

# Future Data Captured in the PI Data Archive and PI System

Presented by **Omar Shafie**, Development Lead  
**Stephen Kwan**, Product Manager



# Agenda

1. Why? Does It Matter?
2. What's new in "PI System 2015"?
3. Get Ready, Get Involved!

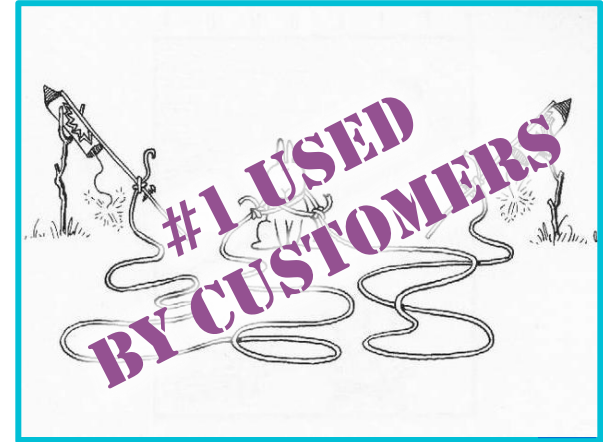
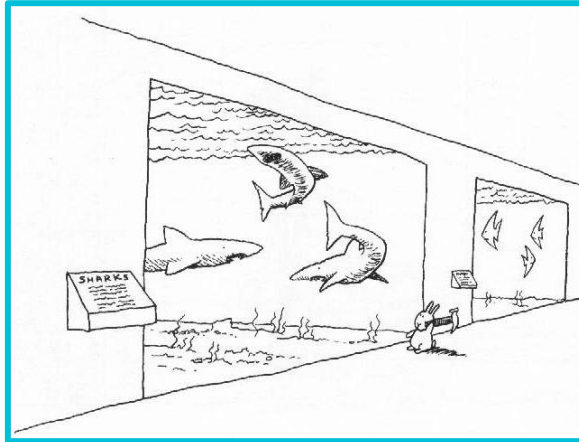
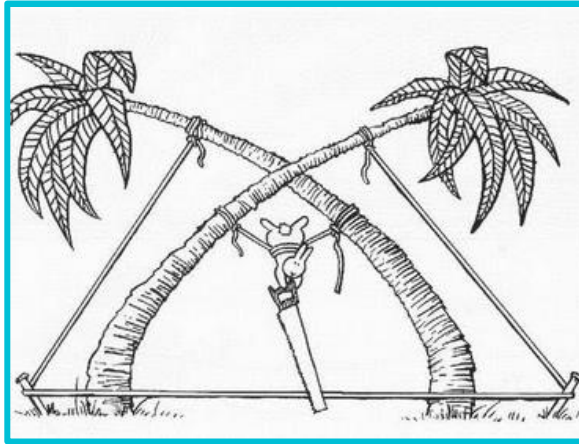
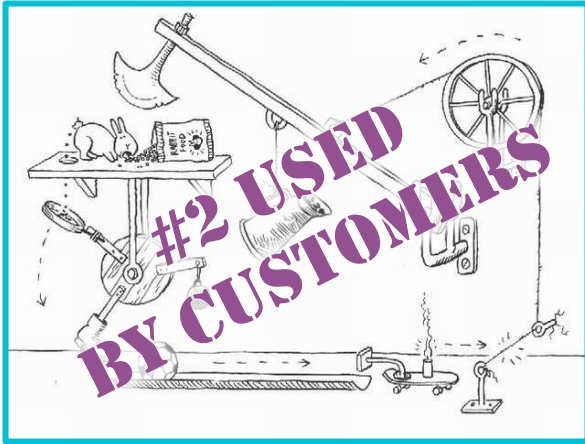
# Why Future Data?

1. Expected
2. Strategic
3. Fundamental



Future Data is...

**Expected**





*“As a plant operator or manager,  
I want to record and **visualize** forecast data with our PI System,  
so we can see how we are doing against our actual production  
numbers and **anticipate both risks and opportunities.**”*



*“As a maintenance engineer,  
I want to **manage** our service schedule in our PI System,  
so that we operate our facility at maximum efficiency and safety,  
while **minimizing equipment failures and downtimes.**”*

