

Your Challenges
are Driving
New Hach Solutions





Agenda

- Introduction
- HQ Portable
- Sc4500 Controller
- The Plus Program
- Key Takeaways



Standard Workflow



Data Management & Accuracy



Instrument Downtime



Lack of Flexibility

**What challenges
are you facing?**

Speakers



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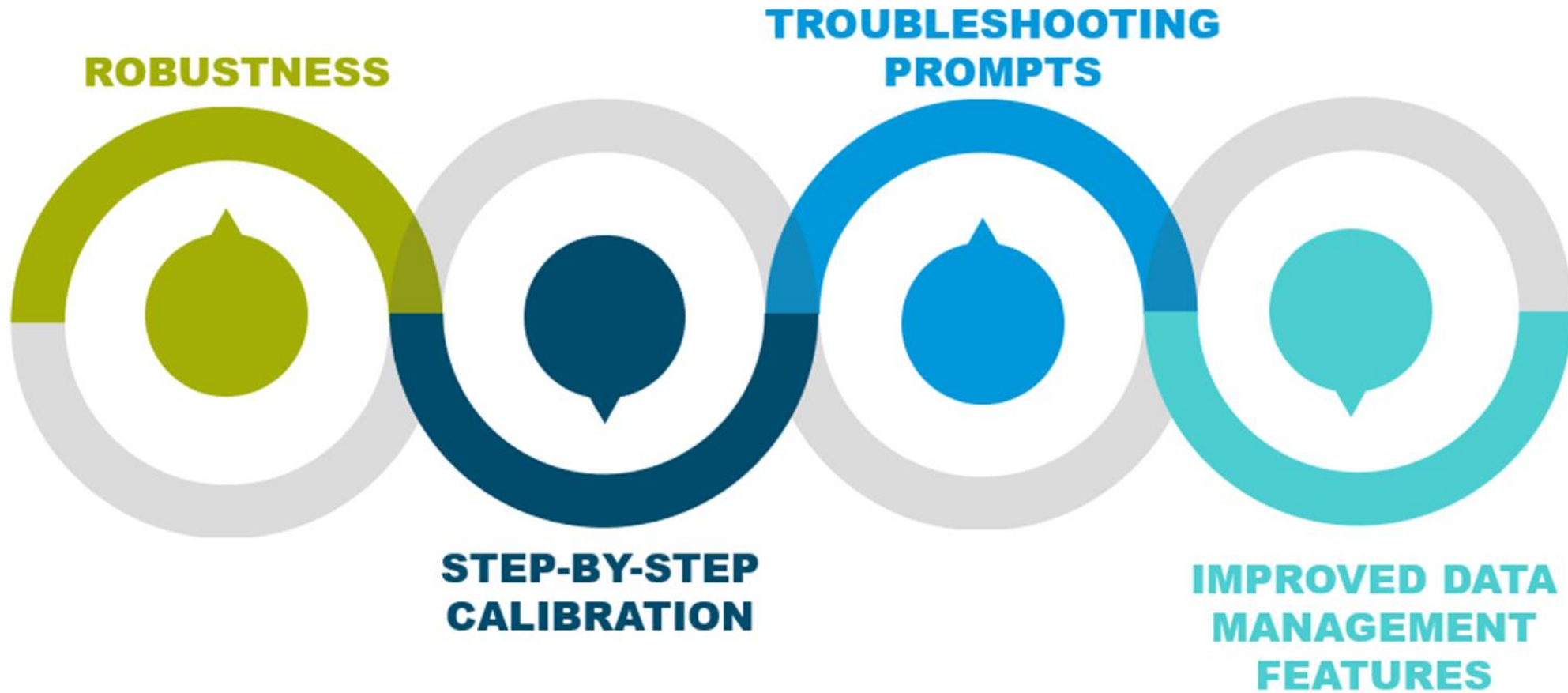
NEW
HQ Portable Meter





- Same approved regulatory methods for each parameter
- Same trusted IntelliCAL sensors used with the HQd platform
- Designed to be more robust, allowing for use in harsh field applications.
- Outstanding service and support

New Design Features & Benefits



New Design Features- Step-by-Step Calibration Procedures

STEP-BY-STEP CALIBRATION PROCEDURES



- Users have the option to follow our on-screen calibration guidance.
- Ensures Accurate Measurements every time whether you are in the field or the lab.



