



Tecnologie Abilitanti Industria 4.0

Mario Casoni – IOT Business development Director, EMEA

Padova – 21 settembre 2017

WE ARE A TECHNOLOGY COMPANY

KEY FACTS



32K
Active
customers



6K
employees



\$1.14B
FY16 total revenue

IOT LEADERSHIP



1050+
IOT
customers

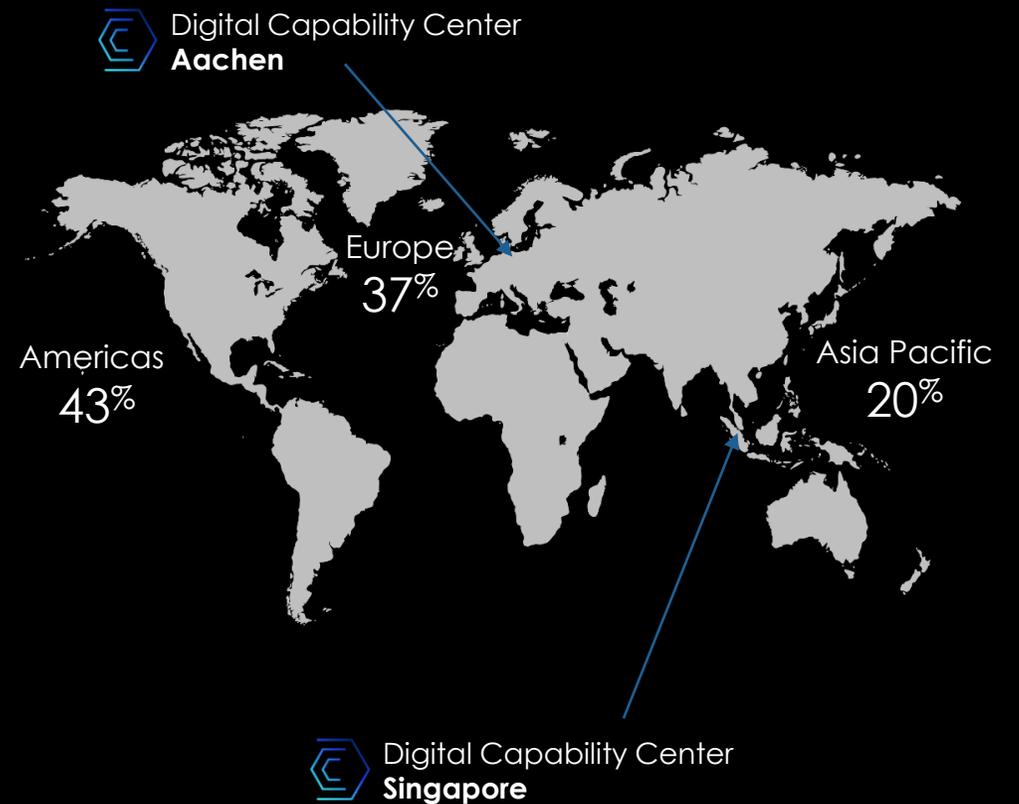