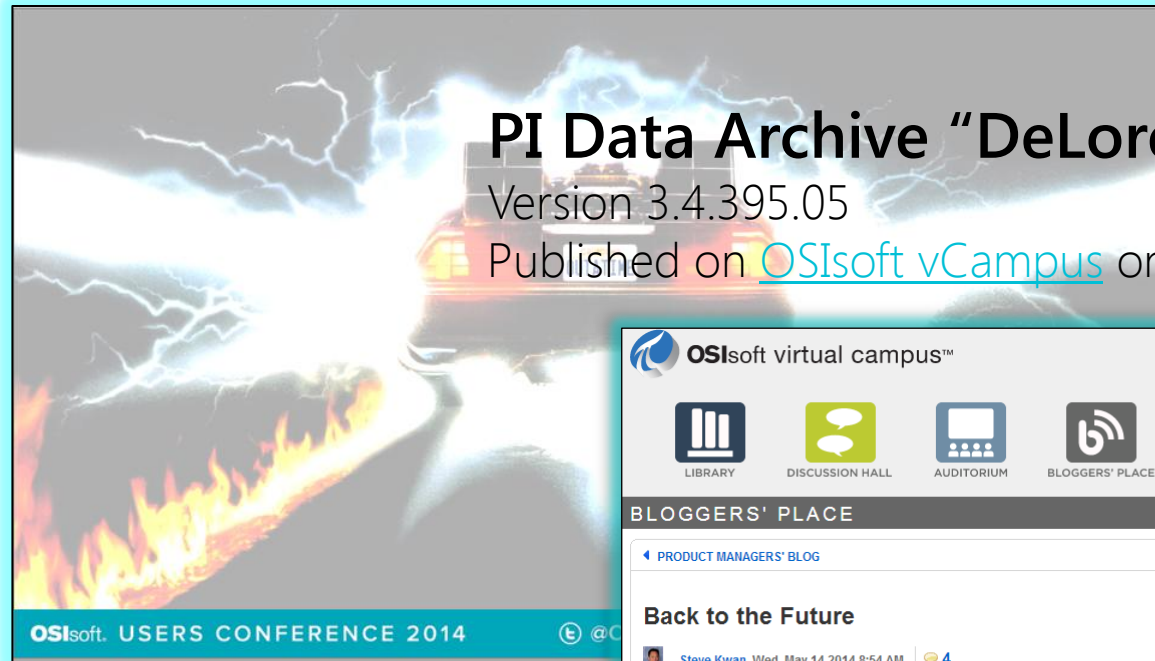


*“As a process or lab engineer,  
I want to **use predictive analytics** with data from our PI System,  
in order to **generate and optimize process models**,  
while researching future products and production techniques.”*



*“As a system administrator,  
I want built-in and **flexible** future data  
storage in our  
PI System,  
so that all data is  
**safe, secure, and highly available**,  
and specific  
retention policies can  
be **easily implemented.**”*

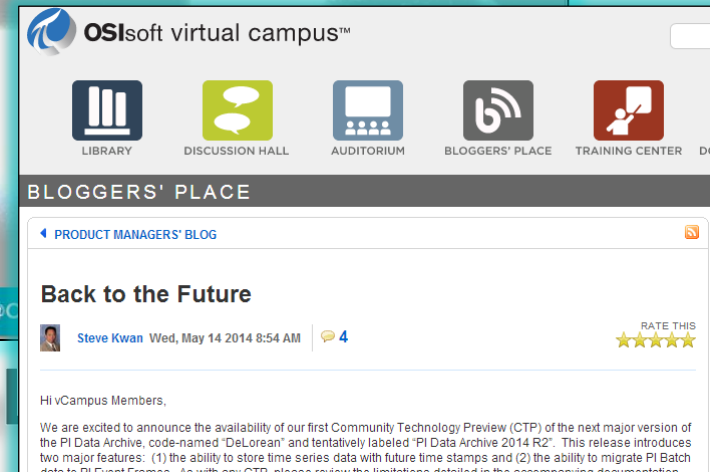
# UC San Francisco, March 2014



## PI Data Archive “DeLorean” CTP1

Version 3.4.395.05

Published on [OSisoft vCampus](#) on 5/14/14



## Live demo of “DeLorean”

Adding Future Data is...