New Design Features- Troubleshooting Prompts

TROUBLESHOOTING PROMPTS



PHC201 100%

Saved

14.00 pH

29.0 °C -500.0 mV

ERROR: Measurement out of range.

READ

Calibrate

Data

Options

PHC201 100%

ERROR: Measurement out of range.

Measurement range is 0.000pH – 14.000pH.

We recommend the following solutions:

- Use the step-by-step instructions to read again.
- Make sure the filling-hole is not clogged.
- Make sure the filling-hole is not covered by the cap or tape.
- Carefully remove any air bubbles from the probe while reading.

PHC201 100%

ERROR: Measurement out of range.

clogged.

- Make sure the filling-hole is not covered by the cap or tape.
- Carefully remove any air bubbles from the probe while reading.
- Replace the filling solution with fresh solution.
- Condition the probe in warm pH 4 buffer for a maximum of 2 hours.

If this error continues, please refer to your user manual for more solutions, or call our Hach Support Team.

HQ Series vs HQd Comparison

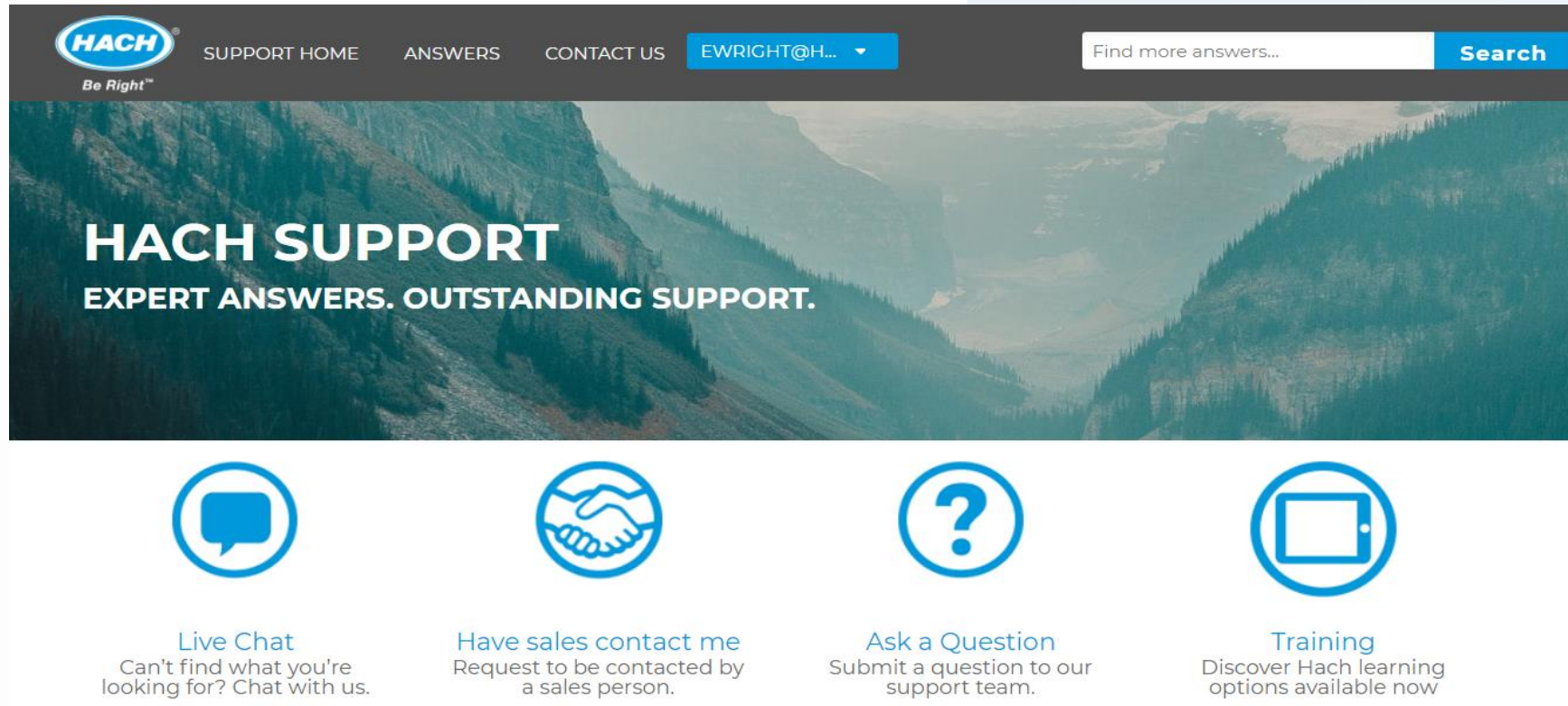


Features	HQ Series	HQd
Claros Enabled:	✓	—
Measurement range:	Dependent on IntelliCAL sensor	Dependent on IntelliCAL sensor
On-screen, guided instructions with troubleshooting procedures:	✓	—
Data Management Sort and Filter Functionality	✓	—
High Contrast B&W OR Color Display	✓	—
Full IP67 Protection Rating with battery compartment	✓	—
Rechargeable Lithium Ion Battery:	✓	—
Built in USB connector (for data export and charge)	✓	—
Up to 100,000 Data Point Memory:	✓	—

Want to learn more...HQ Series Portable Resources

<https://www.hach.com/hqseries>

Visit Hach Support Online (hach.com/support) for the complete library of product support resources



