



Marcy Tanniru

Portfolio

www.marcommer.com

Brochures

[OMNI Flow Computer 4000/7000 Series](#)

This brochure was part of a product launch campaign for OMNI's next-generation product. I worked with subject matter experts to:

- Understand the market
- Develop the messaging
- Write the copy
- Design the brochure

4000/7000 SERIES **OMNI Flow Computer**

REDUCE YOUR RISK

INCREASE INSTRUMENT RELIABILITY

IMPROVE PREDICTABILITY

Turn to OMNI - the most recognized and trusted brand of custody flow computers for oil and gas measurement.

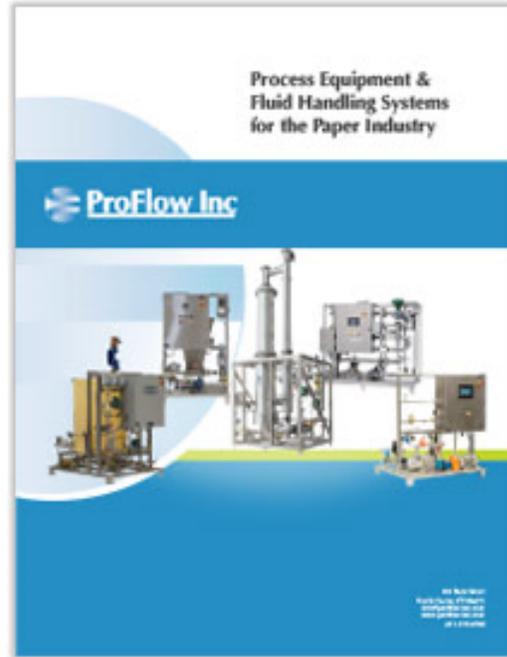
WWW.OMNIFLOW.COM

Brochures

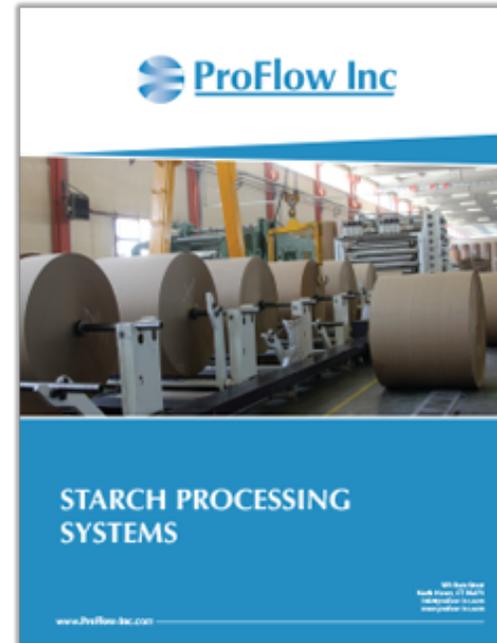
These brochures were part of an effort to improve sales support and customer collateral. I also edit and update ProFlow's Wordpress website and run their LinkedIn presence. We're beginning to run emails campaigns this summer.



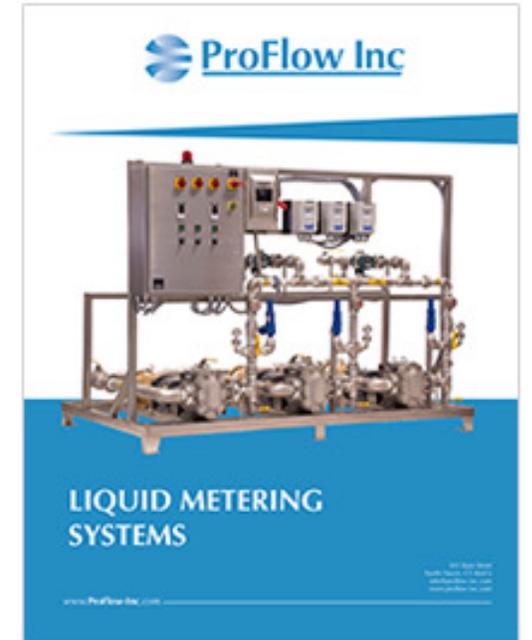
[Capabilities Brochure](#)



[Paper Industry Profile](#)



[Starch Processing Brochure](#)