# STRATEGIC

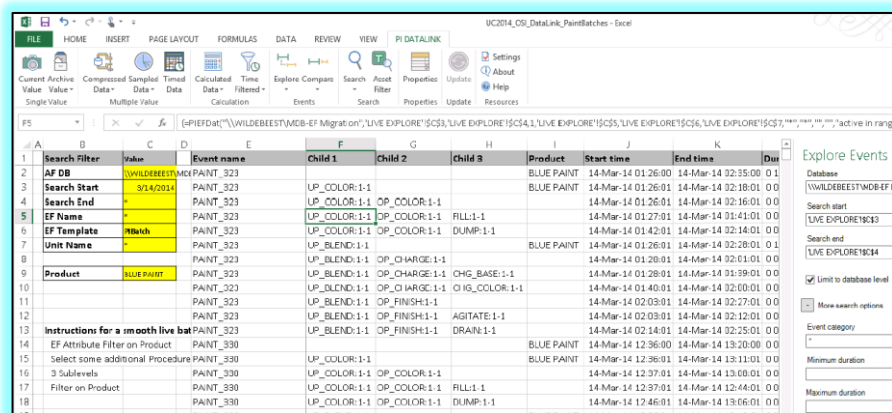


# FUTURE DATA “PERFECT STORM”

## PI Event Frames

*Analysis, Reporting, Visualization*

Use Case: capture and search forecast metadata

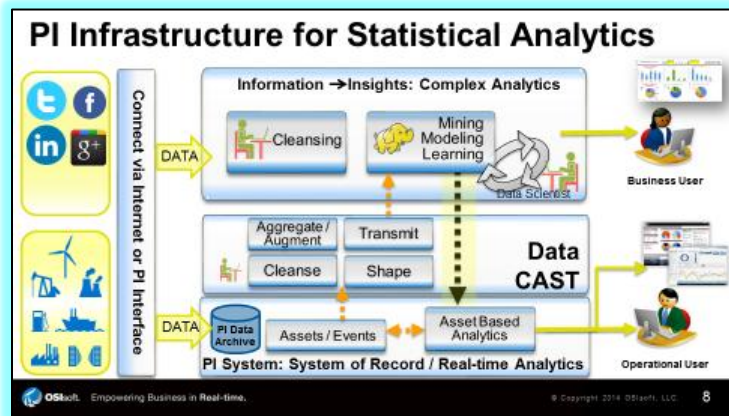


	A	B	C	D	E	F	G	H	I	J	K	L
		Search Filter	Value	Event name	Child 1	Child 2	Child 3	Product	Start time	End time		
1		AF DB	WILDBEEST	PAINT_323				BLUE PAINT	14-Mar-14 01:26:00	14-Mar-14 02:35:00	01	
2		Search Start	9/14/2014	PAINT_323	UP_COLOR:1-1			BLUE PAINT	14-Mar-14 01:26:01	14-Mar-14 02:18:01	00	
3		Search End		PAINT_323	UP_COLOR:1-1	OP_COLOR:1-1			14-Mar-14 01:26:01	14-Mar-14 02:16:01	00	
4		EF Name		PAINT_323	UP_COLOR:1-1	OP_COLOR:1-1	RLL:1-1		14-Mar-14 01:27:01	14-Mar-14 01:41:01	00	
5		EF Template	Batch	PAINT_323	UP_COLOR:1-1	OP_COLOR:1-1	DUMP:1-1		14-Mar-14 01:42:01	14-Mar-14 02:14:01	00	
6		Unit Name		PAINT_323	UP_BLEND:1-1			BLUE PAINT	14-Mar-14 01:26:01	14-Mar-14 02:28:01	01	
7				PAINT_323	UP_BLEND:1-1	OP_CHARGE:1-1			14-Mar-14 01:26:01	14-Mar-14 02:01:01	00	
8		Product	BLUE PAINT	PAINT_323	UP_BLEND:1-1	OP_CHARGE:1-1	CHG_BASE:1-1		14-Mar-14 01:28:01	14-Mar-14 01:39:01	00	
9				PAINT_323	UP_BLEND:1-1	OP_CHARGE:1-1	CHG_COLOR:1-1		14-Mar-14 01:40:01	14-Mar-14 02:00:01	00	
10				PAINT_323	UP_BLEND:1-1	OP_FINISH:1-1			14-Mar-14 02:03:01	14-Mar-14 02:27:01	00	
11				PAINT_323	UP_BLEND:1-1	OP_FINISH:1-1	AGITATE:1-1		14-Mar-14 02:03:01	14-Mar-14 02:12:01	00	
12				PAINT_323	UP_BLEND:1-1	OP_FINISH:1-1	DRAIN:1-1		14-Mar-14 02:14:01	14-Mar-14 02:25:01	00	
13		Instructions for a smooth live bat		PAINT_323				BLUE PAINT	14-Mar-14 12:36:00	14-Mar-14 13:20:00	00	
14		EF Attribute Filter on Product		PAINT_330				BLUE PAINT	14-Mar-14 12:36:01	14-Mar-14 13:11:01	00	
15		Select some additional Procedure		PAINT_330	UP_COLOR:1-1				14-Mar-14 12:37:01	14-Mar-14 13:08:01	00	
16		3 Sublevels		PAINT_330	UP_COLOR:1-1	OP_COLOR:1-1			14-Mar-14 12:37:01	14-Mar-14 13:08:01	00	
17		Filter on Product		PAINT_330	UP_COLOR:1-1	OP_COLOR:1-1	RLL:1-1		14-Mar-14 12:37:01	14-Mar-14 12:44:01	00	
18				PAINT_330	UP_COLOR:1-1	OP_COLOR:1-1	DUMP:1-1		14-Mar-14 12:46:01	14-Mar-14 13:06:01	00	

# MORE “PERFECT STORMS”

## PI Integrators for Hadoop & BI *Big Data Analytics*

Use Case: feed predictive data back to the PI Server



## PI Integrator for Esri ArcGIS *Geospatial Forecasts (e.g., Weather)*

Use Case: overlay future data on live maps



Adding Future Data is...

