

# OGA Conference 2019

April 3-4 Hilton Mississauga/Meadowvale

## Greg Pimento

**P.Eng., M.B.A., Armstrong Fluid Technology**



The Armstrong Road Map for Energy Upgrades,  
highlighting the Wi-Fi connectivity of modern day  
Design Envelope fluid management systems.

# Armstrong Fluid Technology: Energy Upgrade

Greg Pimento, P. Eng., M.B.A.  
Owner Sales Account Executive



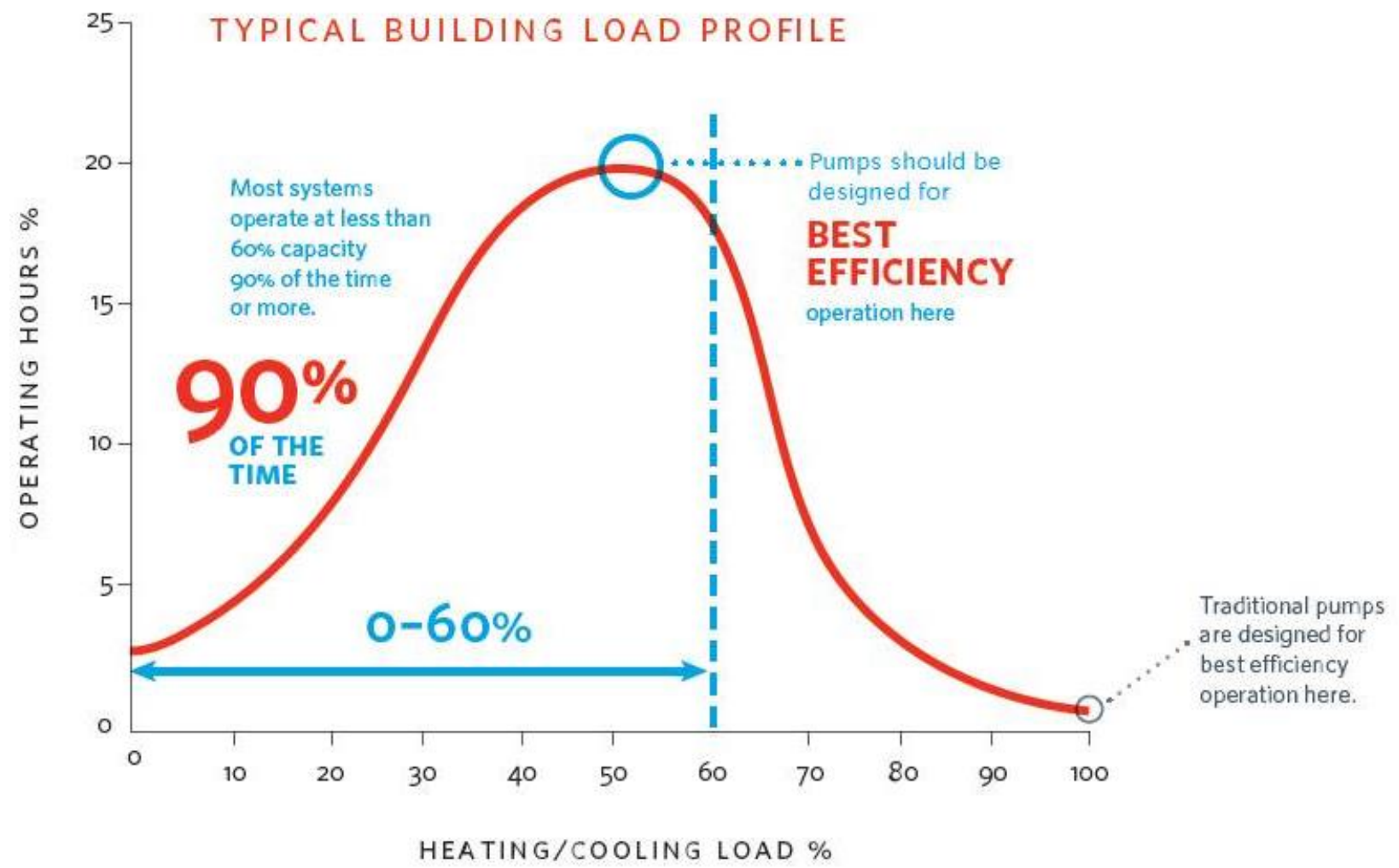
## OGA and Armstrong Shared Values

- Sustainability
- Reduces CO<sub>2</sub> emissions
- Reliability
- Reduces capital costs
- Reduces maintenance costs
- Frees up valuable building space

