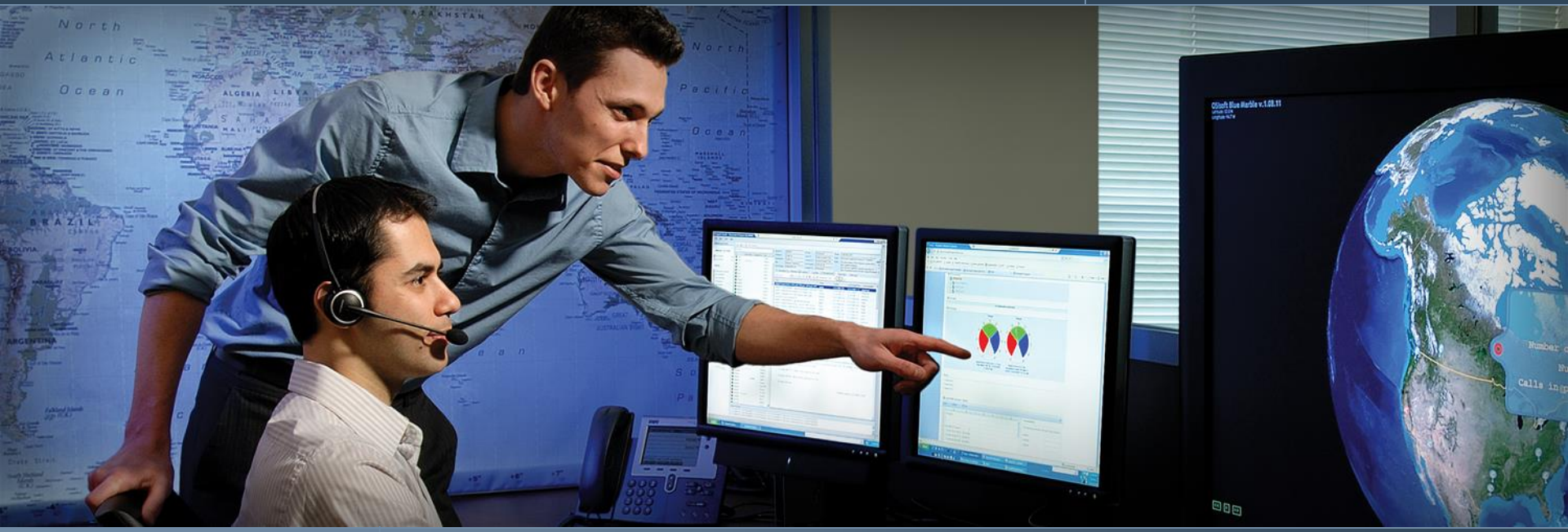
Regional Seminar Series
Kirkland, WA



# PI for Facilities and IT Infrastructure

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Regional Sales Manager
OSIsoft, LLC