The screenshot shows the Hach Support Online website. At the top left is the Hach logo with the tagline "Be Right™". Navigation links include "SUPPORT HOME", "ANSWERS", "CONTACT US", and a dropdown menu for "EWRIGHT@H...". A search bar on the right contains the text "Find more answers..." and a "Search" button. The main banner features a mountain landscape with the text "HACH SUPPORT" and "EXPERT ANSWERS. OUTSTANDING SUPPORT." Below the banner are four service options, each with an icon and a description:

- Live Chat**: Can't find what you're looking for? Chat with us. (Icon: speech bubble)
- Have sales contact me**: Request to be contacted by a sales person. (Icon: handshake)
- Ask a Question**: Submit a question to our support team. (Icon: question mark)
- Training**: Discover Hach learning options available now. (Icon: tablet)

Hach SC4500 Digital Controller

Ready for Now.
Ready for the Future.



Color touch-screen user interface

Display

- 3.5-inch TFT color display
- Capacitive touchpad

Enables

- Dynamic parameter display
- Color-coded errors & warnings

Includes

- Flexible touch: works with or without gloves
- Built-in screen lock



Hach SC4500 Digital Controller

Providing visibility and flexibility
for today and for the future.

- **Accepts a broad range of sensors**
- Self-diagnostics using AI
- Wide range of communication protocols embedded



Inputs: Support for 28 Sensor Families

LDO sc 	pHD-S-pH sc pHD-S-ORP sc 	TSS sc 	CL10 sc 
(A)(N)-ISE sc 	pHD-pH sc pHD-ORP sc 	TU5300 TU5400 	CL17 sc 
Solitax sc 	1200-S sc 	ULTRATURB sc Seawater 	9184 sc 
Nitratax sc 	3798-S sc sc 	1720E 	9185 sc 
PHOSPHAX sc 	UVAS sc 		9187 sc 
AMTAX sc 	Sonatax sc 		SS7 sc 


D3422xx.99: 3400 digital Sensor 



8362 sc pH 
8362 sc ORP 

Analog sensors + Digital Gateways

Analog 34yyxx. sc  — Contacting Conductivity Digital GATEWAY 6120700 

pHD analog sensor PDxxx.99 (pH) RDxxx.99 (ORP) — AD pHD, Digital Gateway for analog pHD-pH and pHD-ORP sensors 6120500 