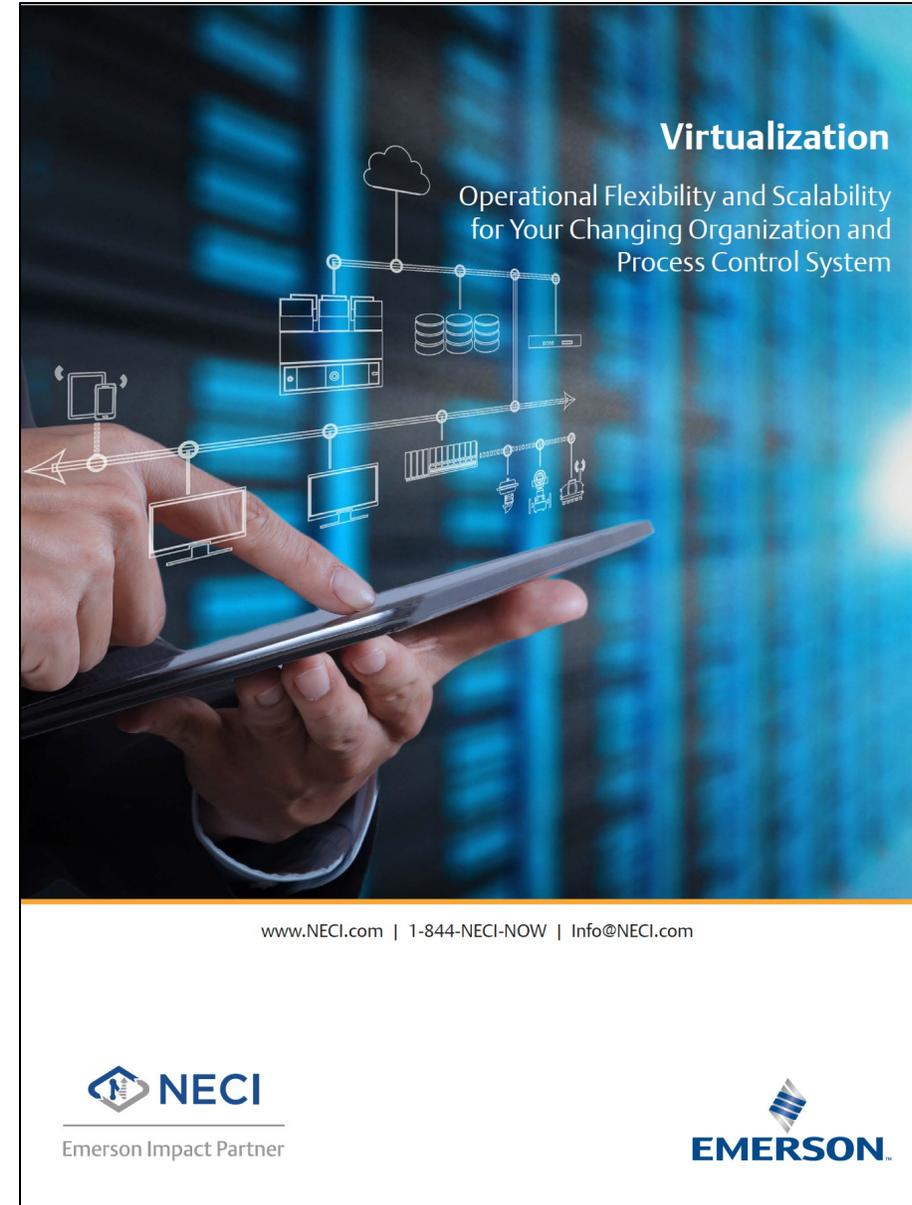


[Liquid Metering Systems Brochure](#)

Brochures

Virtualization Brochure

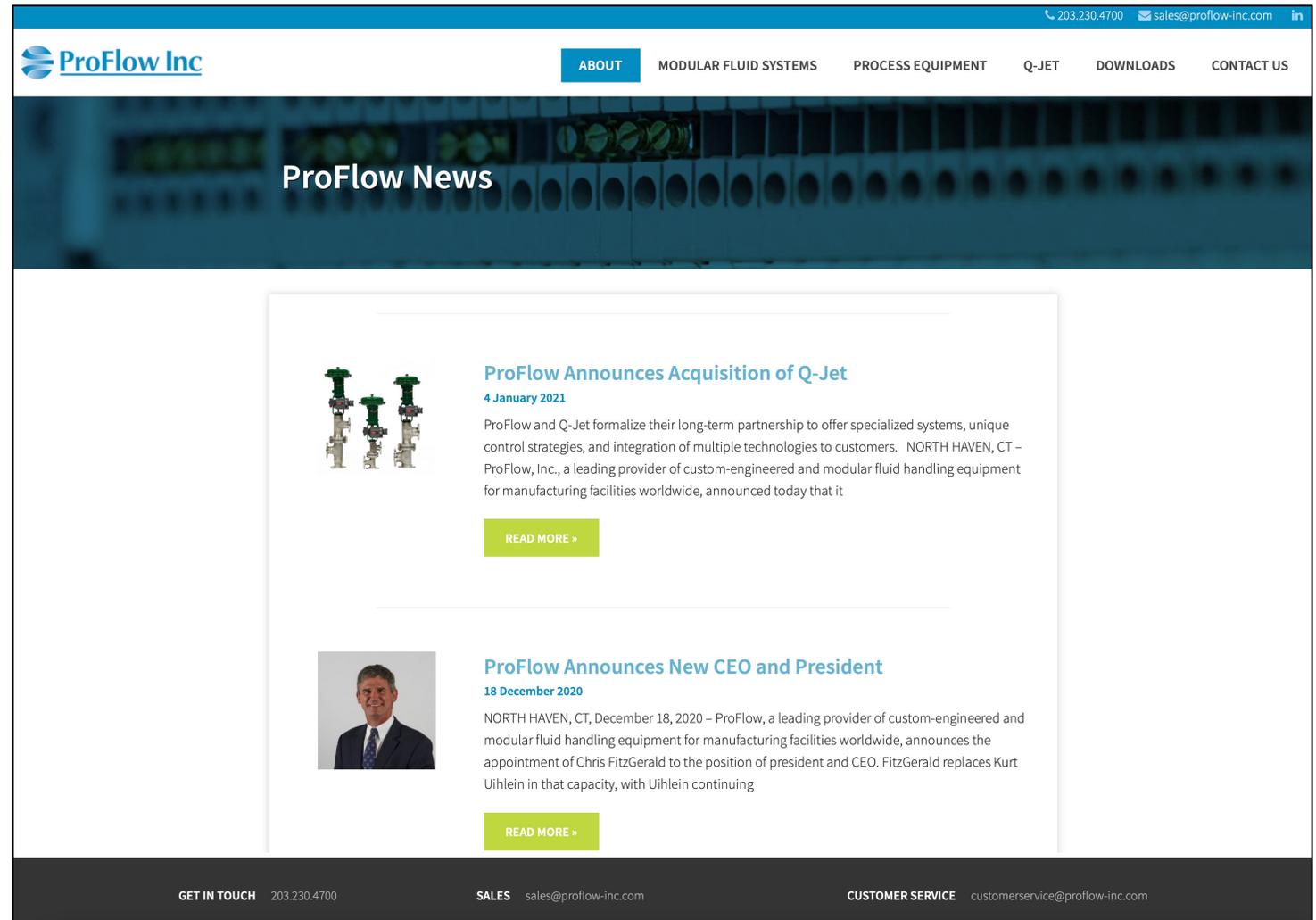
In addition to writing the content of the Virtualization brochure and designing the layout in InDesign, I also created the network illustrations in Illustrator.