# FUNDAMENTAL

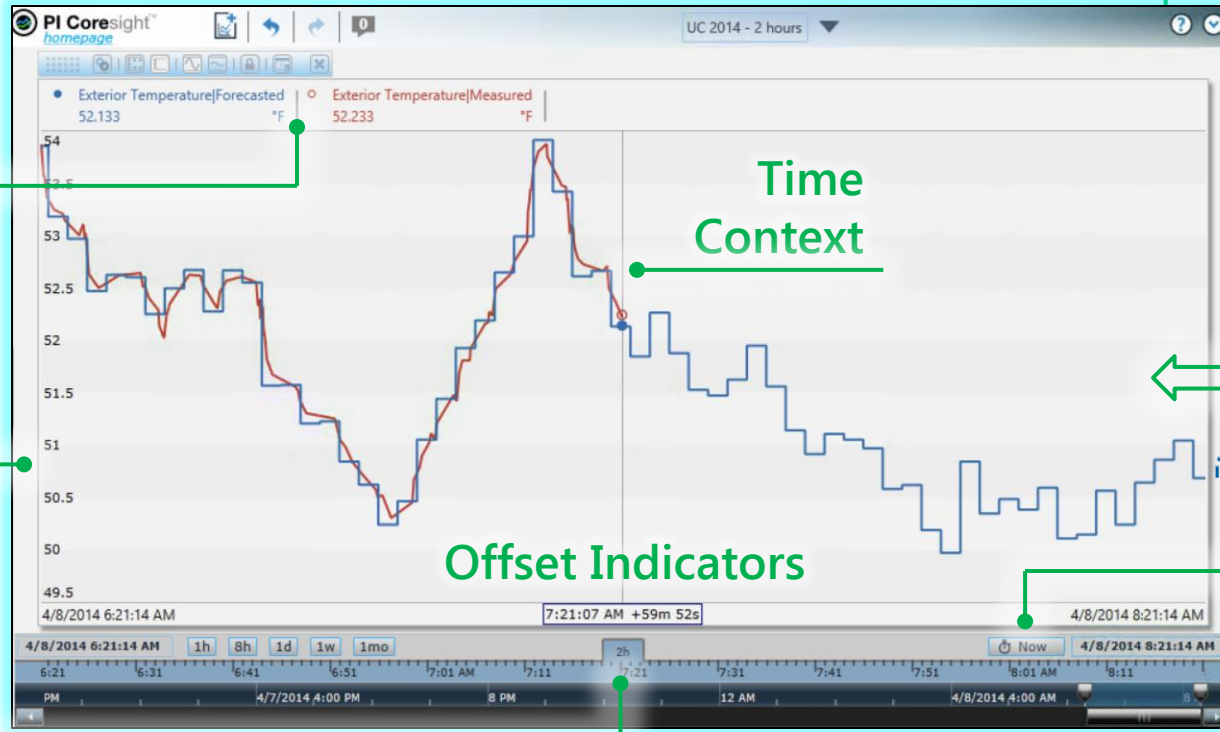
# More Than Meets the Eye

Manageability  
Scalability  
Reliability

Context  
Values

Item  
Discovery

Smart  
Time  
Range

