities. Lumyn sensors utilize proven sensing technologies with digitally enhanced capabilities to build a myriad of data types. Combining this expanded data set with a control system that conditionally logs and monitors complete scenarios occurring in the control ecosystem provides a foundation for intelligent water management technology.

Leveraging Technology

Aligning with the latest trends and developments in industrial technology, Lumyn's accessibility and interface is managed at the "edge", allowing the device to focus on its true function, the control of water treatment applications. Communications are treated as a secondary function, securely being initiated by the device rather than allowing inbound connections. All of this provides for flexible communications and eliminates complex network configurations, allowing for simple installation and startup.

A Platform for Collaboration

A true partnership with Kurita America representatives is achievable through 24/7 access and visibility to Lumyn systems, enabling productive and effective on-site service visits. Lumyn's unique use of technology to interface with edge equipment increases security and provides a full audit log of all control changes by the user for the history of operation. Data received from the local Lumyn control system is processed for analysis of both acute and longer term developing conditions. Users are notified through app or email notifications of situations requiring attention.

Simple, Plug-and-Play Design

The entire platform has been designed to be quick to deliver, easy to install and intuitive to use. With a robust supply chain of equipment and sensors, lead times are short for standard equipment assemblies, packages and parts. Equipment assemblies and packages are designed to fit any application eliminating the need for complex, time consuming custom engineered systems to design and build.