Blog Writing

<https://www.proflow-inc.com/proflow-news/>

I write the content on ProFlow news. ProFlow wasn't originally doing much with this part of their website. When I realized that this section was built on a blog template, we began to use it to post articles in a blog format. We link the articles on LinkedIn to create backlinks to their website.



The screenshot shows the ProFlow Inc. website's ProFlow News section. The header includes the ProFlow Inc. logo, a navigation menu with 'ABOUT', 'MODULAR FLUID SYSTEMS', 'PROCESS EQUIPMENT', 'Q-JET', 'DOWNLOADS', and 'CONTACT US', and contact information: '203.230.4700' and 'sales@proflow-inc.com'. The main content area features two news articles. The first article is titled 'ProFlow Announces Acquisition of Q-Jet' with a date of '4 January 2021'. It includes an image of industrial equipment and a 'READ MORE >' button. The second article is titled 'ProFlow Announces New CEO and President' with a date of '18 December 2020'. It includes a portrait of Chris Fitzgerald and a 'READ MORE >' button. The footer contains contact information for 'GET IN TOUCH', 'SALES', and 'CUSTOMER SERVICE'.

203.230.4700 sales@proflow-inc.com in

ProFlow Inc

ABOUT MODULAR FLUID SYSTEMS PROCESS EQUIPMENT Q-JET DOWNLOADS CONTACT US

ProFlow News



ProFlow Announces Acquisition of Q-Jet

4 January 2021

ProFlow and Q-Jet formalize their long-term partnership to offer specialized systems, unique control strategies, and integration of multiple technologies to customers. NORTH HAVEN, CT – ProFlow, Inc., a leading provider of custom-engineered and modular fluid handling equipment for manufacturing facilities worldwide, announced today that it

READ MORE >



ProFlow Announces New CEO and President

18 December 2020

NORTH HAVEN, CT, December 18, 2020 – ProFlow, a leading provider of custom-engineered and modular fluid handling equipment for manufacturing facilities worldwide, announces the appointment of Chris Fitzgerald to the position of president and CEO. Fitzgerald replaces Kurt Uihlein in that capacity, with Uihlein continuing

READ MORE >

GET IN TOUCH 203.230.4700 SALES sales@proflow-inc.com CUSTOMER SERVICE customerservice@proflow-inc.com

Case Studies

[NECI partners with Pfizer to implement an OSIsoft PI system to support advanced pharmaceutical manufacturing.](#)

This case study was developed from a paper that was delivered during a conference. I was able to write the document without interviewing the subject matter experts or the customers. Once it was written and internally approved, we got customer approval to use his quote from LinkedIn.

PHARMACEUTICALS

NECI partners with Pfizer to implement an OSIsoft PI System to support advanced pharmaceutical manufacturing

RESULTS

- Increased the speed of compliance reporting by 50%
- Saved as much as \$78,000 a year in maintenance through productivity improvements such as reducing routine data collection and analysis
- Improved the speed of root-cause identification by 30% and alarm-cause identification by 90%



APPLICATION
The Pfizer facility in Groton, Connecticut focuses on small molecule R&D for pharmaceuticals — specifically formulation development and clinical manufacturing.

CUSTOMER
Pfizer
Groton, Connecticut

CHALLENGE
Pfizer was interested in using an OSIsoft PI system to support an advanced pharmaceutical manufacturing implementation. The existing system was large (2000+ tags) and highly automated, but had only a local process historian. This created data utilization challenges. First, they only had local access and raw .csv data. This came with isolated, raw data sets with poor analytic tools. Analysis was cumbersome and manual. There was no collaborative environment, which led to inefficient data utilization. Pfizer partnered with NECI to create a solution. They wanted to be able to aggregate and contextualize BMS & process data within a collaborative enterprise environment. With this, they sought to implement visualizations and analytics that could empower decision makers.

David Eisenberg
Manufacturing Engineer at Pfizer

Had an awesome time speaking this week at #OSIsoft #PIWorldSF2019 on some of the exciting #digitaltransformation work we are doing at Pfizer. I can't thank Christopher Beaupre and Wyatt L. from NECI enough for the work they do to advance our digital strategy.

Here's a link for anyone interested:
https://lnkd.in/gTxa_BJ

Presentation: Implementation of an OSIsoft PI System in support of advanced pharmaceutical manufacturing (Pfizer/NECI)

osisoft.com
Pfizer WRD in partnership with NECI implemented a 3 stage PI system to most effectively utilize and ...

 For more information:
www.NECI.com

Emerson Impact Partner



©2019 NECI

Case Studies

[ProFlow Partners with R&D Dynamics to Fabricate & Assemble ThermoGen Waste Heat to Electric Power Converter](#)

I interviewed the customer directly, wrote the case study, and then worked with the customer through a few rounds of edits to get approval to publish.



ProFlow Partners with R&D Dynamics to Fabricate & Assemble ThermoGen Waste Heat to Electric Power Converter



APPLICATION

R&D Dynamics Corporation developed their ThermoGen Waste Heat to Electric Power based on the Organic Rankine Cycle (ORC) to enable processes with excessive waste heat to harness the potential energy and convert it to electricity.

CHALLENGE

R&D Dynamics had the design and specifications of the ThermoGen product, but they were looking for the right partner to handle sourcing, fabrication, and assembly.