RC and PC analog sensor PCxxx.99 (pH) RCxxx.99 (ORP) — AD pH, Digital Gateway for conventional analog pH and ORP sensors 6120600 

Analog 37xx sc  — Inductive Conductivity Digital Gateway 6120800 

370X EEX 372X EEX

mA Input Board Future Systems

Hach SC4500 Digital Controller

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Self-Diagnostics: Prognosys



Prognosys is a predictive diagnostic system that enables proactive maintenance using alerts to flag upcoming instrument issues

Alerts are communicated via two indicators:

Measurement Indicator



- The measurement indicator monitors the instrument's components and uses that information to alert the user to upcoming instrument needs before measurements fall outside range of confidence

Service Indicator



- The service indicator tracks the number of days until the instrument will require maintenance or service

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Enabling new levels of communication flexibility

Available Outputs

- Analog (4-20 mA)
- High-voltage relays
- Profibus DPV1
- Modbus TCP/IP
- PROFINET
- Ethernet/IP



*Others anticipated in future releases

Controller networking

Hach Controller Network Bus

- Bi-directional communication protocol
- May be used for Real Time Control

Connectivity

- Wi-Fi
- Cellular 4G
- Ethernet LAN

Benefits

- Increased flexibility
- Lower installation costs
- More data in more places



Controller Evolution (2-Channel)

Feature	SC4500	sc200	sc4200c
Full SC Sensor Portfolio	✓	✓	✓
Local Display	✓	✓	✗
Analog mA Output to PLC/SCADA	✓	✓	✓
Modbus 485	✗	✓	✗
HART	✗	✓	✗
Modbus TCP/IP	✓	✗	✓
Profibus DP	✓	✓	✓
EtherNet/IP	✓	✗	✗
PROFINET	✓	✗	✗
Hach Controller Networking Bus	✓	✗	✓
Embedded Prognosys	✓	✗	✗
Mobile Sensor Management	✓	✗	✓
Service Partnerships / PaaS	✓	✗	✓



Hach SC4500 Digital Controller

Providing visibility and flexibility
for today and for the future.

Contact your Hach representative
for more information.



The Plus Program



WHY THE PLUS PROGRAM?