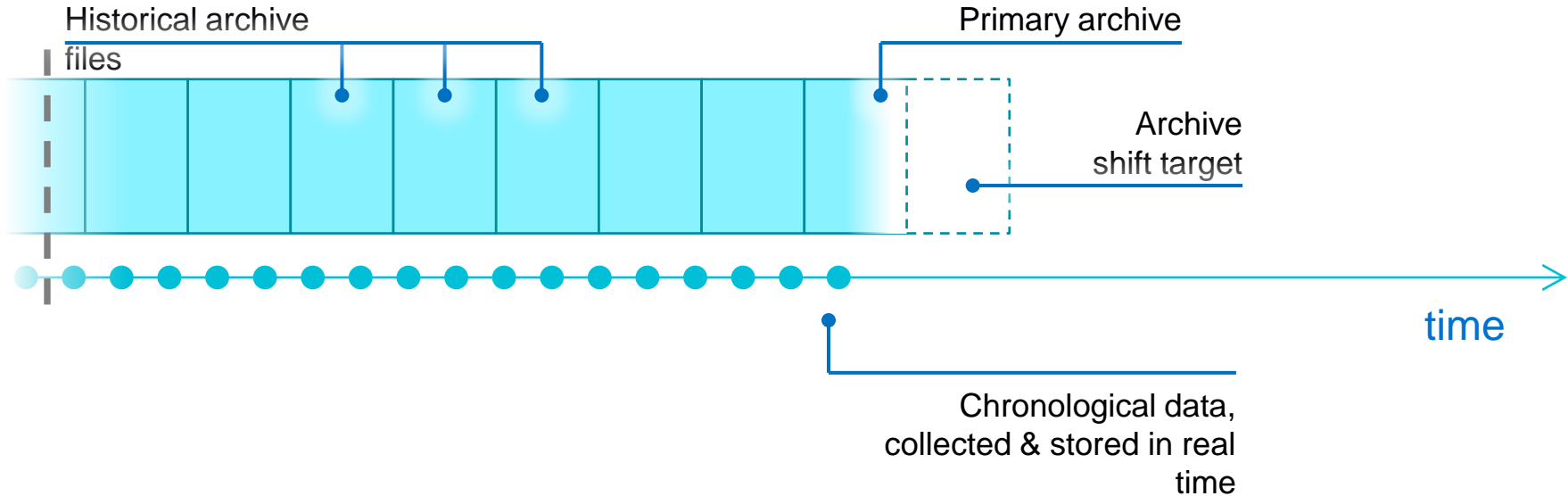


Time  
Context

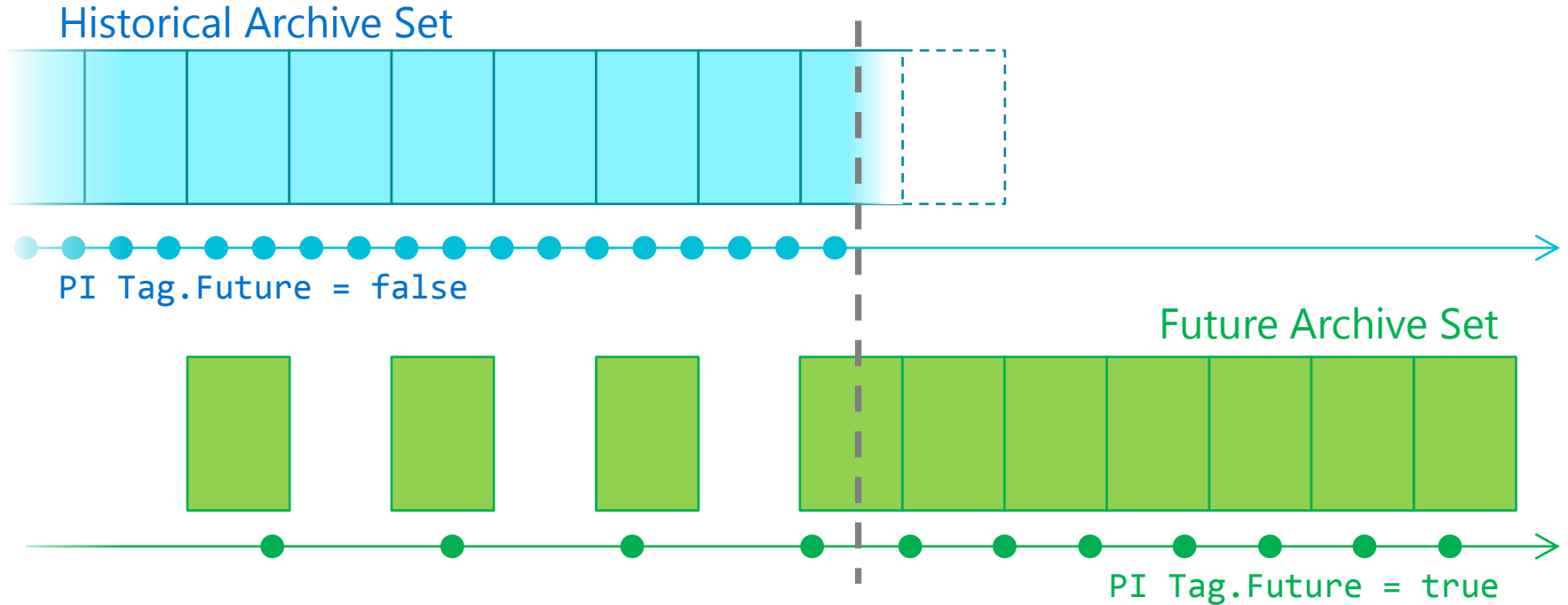
Automatic  
Updates

Time  
Navigation

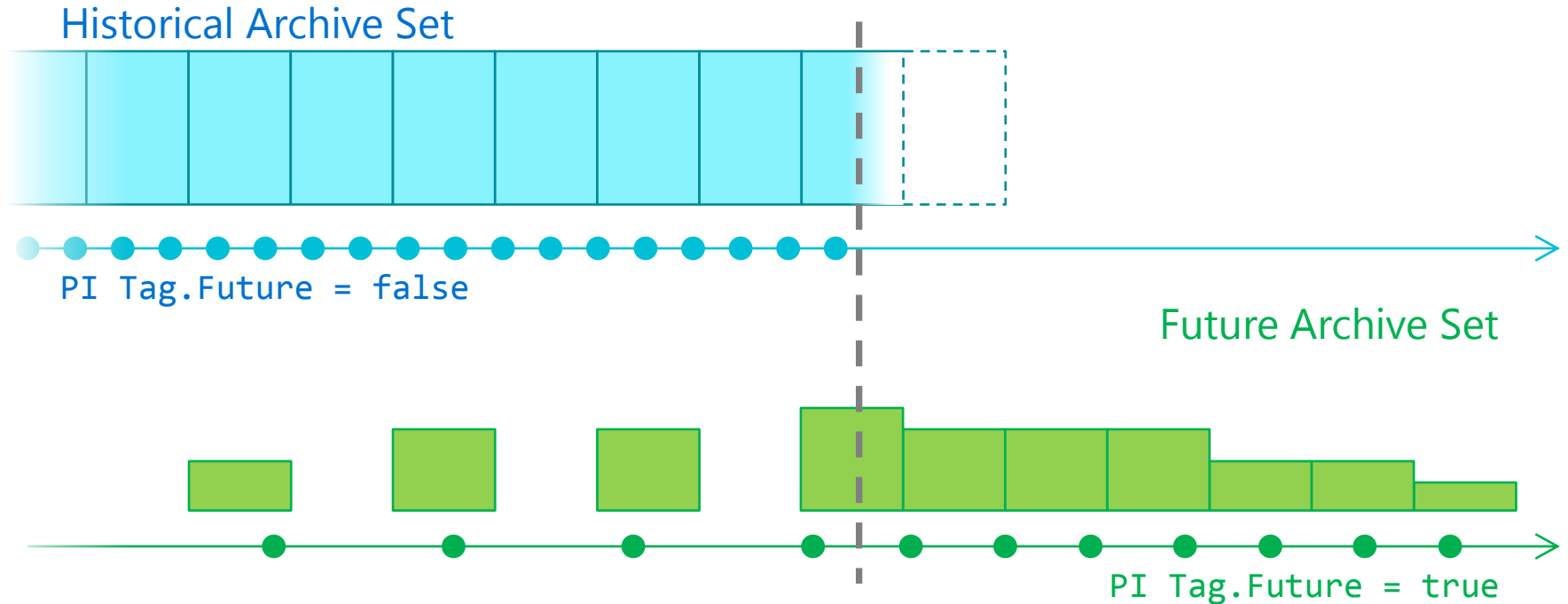
# Storing “Historical” Data...