They had a few requirements for their preferred partner:

1. The partner needed to be able to scale systems to fit customized requirements
2. The partner needed to offer exceptional project management
3. The partner needed to have excellent turnkey capabilities—including engineers, fabricators, assemblers, and welders.

SOLUTION

The ThermoGen ORC Module includes a turbo alternator, power electronics, refrigerant pump, condenser, evaporator, pre-heater, and PLC, so the preferred partner needed to be highly familiar with these pieces of equipment.

After R&D Dynamics met with ProFlow, they knew immediately that ProFlow had the capabilities they required. ProFlow has a highly skilled, diverse staff of engineers, assemblers, and fabricators. Their North Haven, Connecticut facility is large, and includes a welding shop and certified welders.



Page 1 | www.proflow-inc.com

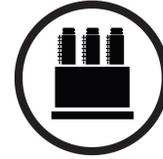
303 State Street
North Haven, CT 06473
203-230-4700
www.proflow-inc.com
info@proflow-inc.com



White Papers

[Using Embedded Model-Based Algorithms to Improve Control of Steam Attenuation in Combined Cycle Plants](#)

I worked with this division of Emerson for seven years early in my career, so I was already familiar with the combined cycle application. I interviewed the subject matter expert, researched the topic for supporting data, wrote the white paper, and formatted the document in InDesign.

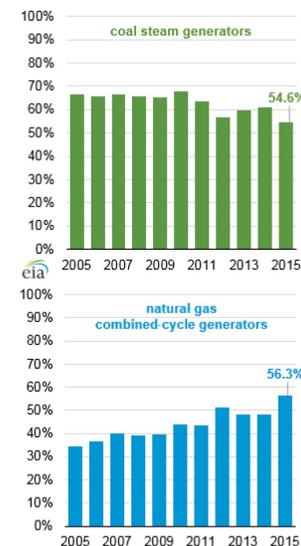


Using Embedded Model-Based Algorithms to Improve Control of Steam Attenuation in Combined Cycle Plants

Market Dynamics are Changing the Way We Operate Combined Cycle Power Plants

There is a tremendous shift underway for power generation and the mix of energy in the United States. This transition is being driven by several factors, including the price of fuel, renewable energy goals, existing limitations in the infrastructure, and deregulated markets across the states.

Annual average capacity factor of selected electricity generated technologies (2005-2015)



The price of natural gas, which has been dropping since 2014, has led power generation to transition toward natural gas generation.^[8] By June 2016, U.S. power plants were burning 26 billion cubic feet of natural gas per day (bcf/d), a record high for that time of year.

Environmental regulations, such as the Mercury and Air Toxics Standard (MATS) and the Cross States Air Pollution Rule (CSAPR) are driving the retirement of coal-fired plants.^[6]

Renewable portfolio standards and environmental concerns continue to drive the growth of renewable generation capacity – specifically wind and solar – which are also impacting the industry, as recent innovations leading to cost and performance improvements are making renewable generation more appealing and fiscally justifiable.^[6]

These trends are the latest indication that the mix of U.S. power generation is undergoing significant change. While the amount of electricity that coal-fired power plants have been providing to the national grid has been declining since 2008, natural-gas-fired generation has been experiencing a steady increase that began in the early 1990s.^[6]

Figure 1. Source: U.S. Energy Information Administration, Electric Power Monthly
<http://www.eia.gov/todayinenergy/detail.cfm?id=25652>

White Papers

[Automating Excursion Management for Real-Time Resolution in the Pharmaceutical Manufacturing Process](#)

The Excursion Management white paper was based on a highly technical presentation that the subject matter expert was working on. The SME did his presentation dry run on a conference call with me, and I wrote the paper based on his presentation.



Automating Excursion Management for Real-Time Resolution in the Pharmaceutical Manufacturing Process

www.NewEnglandControls.com | Info@NewEnglandControls.com



Application Notes

[Monitor TOC in Drinking Water Sources to Optimize Chemical Usage and Minimize DBPs](#)

[Lost Product Detection and Prevention Using TOC Monitoring of Wastewater](#)

These Biotector/Hach Application notes were part of a series of similar documents. I interviewed the subject matter expert, who was located in Ireland, and wrote and formatted the document in Word.

Monitor TOC in Drinking Water Sources to Optimize Chemical Usage and Minimize DBPs

Problem

The intake/raw water taken from rivers, lakes, aquifers, and reservoirs contain organic contamination and naturally occurring organic matter (NOM). When raw water is chlorinated for the disinfection process, residual chlorine can react with the organics, and potential carcinogens, known as disinfection by products (DBPs), such as trihalomethanes (THMs), can be formed.

Solution

By measuring the organic matter in raw water using total organic carbon (TOC) analysis, it is possible to optimize chemical usage and minimize the formation of DBPs that can result from improper chemical application. Hach's BioTector B3500dw online TOC analyzer accurately and reliably detects organics to optimize the monitoring and removal of organics based on real-time TOC measurements.

Benefits

BioTector's reliable TOC analysis leads to efficient TOC removal from raw water and helps optimize the chlorination and the coagulant/flocculant feed within the water treatment process. BioTector's efficient oxidation process, accurate analysis, and rapid response provide stability in the treatment process, prevent overdosing and unnecessary treatment, and deliver cost savings.

Background

Raw water comes from many different sources such as rivers, lakes, aquifers, and man-made reservoirs. One of the most prevalent impurities in source water is organic material. Organics in source water come from naturally occurring organic matter (NOM) and pollution. Water contamination can also occur when water is exposed to bacteria as it travels through the network of raw water sources. To ensure the safety of drinking water, the typical water treatment process involves adding disinfectants like chlorine, hypochlorite, ozone, or chlorine dioxide to the water.

Unfortunately, while disinfecting the water, these chemicals can react with the NOMs in the raw water supply, which can then result in the creation of disinfection byproducts, such as trihalomethanes.