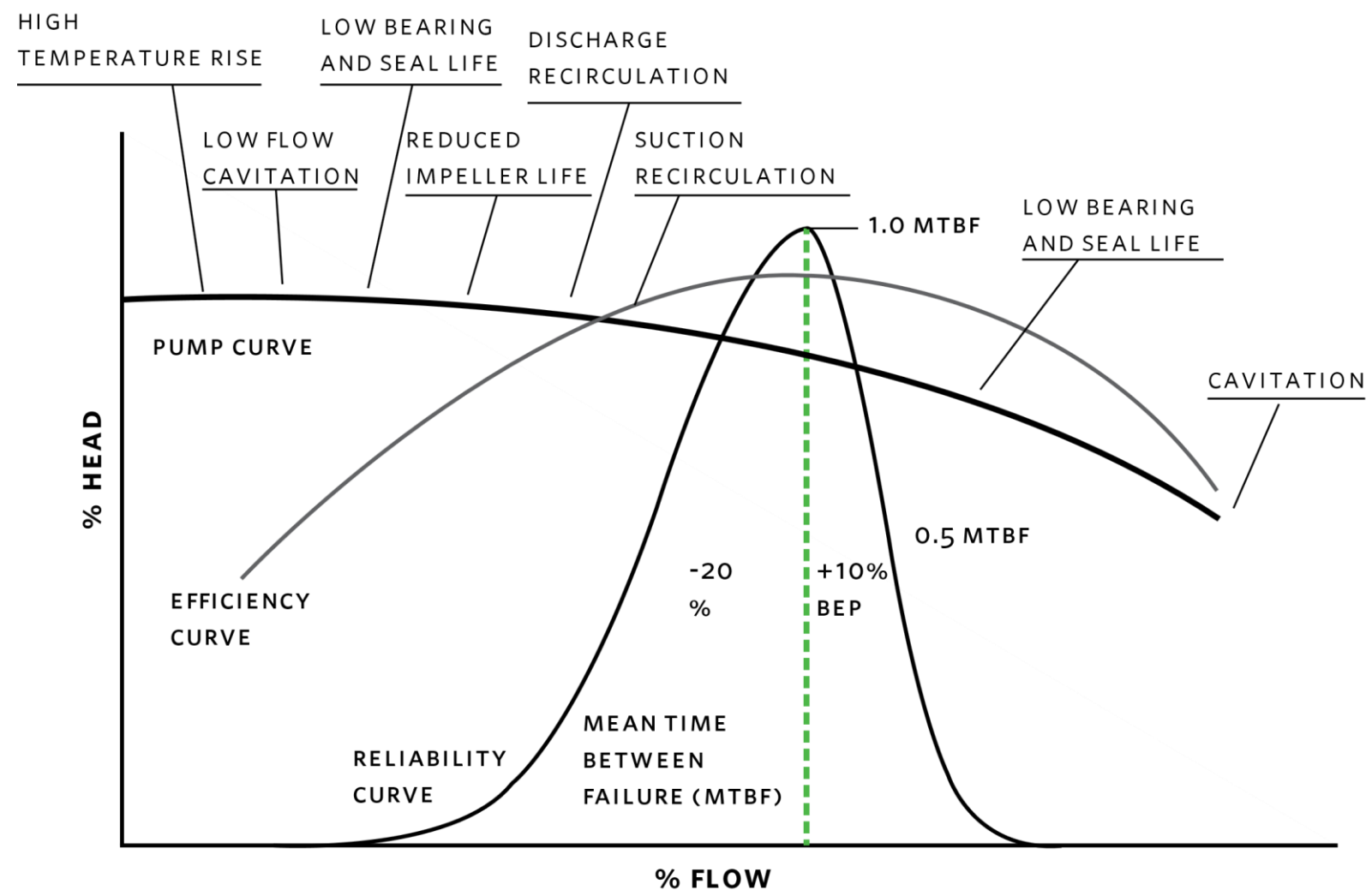


# Building Load Profile

Most systems operate at less than 60% capacity, 90% of the time or more.