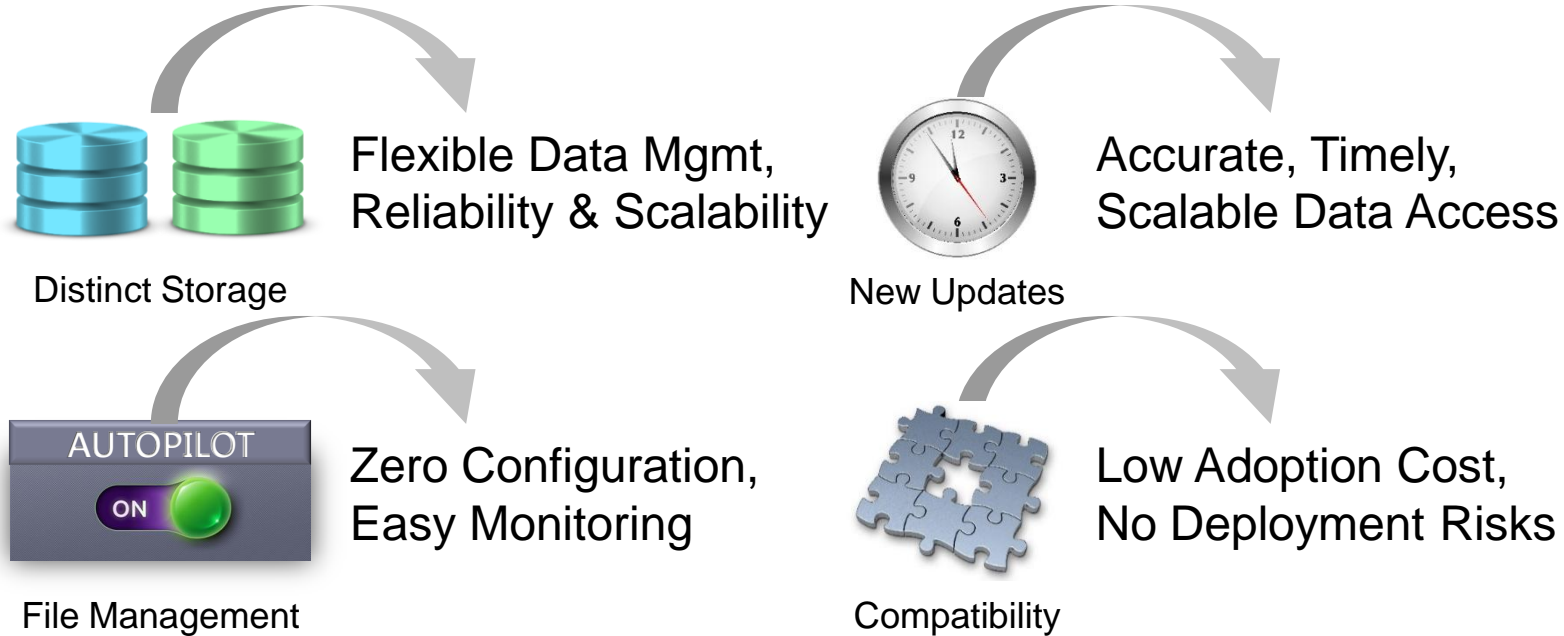
# ...And Storing “Future” Data



# ...And Storing “Future” Data