Humans can be exposed to DBPs through drinking, showering, and even inhaling water vapors. DBPs, especially trihalomethanes, are thought to be carcinogenic and could potentially lead to adverse health affects to humans. For this reason, the amount of DBPs permitted in drinking water is tightly regulated in most world areas.



Compliance with chemical standards for drinking water is an important requirement for water treatment plants. Because there is a direct correlation between the amount of TOC and NOMs in raw water, online TOC measurement is an efficient method to determine and control the NOM to prevent the formation of DBPs. By lowering the organic levels in the raw water and controlling the TOC removal through accurate and reliable TOC analysis, it is possible to increase the efficiency of the treatment plant, reduce operational costs, and provide safe drinking water to the public.



Lost Product Detection and Prevention Using TOC Monitoring of Wastewater

Problem

The international dairy industry accepts a "standard" lost product figure of 2-3% annually. Even with these low percentages, the loss can be very high in monetary terms. The cost of spilt milk is definitely worth shedding some tears.

Solution

The Dairy BioTector B7000 on-line TOC analyzer was developed specifically for the dairy industry. Much of the global success of these analyzers stems from the fact that they can overcome the obstacles faced in such harsh sampling and measurement conditions.

Benefits

Hach's reliable TOC monitoring allows greater stability of wastewater loading, protection against overloading, and optimization of WWTP capacity. It also enables rapid response to product loss incidents, delivering process optimization and cost reductions.

Background

Historically, many processing plants viewed production and wastewater treatment as two entirely separate functions. This is changing as raw material costs increase, margins tighten, the market changes, and competition becomes more intense. Therefore, cost management is more important than ever. Process wastewater is infamous for carrying valuable product away from the plant, and away from the bottom line.

International experts concur that approximately 2-3% of the total amount of milk purchased annually by dairy processors is lost during processing. Some of this is an inevitable part of processing output, but some of the loss could be avoided. As an extra commercial headache, pollutants generated by industry are very often these same losses in production. So, not only does lost product cost in terms of the wasted raw materials, but it also costs to treat it at the wastewater treatment plant (WWTP). Production and treatment of each pound of BOD in a dairy processing environment is expensive, particularly since the average plant will produce millions of pounds of BOD each year.

Processing Challenges for TOC Measurement

Dairy Processing is a very challenging environment for an analyzer due to the fats, oils, grease, and solid waste (FOGS), salts, and particulates that are inevitably present in process streams. Many on-line TOC analyzers fail under these harsh and challenging process and wastewater conditions.



Illustrations & Infographics

[Industrial Internet of Things Infographic](#)

This infographic was created because NECI wanted to use an article published in a magazine, but we weren't sure if we had the rights to use it the way NECI wanted to. We took the information and repurposed it into an infographic, which was then used to promote their capabilities relating to the Industrial Internet of Things.



Leveraging the Industrial Internet of Things
to Monitor Valve Health



Digital Field Networks

For existing plants, incorporating an IIOT solution needs to be backwards compatible with the existing network. Fieldbus-compatible and wireless instruments are a requirement, and deploying WirelessHART (IEC 62591) is a good place to start.

Adding wireless sensors and integrating them with the existing control system makes the plant more efficient and reliable by covering measurements left out of the original design. When the correct protocols are applied, gateways connect to the distributed control system (DCS), historian and condition monitoring software.

Instrument Assets

If a plant is using fieldbus, the valve positioners are already intelligent, and sensors for condition monitoring of other equipment can be added easily to the same fieldbus networks.

If a plant is built on 4-20 mA, a good step forward is to modernize all control valves with smart valve positioners, starting with the most critical valves. A discovery session should be conducted to identify critical control valves, see if they are digitally integrated with valve diagnostic software and ascertain if the HART communication is still working.

On-Premise Analytics Software

Many plants don't capture much equipment data. Those that do often only analyze a small amount of that data. By implementing on-premise analytics software, data analysis is made more accessible through a simple dashboard offering an at-a-glance view of the overall health of the valve package. This will be the first place to access instrument readings, and instrument technicians can zoom into greater levels of detail, such as valve diagnostics. With special software, the plant can ensure high availability, reduce maintenance time, and reduce energy consumption.

Review Work Processes

Once the smart positioners, sensors and software are in place, the standard operating procedures (SOPs) can be modified to proactively use the software in the daily operation and maintenance of the plant, rather than require manual inspection of valves and equipment. Rewriting SOPs is an important step that should not be missed.

Internal IIOT

Attracting experienced employees for a job that requires extensive time spent on the road in remote areas can be a challenge. By connecting the valve and equipment condition monitoring systems to an enterprise intranet, the data from the site can be accessed across the internet by employees anywhere in the world, such as an onshore office or a global center of excellence with valve, vibration analysis, and corrosion experts.