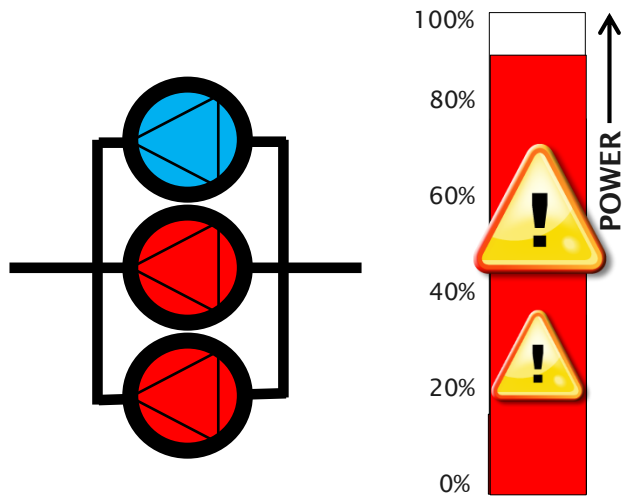
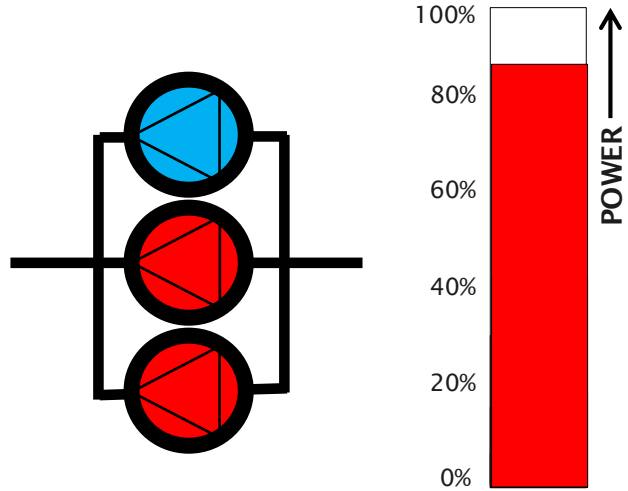