500+
IOT/AR
partners

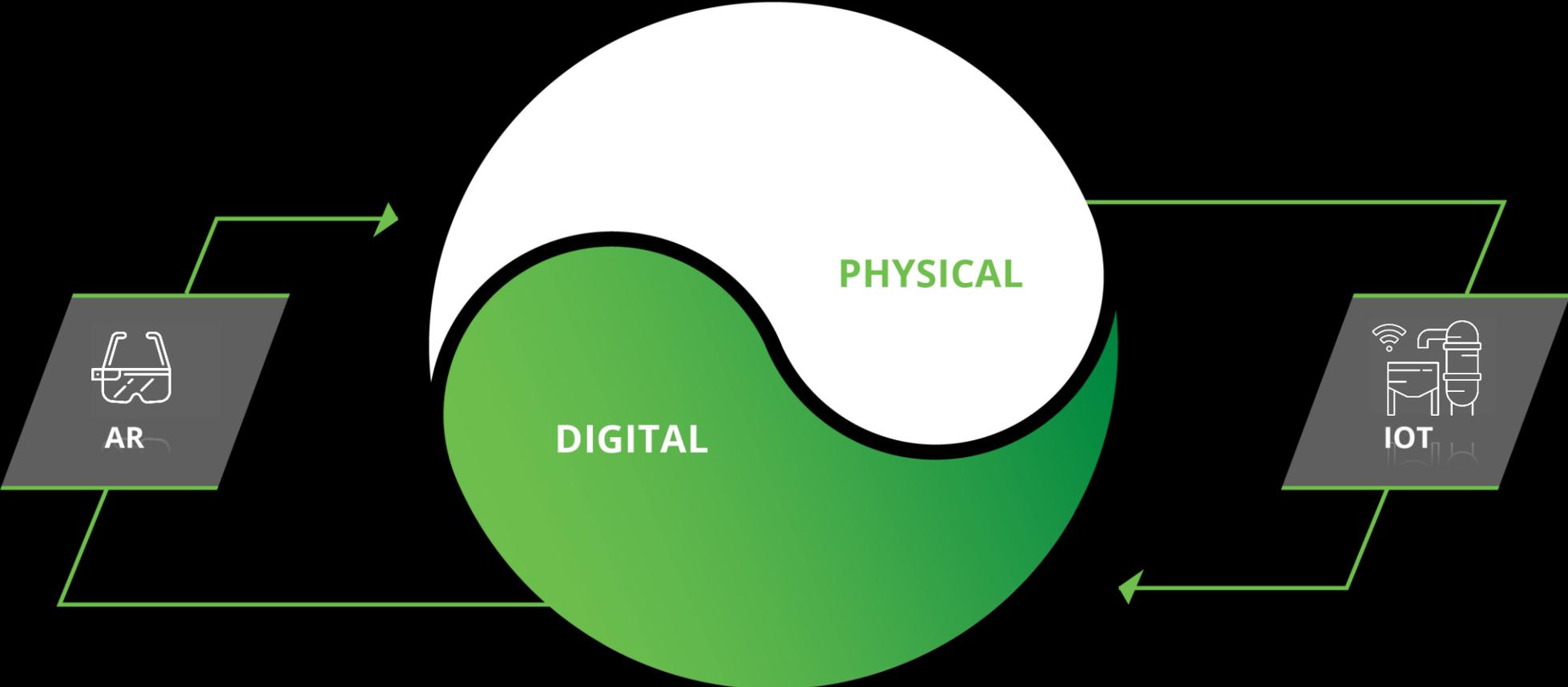


250K
IOT/AR ecosystem
developers

GLOBAL SCALE & DISTRIBUTION



PHYSICAL & DIGITAL CONVERGENCE

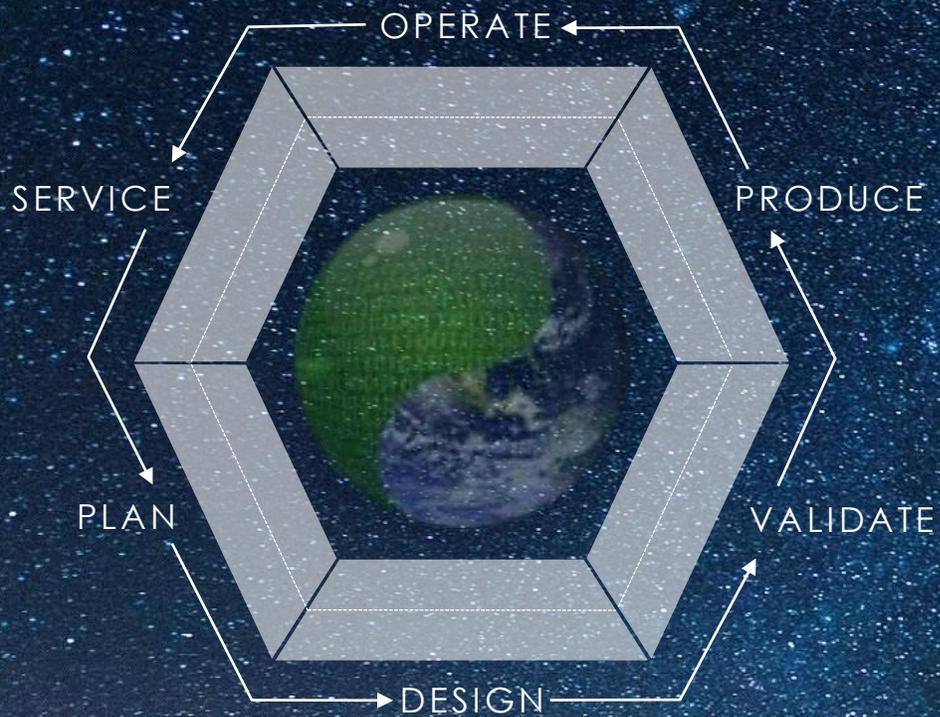


OUR MISSION

PHYSICAL
WORLD



DIGITAL
WORLD



Closed-Loop Lifecycle Management