External IIOT

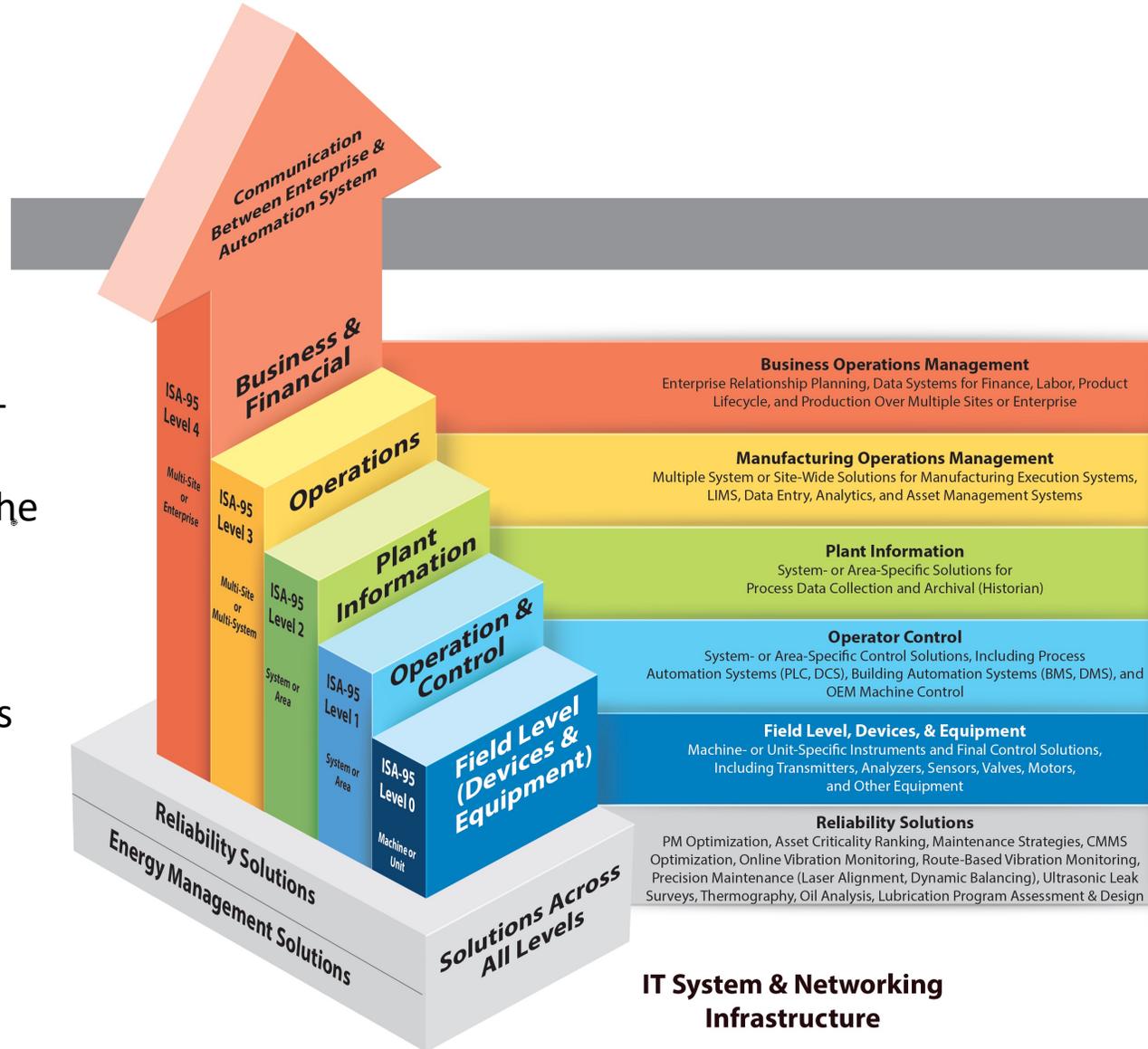
A plant may have fieldbus valve positioners and wireless sensors, but an internet connection is required for remote monitoring. Without an internet connection, a remote expert must request site personnel to run tests, take photos, and make screen captures, then send them across available communications channels, which could take days. By connecting the systems to a secure internet, access to data from the site can be granted to selected external vendors and service providers anywhere in the world. This is the full Internet of Things architecture.

This infographic is based on an article published in Valve Magazine by Jonas Berge, "Monitoring Valve Health Via the Internet." Read the full article here: <http://valvemagazine.com/magazine/sections/features/8578-monitoring-valve-health-via-the-internet.html>

Illustrations & Infographics

[ISA-95 Magnetic Poster](#)

NECI wanted to talk about ISA-95 at a tradeshow, but they weren't sure how to present the information. I created this infographic and had it printed on a magnet board with magnets, which allowed NECI's subject matter experts at the trade show show how their capabilities aligned with the ISA-95 requirements.