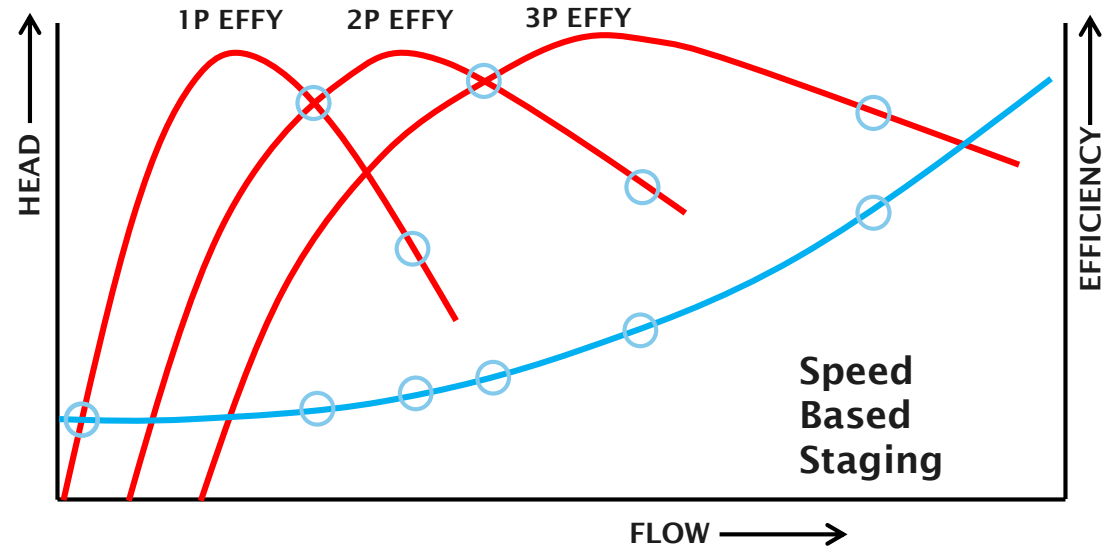
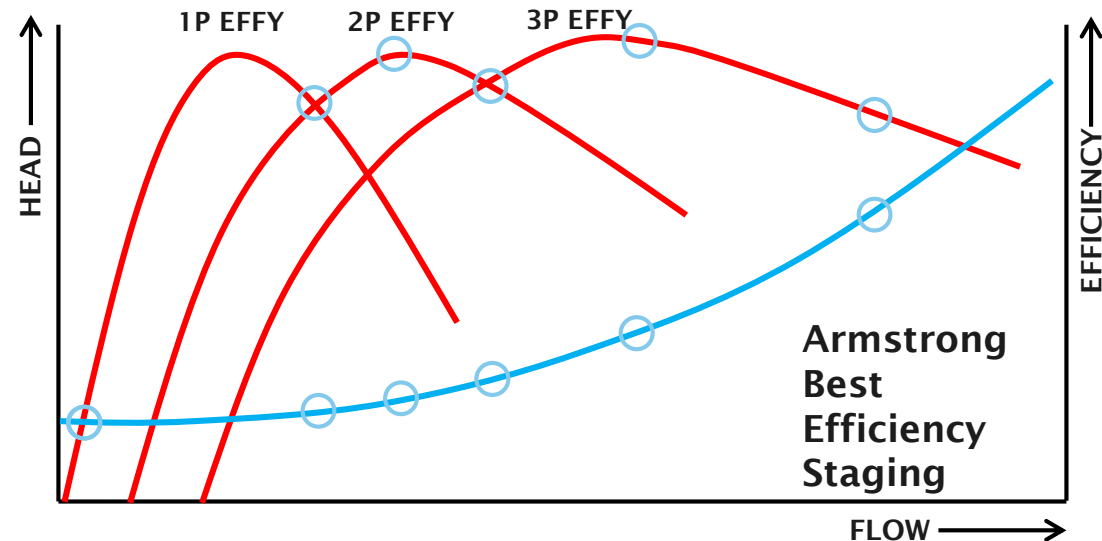
# Efficiency Means Reliability