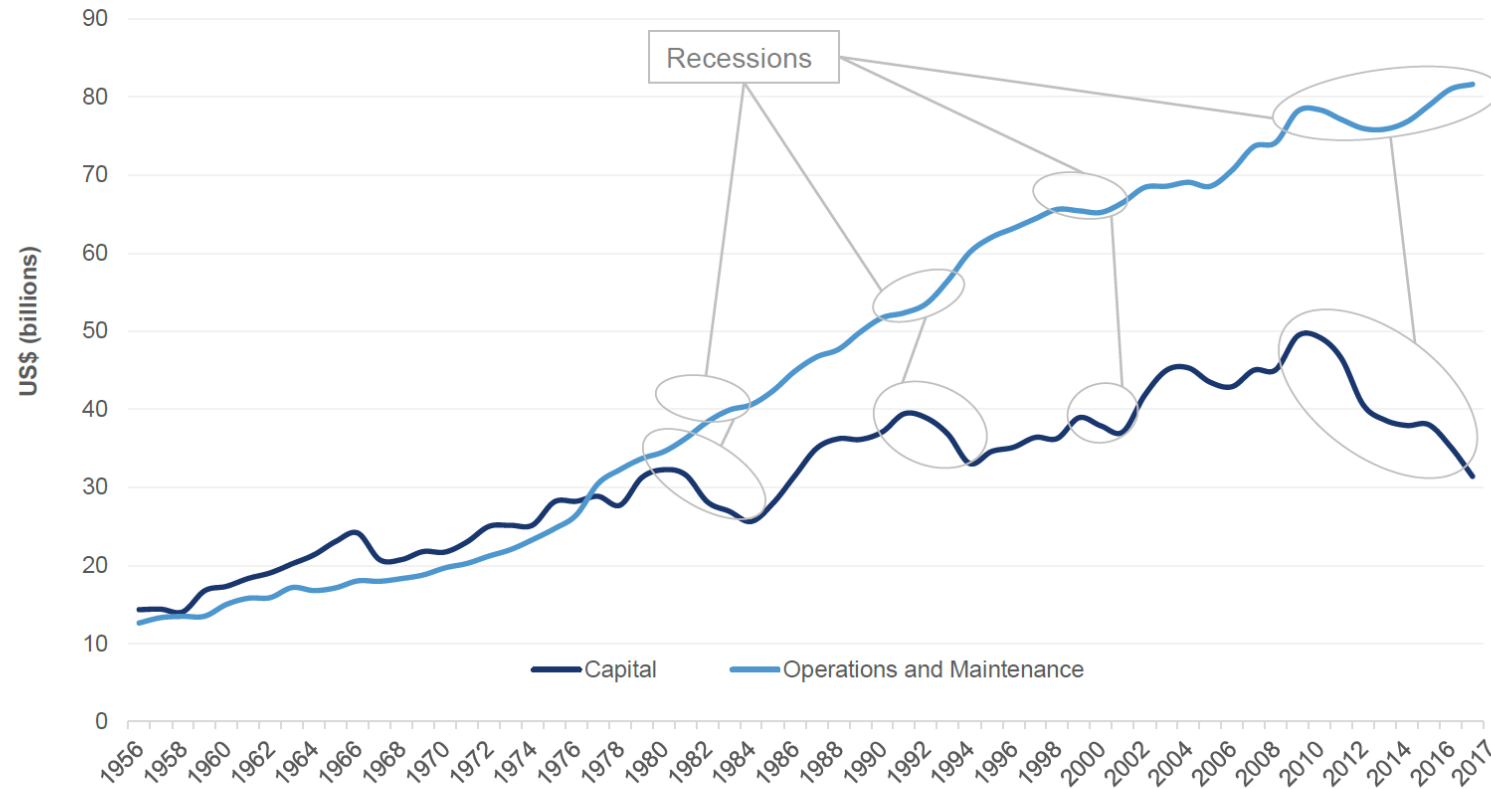


Challenges

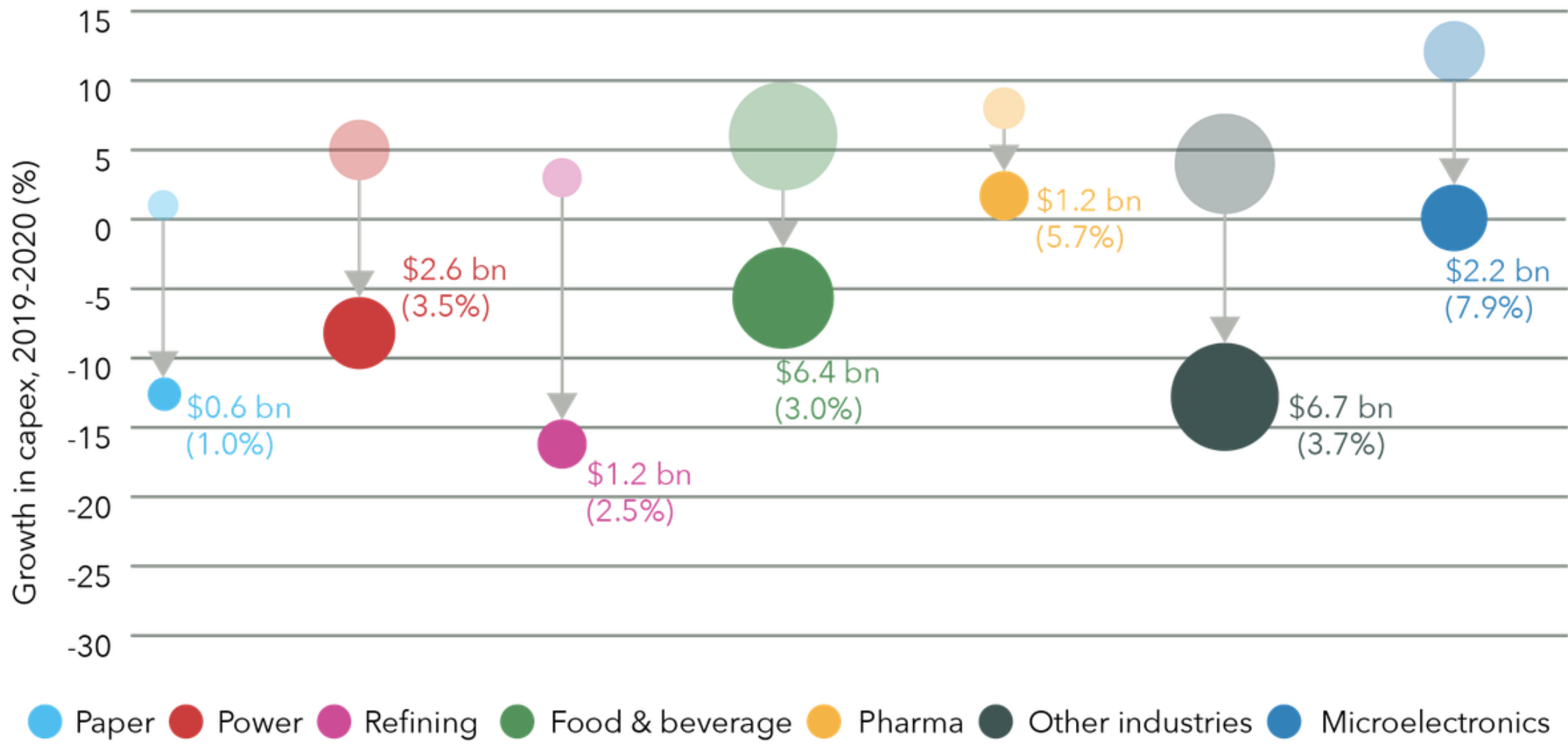
- COMPLIANCE
- FUNDING LIMITATIONS
- SERVICE

CAPEX vs. OPEX Trends in U.S. Water & Wastewater Sector

Utility CAPEX has grown at a 1.3% CAGR historically, highlighting chronic underinvestment in water infrastructure. OPEX has risen at a 3.1% CAGR, putting pressure on utilities to increase revenue and find operational efficiencies.