ISA-95

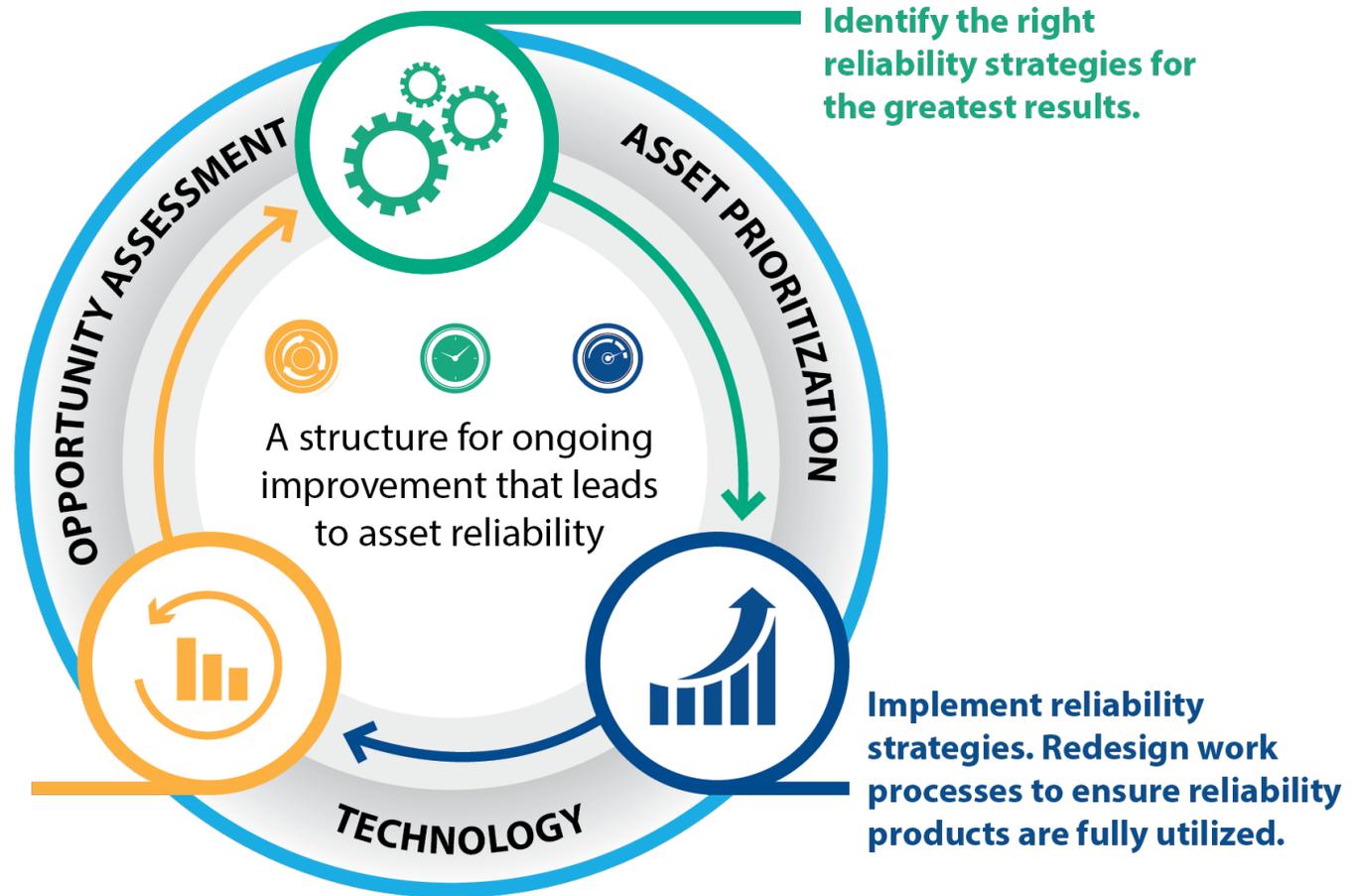
AND WHAT IT MEANS FOR YOU

Illustrations & Infographics

Reliability Infographic

I created this artwork to describe NECI's reliability solutions program. It was used in several brochures and presentations.

Quantify the ROI of installed and additional products and services NECI can provide. Assess and benchmark.

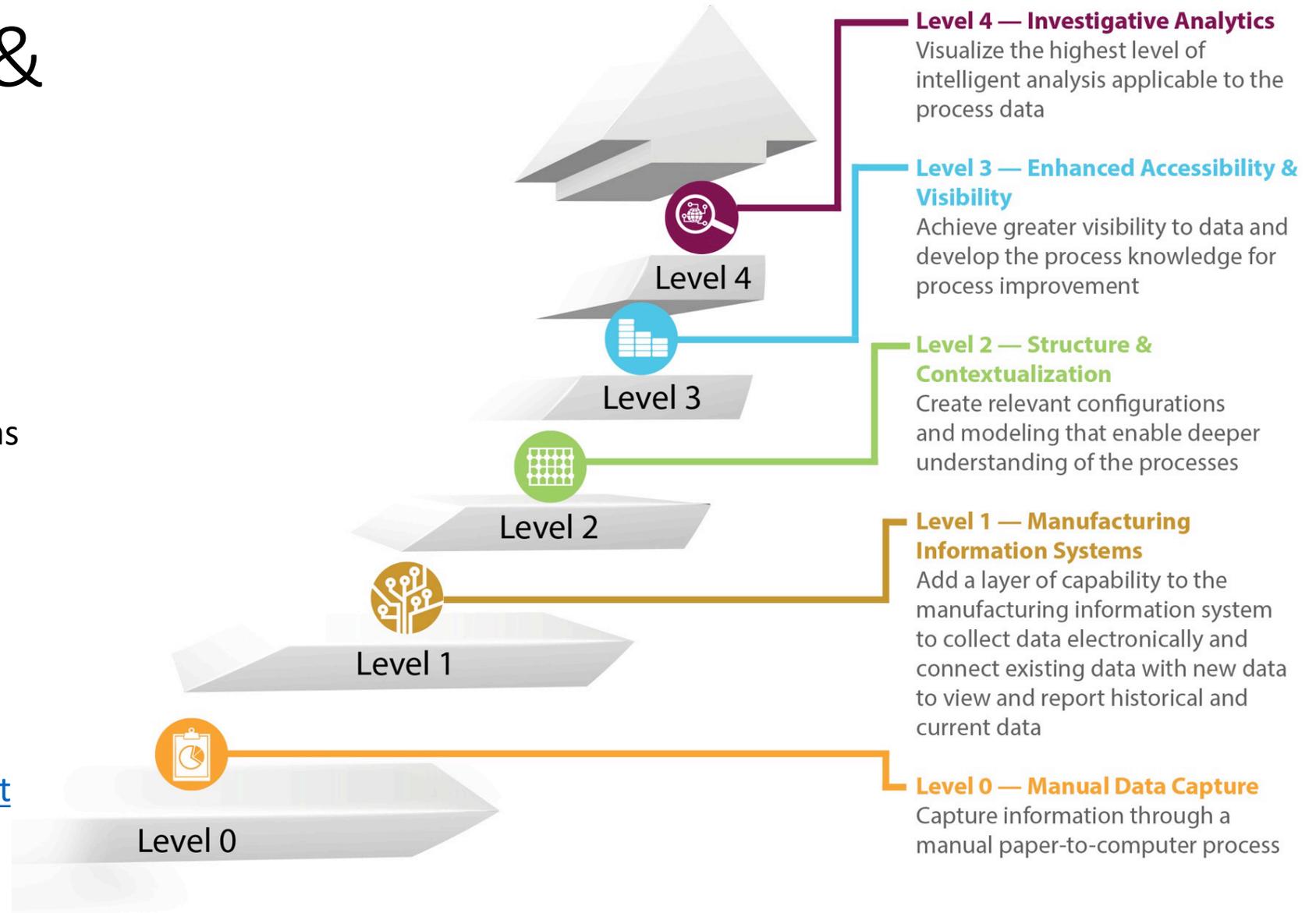


Illustrations & Infographics

[Maturity Model for Enterprise Solutions](#)