OUR MISSION

CONVERGE THE DIGITAL AND PHYSICAL WORLDS

Solutions

CAD  **creo***

PLM  **windchill***

ALM  **integrity***

SLM  **servigistics***

IoT Platform & Apps

 **thingworx***  **vuforia*** **kepware**

CONNECT

ANALYZE

CREATE

EXPERIENCE



thingworx®

PLATFORM + APPS + SUPPORTING SERVICES

ThingWorx Platform

INDUSTRIAL CONNECTIVITY
FOUNDATION
ANALYTICS
UTILITIES
STUDIO

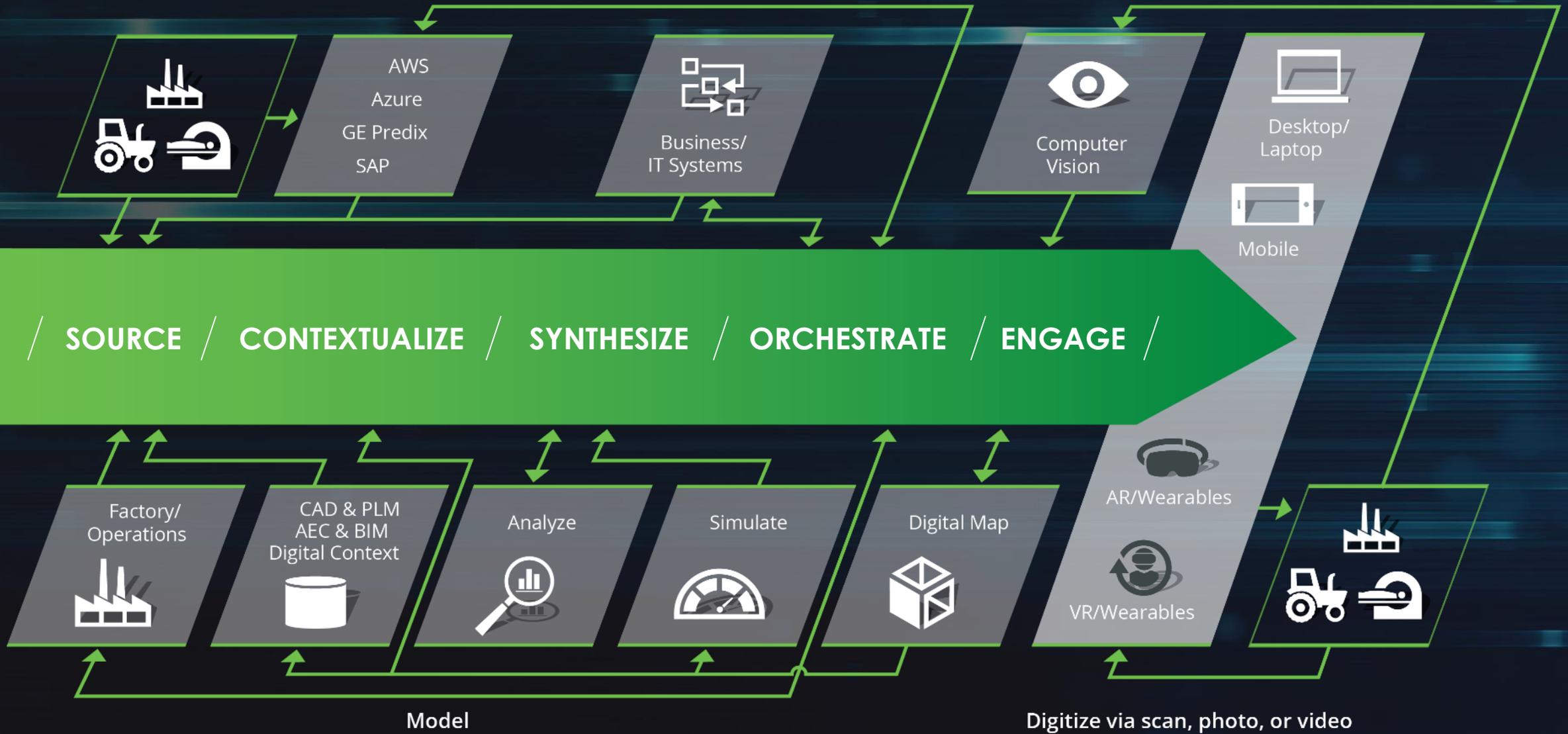
ThingWorx Apps

THINGWORX NAVIGATE
THINGWORX CONTROLS ADVISOR
THINGWORX PRODUCTION ADVISOR
THINGWORX ASSET ADVISOR

ThingWorx Developer Zone

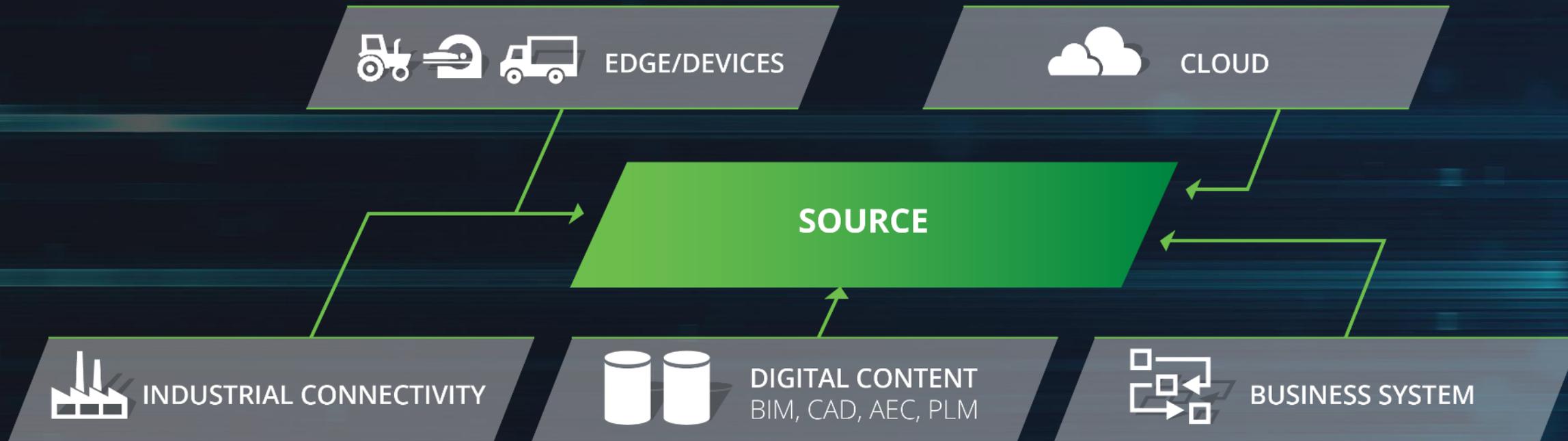