Hydraulic Institute

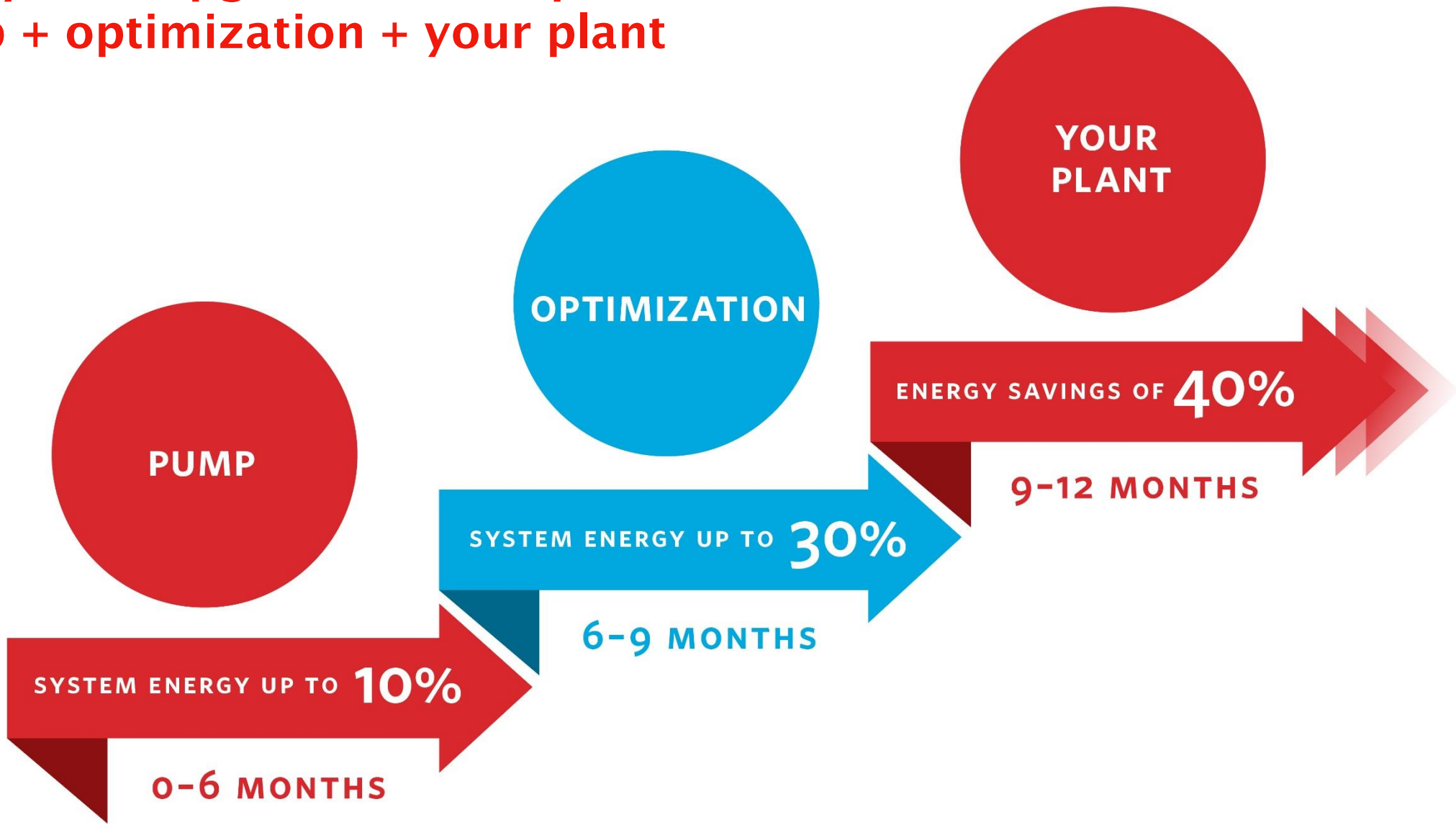
# Parallel Pump Staging

## Best Efficiency Staging versus Speed Based Staging



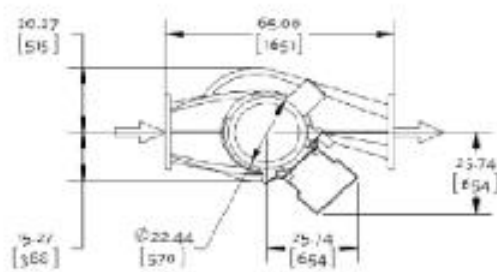
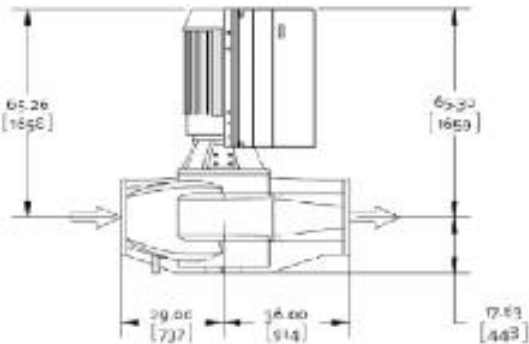