# PI Server 2015: Key Benefits



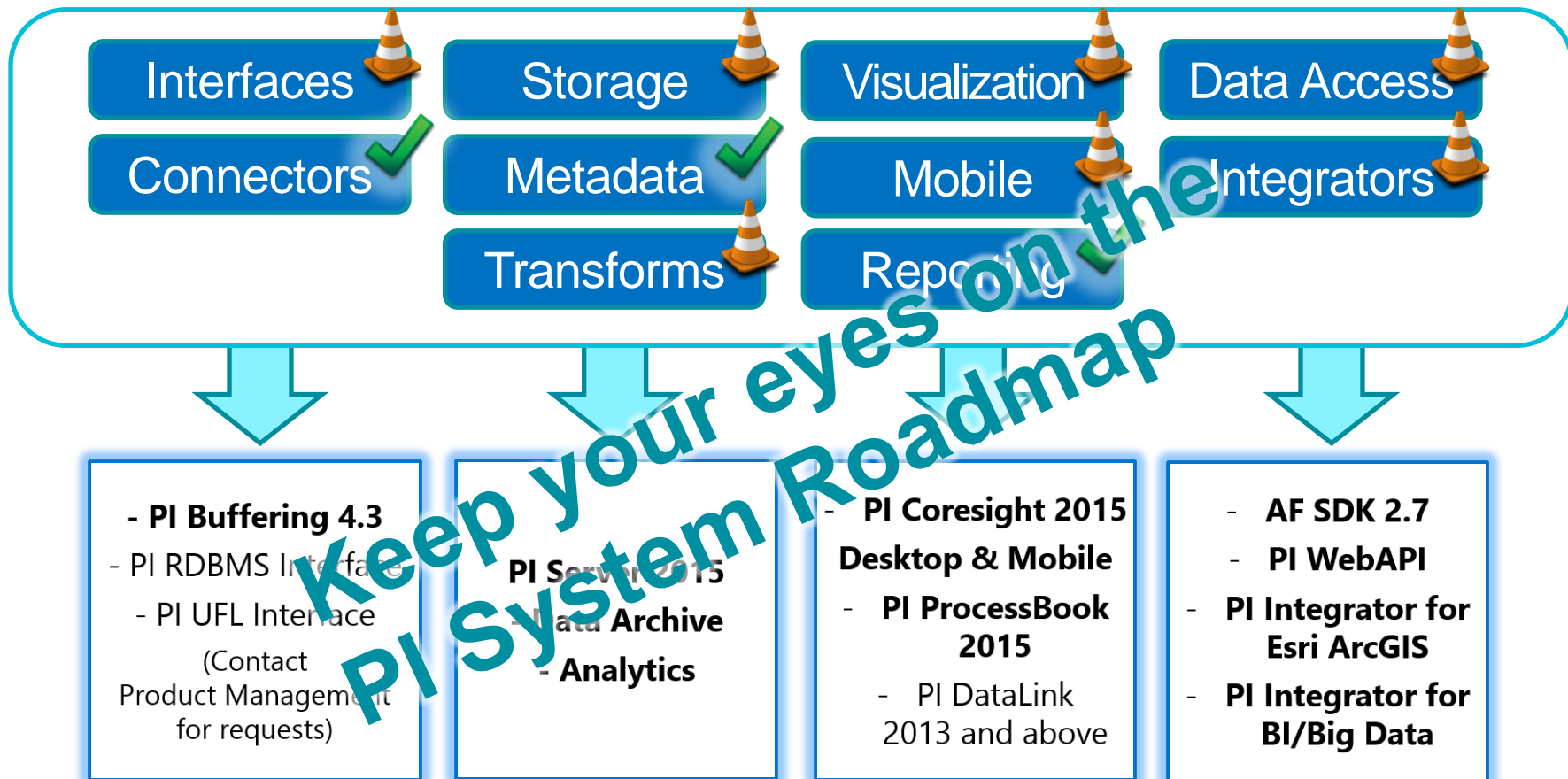




# DEMO

Where is Future Data?