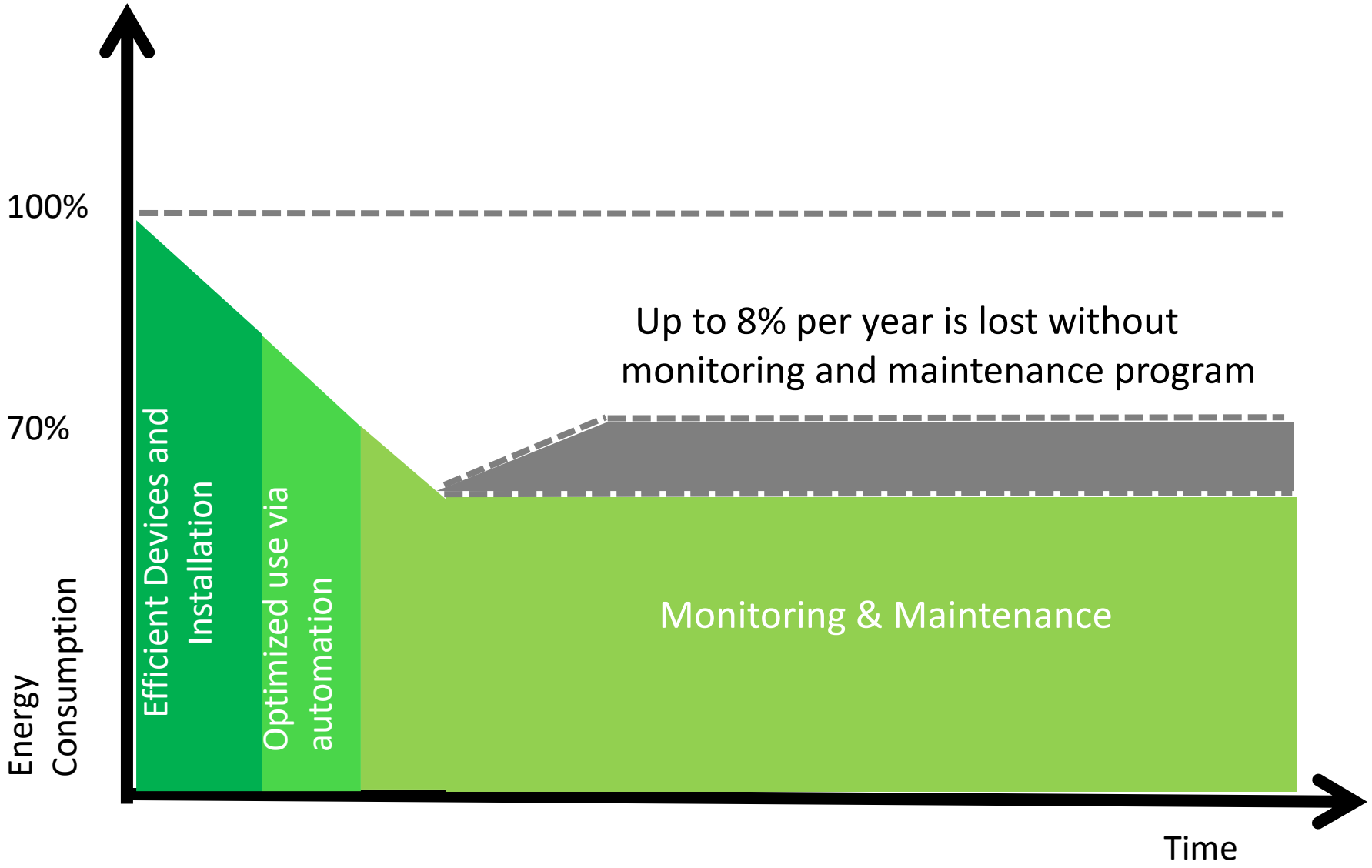
November 10, 2009

Empowering Business in Real Time.

# State of Market

- Maintaining availability of the data center still the top priority
- Reducing operational costs
- Improving energy efficiency