ThingWorx Marketplace

Customer Success



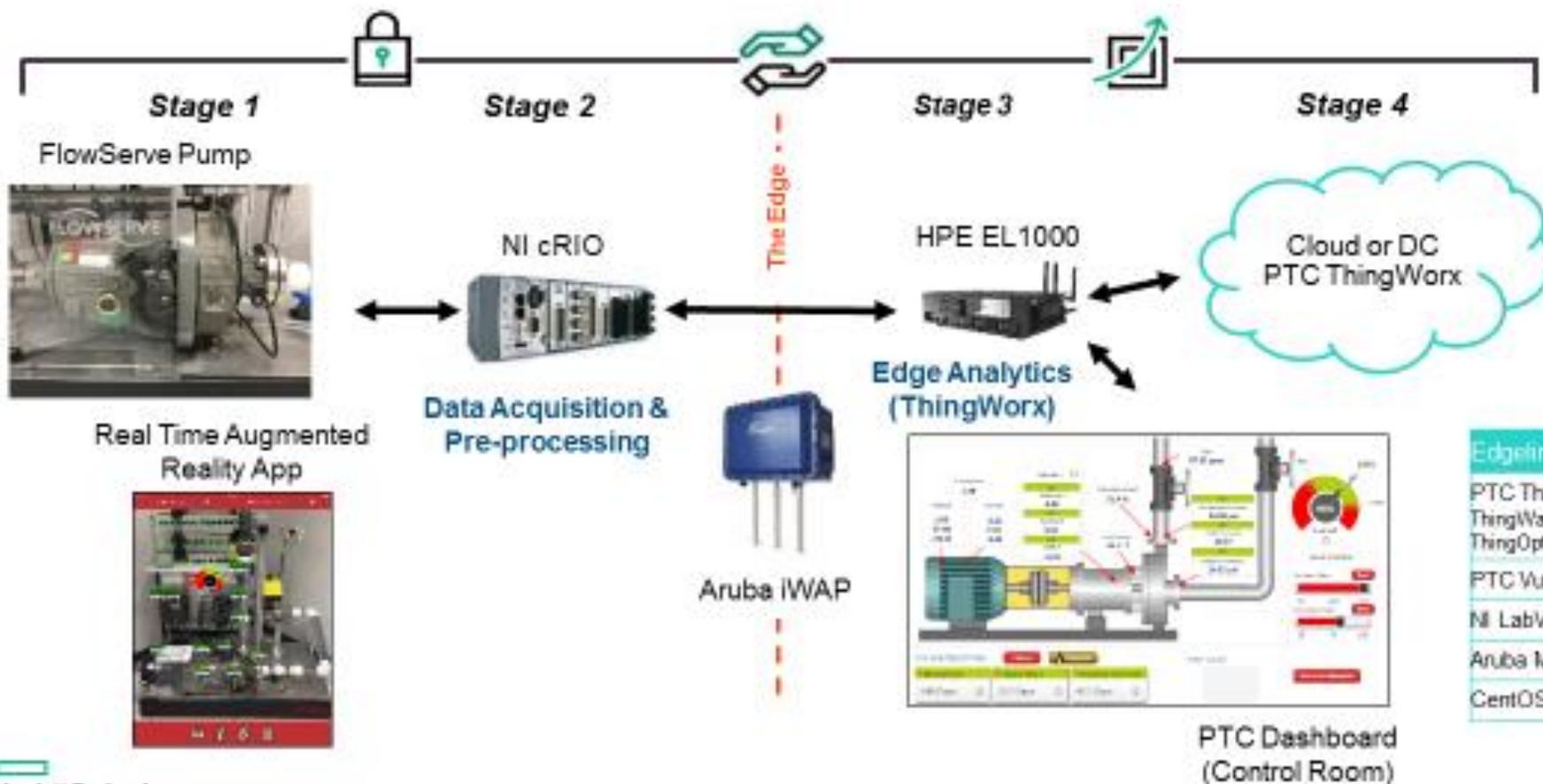
Flowserve Video

thingworx® platform



PTC - Edgeline Use Cases for Predictive Maintenance

Industrial Pump



Hewlett Packard Enterprise

Edgeline Ecosystem

PTC ThingWorx Analytics :
ThingWatcher, ThingPredictor,