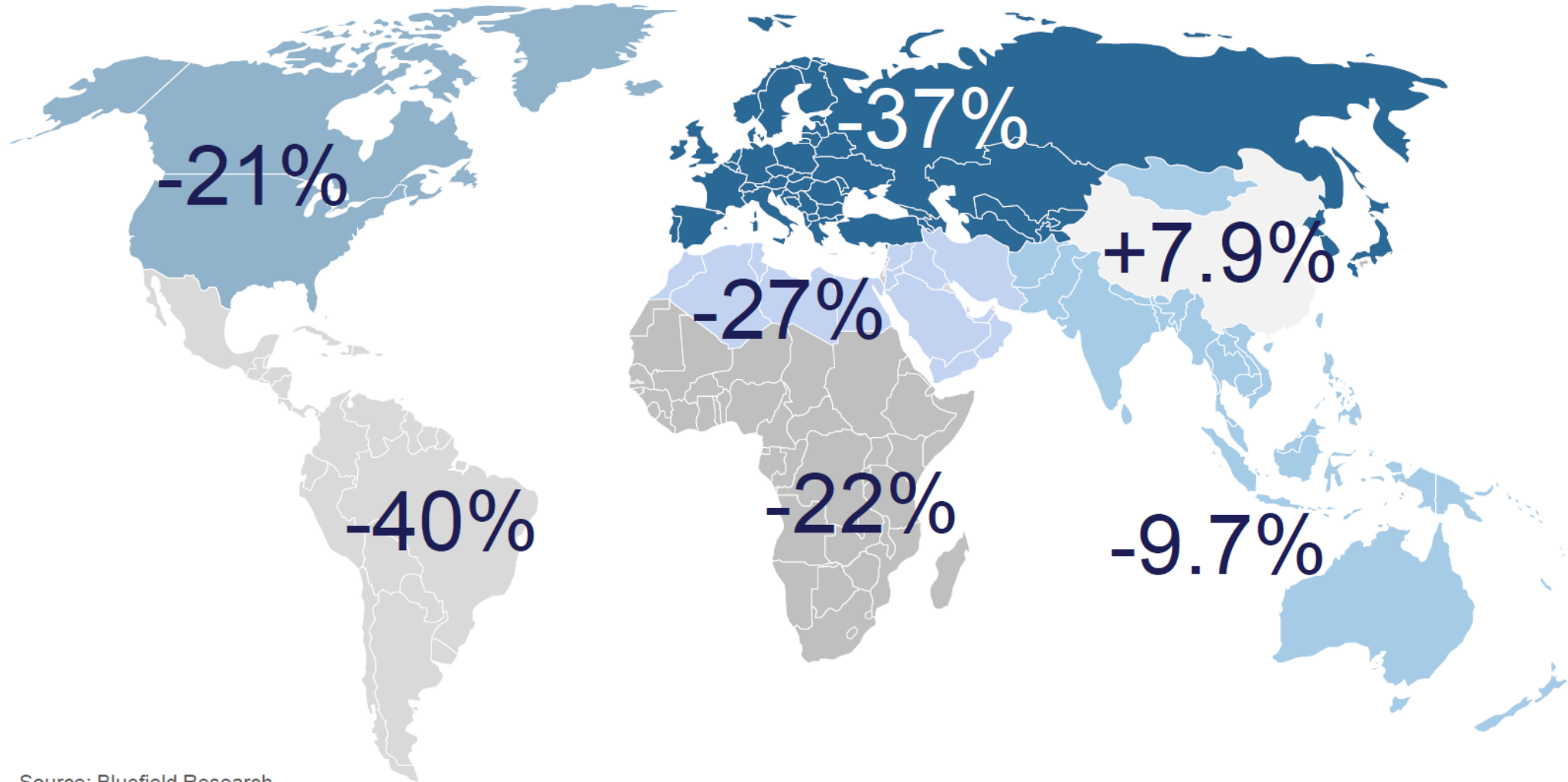
Source: U.S. Congressional Budget Office, Bluefield Research



NB: Numbers in brackets are 2019-2024 CAGR figures



Municipal Water & Wastewater CAPEX Declines by Region, 2020 - 2024



Source: Bluefield Research



What Is The Plus Program?

A comprehensive bundle from Hach that allows customers to focus on data outputs from their Hach instruments while Hach takes care of the rest.



Service

WarrantyPlus
and Field
Service
Partnerships
for all
instruments.



Claros

MSM and
Remote
Monitoring come
standard with
TPP.



Upgrades

You get new
instruments and
hardware as they
become available.



Reagents

Reagents and
other consumable
parts are
included.



Support

The **Remote
Monitoring team**
will reach out to
you when
maintenance is
necessary.

PaaS vs. Lease – What’s the Difference?

The Plus Program: A New Way to Manage Complexity

The Plus Program offers you a full-scope alternative to plant management. With standard instrument purchases, additional solutions are not included. With a lease agreement, a third party finances your instruments.

Only The Plus Program consolidates instruments, software, service, reagents and upgrades all into one flexible price.

Features and Options	Flexible Pricing Subscription*	Instruments Provided	Service Included	Software Included**	Upgrades Included	Reagents Subscription	Financed by 3rd Party
The Plus Program	✓	✓	✓	✓	✓	✓	
Product Leasing		✓					✓
Standard Purchase		✓					

*Buyout, renew or return at end of contract (1-3 years) **Claros™, Mobile Sensor Management and Remote Monitoring



Key Takeaways