- Potential government regulations

# Why PI For Facilities Energy Management



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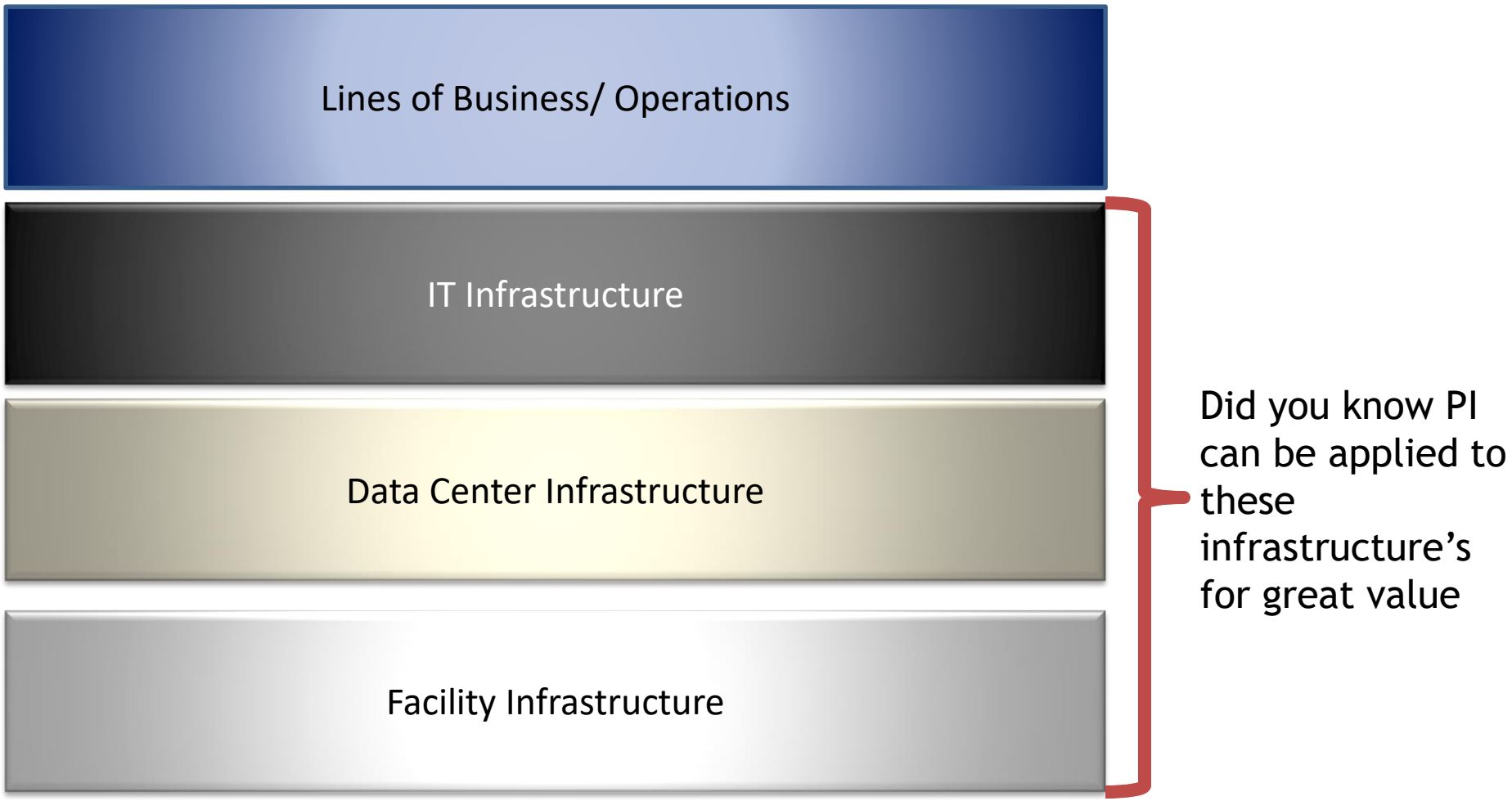
# Expand your PI for the infrastructure