# PRODUCT UPDATES

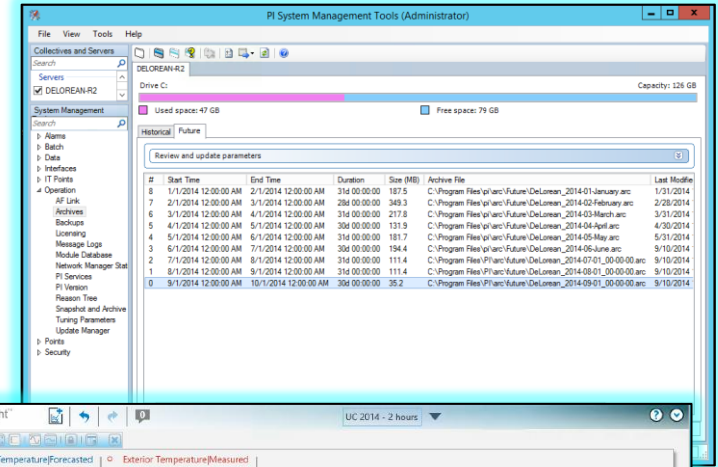


# Help Us Help You...

Any of you doing data forecasting today?  
Interested in doing more?

**PI Server 2015 Beta**  
to be announced soon!

[BetaPIServer@osisoft.com](mailto:BetaPIServer@osisoft.com)



# Future Data: Summary

## 1. Coming to “PI System 2015”

Including: Storage, Analytics, Event Frames, Visualization, Data Access, Integrators, and more...

## 2. Expected, yet Fundamental and Strategic

Pushing the PI System into powerful use cases

## 3. PI Server 2015 Beta Imminent

Get involved, try it with your own data!

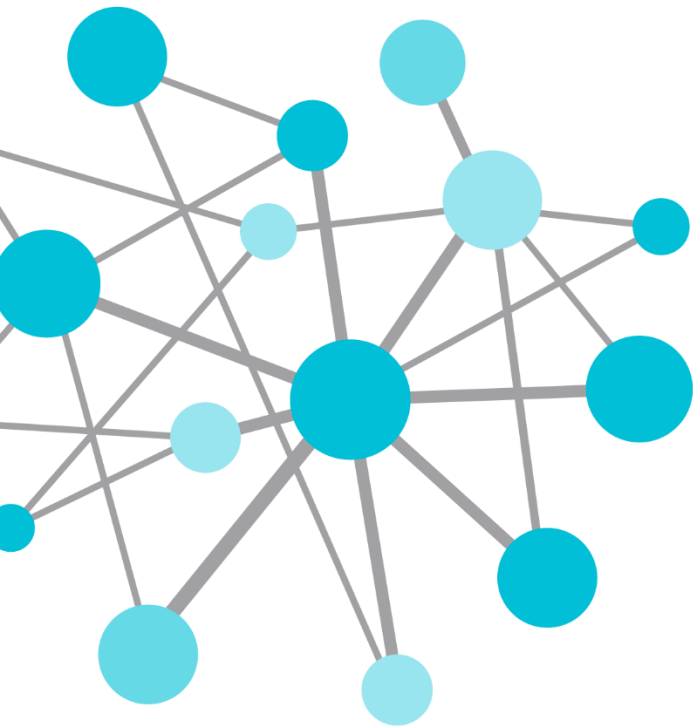


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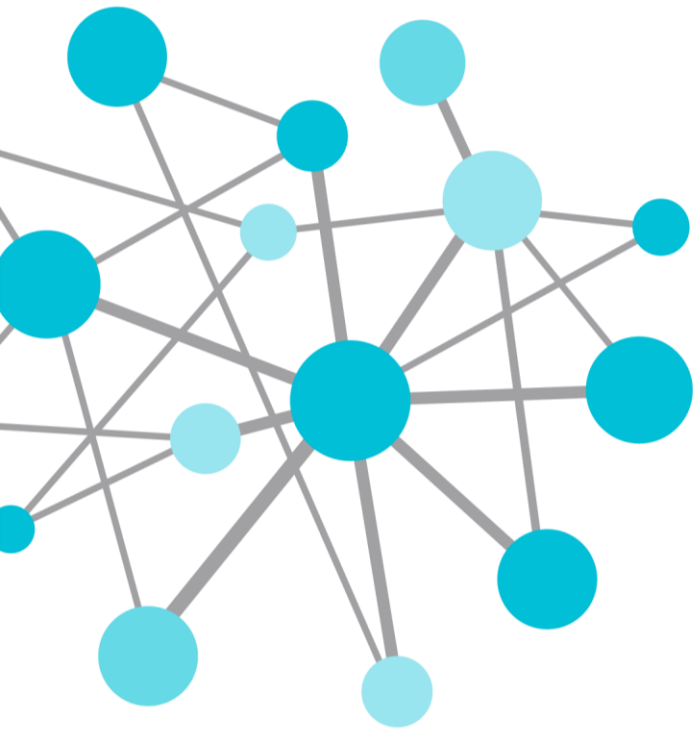


# Questions

Please wait for  
the **microphone**  
before asking  
your questions



State your  
**name &  
company**



THANK  
YOU

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