# The system upgrade roadmap: pump + optimization + your plant



DE 4300 & IPS

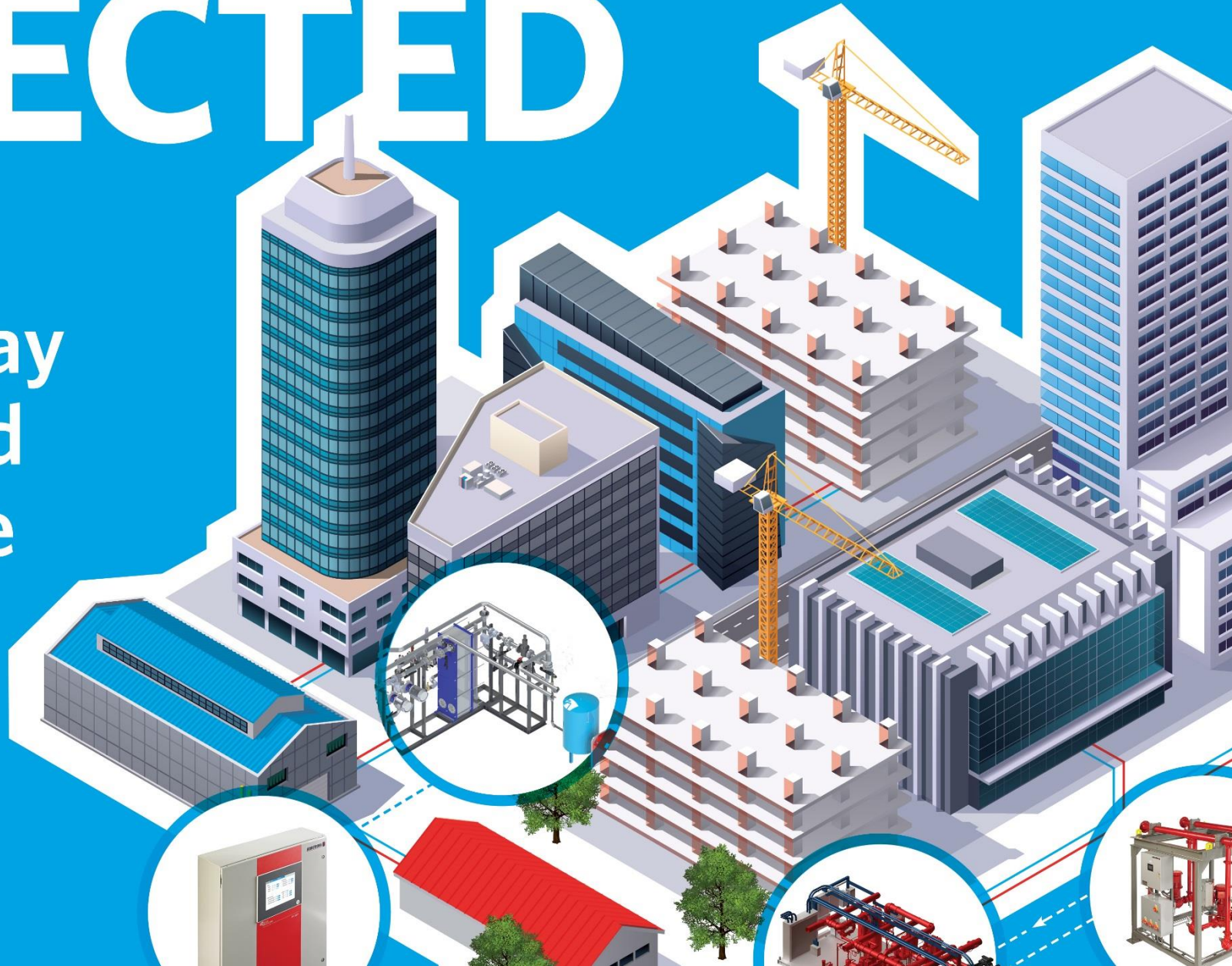
DESIGN  
ENVELOPE





# CONNECTED

equipment  
paves the way  
for sustained  
performance  
and smarter  
buildings