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# Some Example Customers

## Facility Customers


Kodak

IBM


CISCO

## Data Center Customers


Microsoft®

APS®

equinix

hp invent

# PI at Eastman Kodak

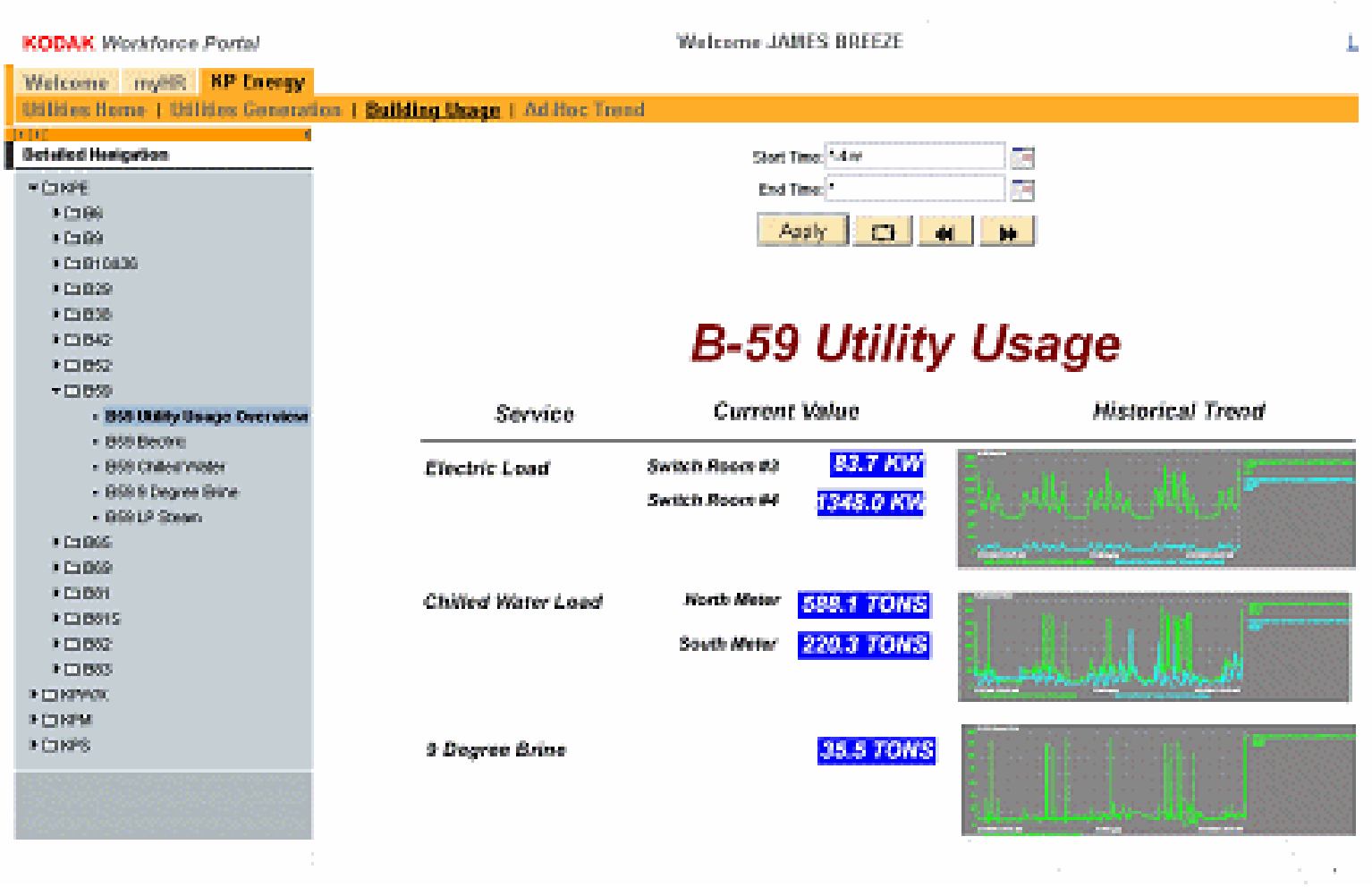
- **Kodak Park facts**

- Area>20,000,000 Square Feet
- 11,000 Employees
- Operates its own Fire Department
- Operates its own rail road
- Performs its own water and waste water treatment
- Operates 2 power plants
- Benefits >$10MM !

**Measurements**

- 600 **Electric** Distribution **Meters**
- 600 Additional Distribution **Meters** for Steam, Chilled water, Brine, Compressed air, Process water, Nitrogen, Natural gas etc.
- Significant **Metering** Used within the Power Houses to Manage the **Generation** Side

# PI at Eastman Kodak



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## System Components

- OSIsoft **PI System** – captures data from all meters, plant control system, and building automation systems
- Revenue Meter Interface
- Plant Control System & Meters
- Building submeters
- Building automation systems
- Network

## Measurements

- **Hot water** meters
- **Electric** meters (including HV substations)
- Assorted **gas, oil** & other meters
- **Chilled water** meters
- **Steam** meters

# River Campus Chilled Water

# PI at Cornell Medical School

- Green computing…
  - Save power 8% of yearly energy by shutting down nodes that are not in use.
- …but minimize impact on performance
  - Maintain a target number of standby nodes ready to run new jobs immediately.
  - Reduce latency perceived by end users

Future direction

- Tunable parameters
  - Function of time of day, day of week?
  - Based on past observations?
- Balance runtime of nodes
- Balance heat distribution in data center
  - Synchronize with HVAC rotation schedule and failures

# PI at Cornell Medical School




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# PI expansion update- see for yourself

**UC Davis**

http://facilities.ucdavis.edu/Dashboard/

**Queen's University**

http://livebuilding.queensu.ca/

**Rochester University**

http://meters.energy.rochester.edu/rc%20sharepoint%20files/hutch%20hall%20electric.aspx

**2009 User Conference Critical Facilities Track -**

Industry Observations and Trends (David Jump, Quantum Energy) - PPT
The Daily Miracle of Internet Connectivity (PI Data Centers) (Greg Dumas, DST Controls, Ernest Holloway, Pamela Brigham, Equinix) - PPT
Real time Data for Data Center and Lab Energy Efficiency (Chris Nolan, Cisco Systems, Ken Morikawa, OSIsoft) - PPT
The Data Center Dashboard (Steven Berkovich, Teresa Tung, Accenture) - PPT
Understand How PI is being used at Microsoft in the 10min. Wrap (Scott Mauvais, Microsoft Technology Center) - PPT

# Get Started today-ADD Value to the PI investment

## Engage with OSIsoft for understanding how

**Expand the use of PI For IT –**

How to Utilize:
MCN Health Monitor
PI for IT Monitoring

**Expand the use of PI for Critical Facilities**

How to Utilize
Add- PI Interfaces BACnet, Modbus, OPC

## Take advantage of Benefits

"While metering alone does not save energy, the information from the meters, when acted on, can result in significant reductions — typically **5 to 15 percent**"

- Jean Lupinacci, Director, Commercial and Industrial Branch of Energy Star®
- U.S. Environmental Protection Agency (EPA)


# Thank you



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