I created this maturity model as part of NECI's Enterprise Solutions product launch campaign. I also created the website, supporting data sheets, posters, emails, and other sales support efforts.

www.enterprisesolution.expert



Illustrations & Infographics

[Enterprise Solutions Roller Banner](#)

This is a poster that I created to use to describe what NECI's Enterprise Solutions capabilities entailed.

www.enterprisesolution.expert

ENTERPRISE SOLUTIONS

Envision the ability to ...

- Increase production throughput by 10% by eliminating bottlenecks in the process
- Add one more batch of production to each line per year
- Shorten the time required for technology transfer by a month or more
- Reduce the time it takes to conduct a process deviation investigation by half

We can get you to the next level.

Investigative Analytics
Visualize the highest level of intelligent analysis applicable to the process data

Enhanced Accessibility & Visibility
Achieve greater visibility to data and develop the process knowledge for process improvement

Structure & Contextualization
Create relevant configurations and modeling that enable deeper understanding of the processes

Manufacturing Information Systems
Add a layer of capability to the manufacturing information system to collect data electronically and connect existing data with new data to view and report historical and current data

Manual Data Capture
Capture information through a manual paper-to-computer process

Services to Support Your Vision

- CONNECT & COLLECT**
Device or system to DeltaV or historian.
- STORAGE (LOCAL & ENTERPRISE)**
Store data in continuous historian or event historian
- VISUALIZATION**
Present stored or aggregated data (dashboard, graphic, mobile)
- REPORTING**
Present pre-configured reports
- NOTIFICATIONS**
Notify remote users via text, email, or voice when events occur
- CONTEXTUALIZATION**
Add context by 1) linking data, 2) building models, and 3) manually entering meta data
- ANALYTICS**
Use statistical and numerical methods to find patterns and make meaningful data
- CLOSED LOOP CONTROL**
Change device or system setpoints

WWW.
ENTERPRISESOLUTION
.expert

Illustrations & Infographics

[OMNI 4000/7000 Poster](#)

This OMNI Flow poster was part of their product launch. I hired a graphic designer to develop the brochure template, and I used the concept to create complementary material, like this roller banner.



FULLY TRACEABLE
FULLY TESTED
FULLY APPROVED

The OMNI Series 4000/7000 flow computer delivers reliable and fully traceable measurements of gas and liquid applications. As the most secure flow computer available, the 4000/7000 is ideal for custody transfer and fiscal measurement applications.

- ▶ Powerful, robust real-time operating system
- ▶ 365+ days of batch storage
- ▶ Enhanced security for protection against internal and external intrusions
- ▶ Fast access to critical data when you have remote connections like PLCs, DCSs, and SCADA systems



Video Development

<https://www.youtube.com/user/NorrisealVideos/videos>

I developed 37 videos for Norriseal. I worked with Norriseal to understand their needs, and then worked with subject matter experts to develop the story board and script. I hired a video company, supported the video shoots, managed post-production edits, and created the branded YouTube page.

The screenshot displays the Norriseal YouTube channel page. At the top, there is a search bar with 'norriseal' entered and a navigation menu with icons for Home, Explore, Subscriptions, Library, History, Your videos, Watch later, Sensors, and Show more. The channel banner features a large image of industrial piping and equipment. Below the banner, the channel name 'Norriseal Videos' is shown with 1.78K subscribers and a 'SUBSCRIBE' button. The page is organized into sections: 'Uploads' and 'PLAY ALL' are visible at the top of the video grid. The video grid consists of 18 thumbnails, each with a title, view count, and upload date. The videos cover various topics such as product portfolios, troubleshooting, and installation instructions for different Norriseal valve and controller models.

Video Title	Views	Upload Date
Webinar: Facilitating Chemical Injection Through...	641 views	2 years ago
Troubleshooting the 2700 - Replacing the Non-...	3.3K views	7 years ago
The Norriseal Experience	3.2K views	8 years ago
How To Troubleshoot Your 1001 Series Level Controller	6.8K views	8 years ago
Specifying the Series 1001 Liquid Level Controller	1.9K views	8 years ago
Maintaining Your 2200 and 2220 High Pressure Control...	4.1K views	8 years ago
How to Replace the Packing in Your Series 2200 Control...	5.6K views	8 years ago
Troubleshooting the Trim in the Series 2200 Control Valve	3.6K views	8 years ago
How To specify a Norriseal Series 2200 Control Valve	2.3K views	8 years ago
Disassembling & Reassembling a Valve with...	873 views	8 years ago
Maintaining Your 2700 High Pressure Control Valves	808 views	8 years ago
Troubleshooting Your 2700 Control Valve Diaphragm	489 views	8 years ago
Troubleshooting the Trim in a 2700 Control Valve	1.6K views	8 years ago
How to Specify a Series 2700 Norriseal Control Valve	950 views	8 years ago
Installing a Series 4900 Pneumatic Pressure...	1.8K views	8 years ago
Calibrating a Proportional-Only 4900 Pneumatic...	29K views	8 years ago
Calibrating a 4900 Differential Gap Controller	1.1K views	8 years ago
Specifying the 4900 Pressure Controller	488 views	8 years ago

Marcy Tanniru
The Marcommer LLC
www.marcommer.com
832-302-4101