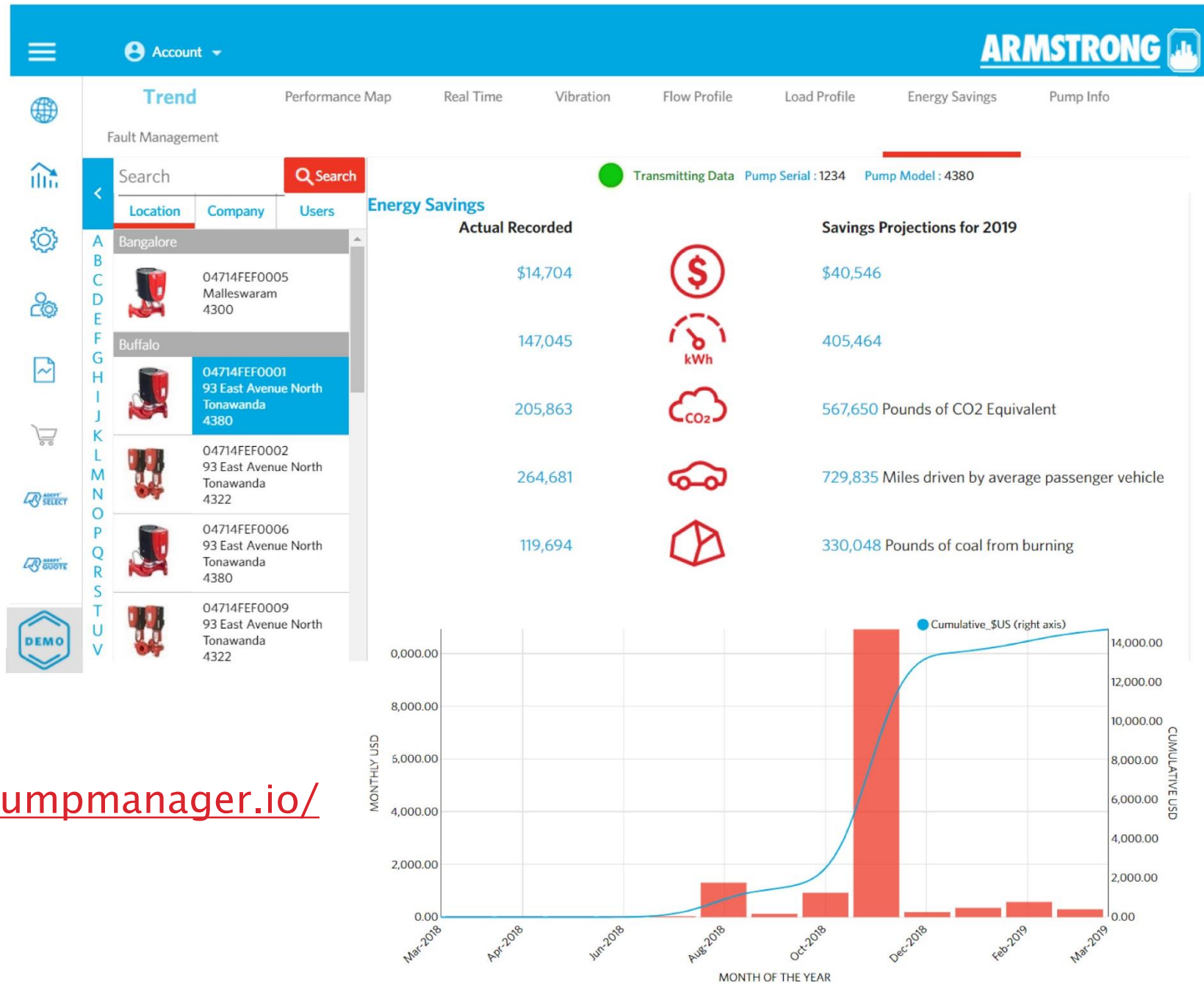
# UP TO 30% ENERGY SAVINGS

**25%**  
**AVERAGE**

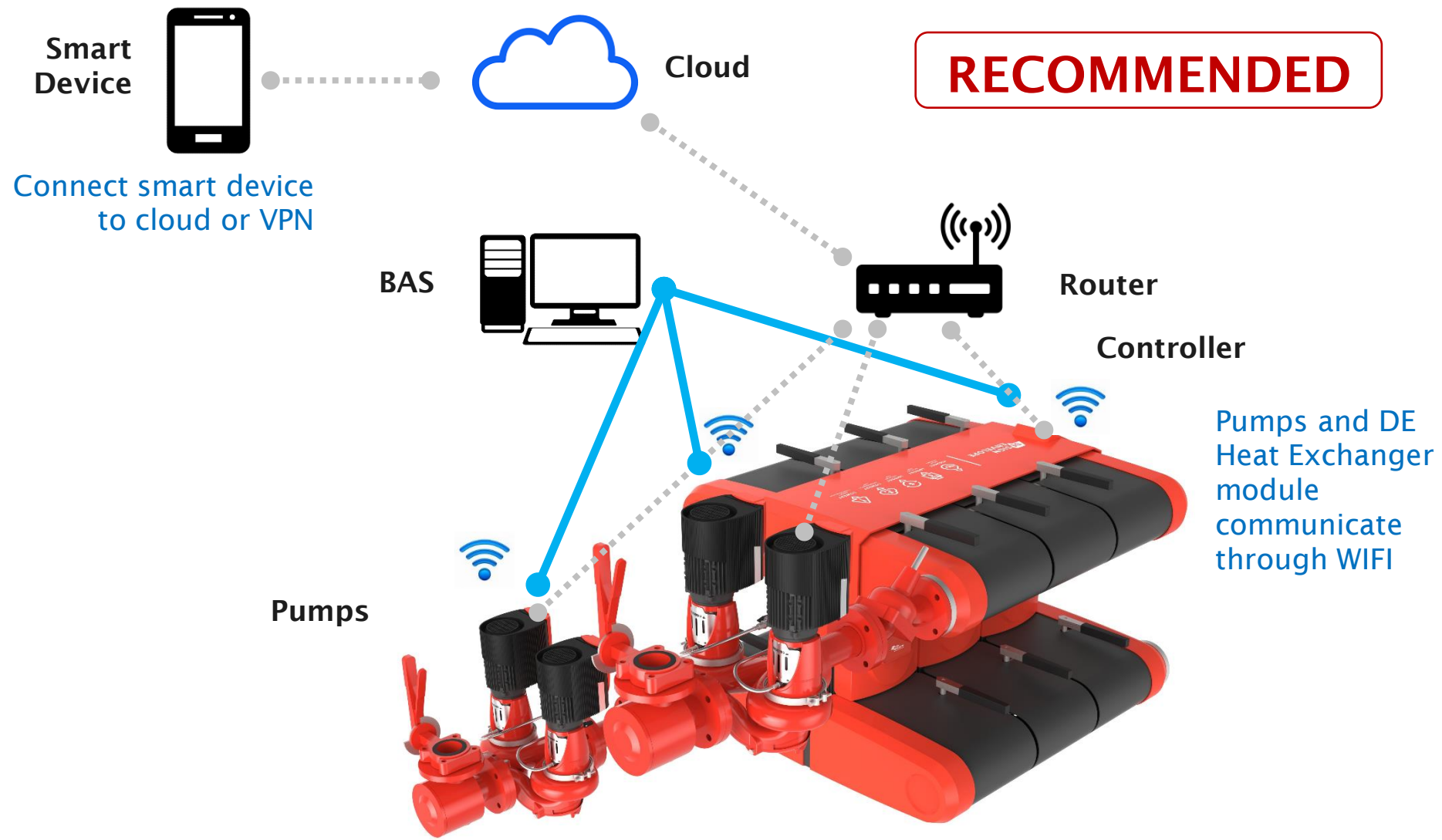
Pacific Northwest National Laboratory – May 2017

# Pump Manager

<https://www.pumpmanager.io/>



# Communication -Enabling Network Connectivity Remote Setup





# Case Study: Carlson Court





**FACILITY TYPE**  
Large Office  
Complex



**LOCATION**  
Toronto,  
Canada



**SIZE**  
300,000 ft<sup>2</sup>



**ANNUAL ENERGY COST**

BEFORE	AFTER
\$140,072	\$18,380
CAD	CAD
AVERAGE	AVERAGE

ANNUAL COST SAVINGS

**\$121,692**

CAD



**CO<sub>2</sub> EMISSIONS**

BEFORE	AFTER
150,847	19,794
kg CO <sub>2</sub>	kg CO <sub>2</sub>
AVERAGE	AVERAGE

ANNUAL CO<sub>2</sub> EMISSION REDUCTION

**131,053**

kg CO<sub>2</sub>



**KEY OUTCOMES:**

- ✓ Energy savings of over 80% compared to the original constant speed pumps
- ✓ Improved occupant comfort
- ✓ Pump Manager notification identified deadhead condition

# Thank you for your time.

# QUESTIONS

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