ThingOptimizer

PTC Wuforia

NI LabView

Aruba Meridian

CentOS



THINGMODEL



ANALYZE



SIGNALS & PROFILES

SYNTHESIZE



VIRTUAL SENSORS

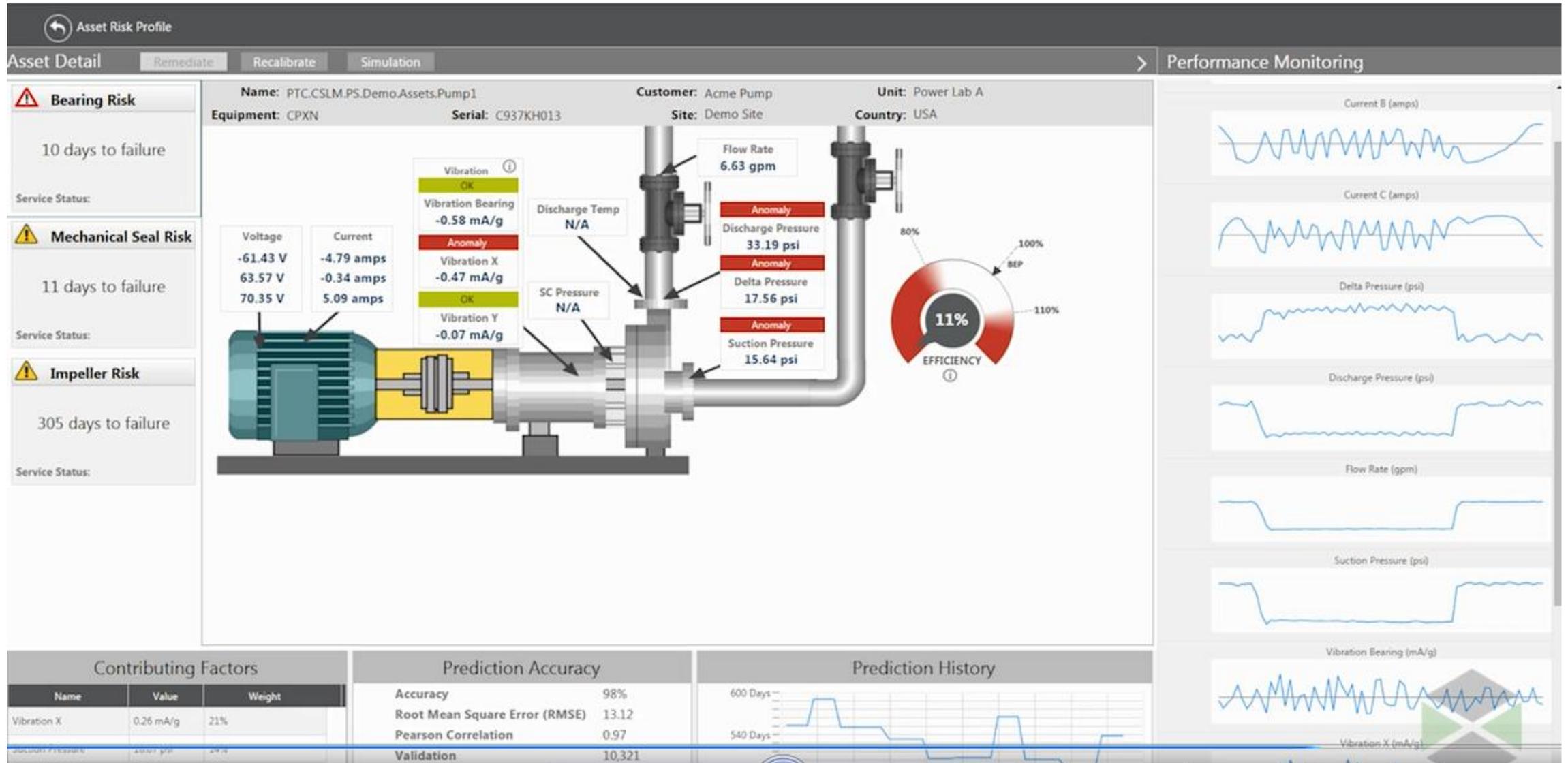


SIMULATE



PREDICTIVE MODELING

SINTESIZE - FLOWSERVE EXAMPLE





PHYSICAL WORLD



DIGITAL WORLD

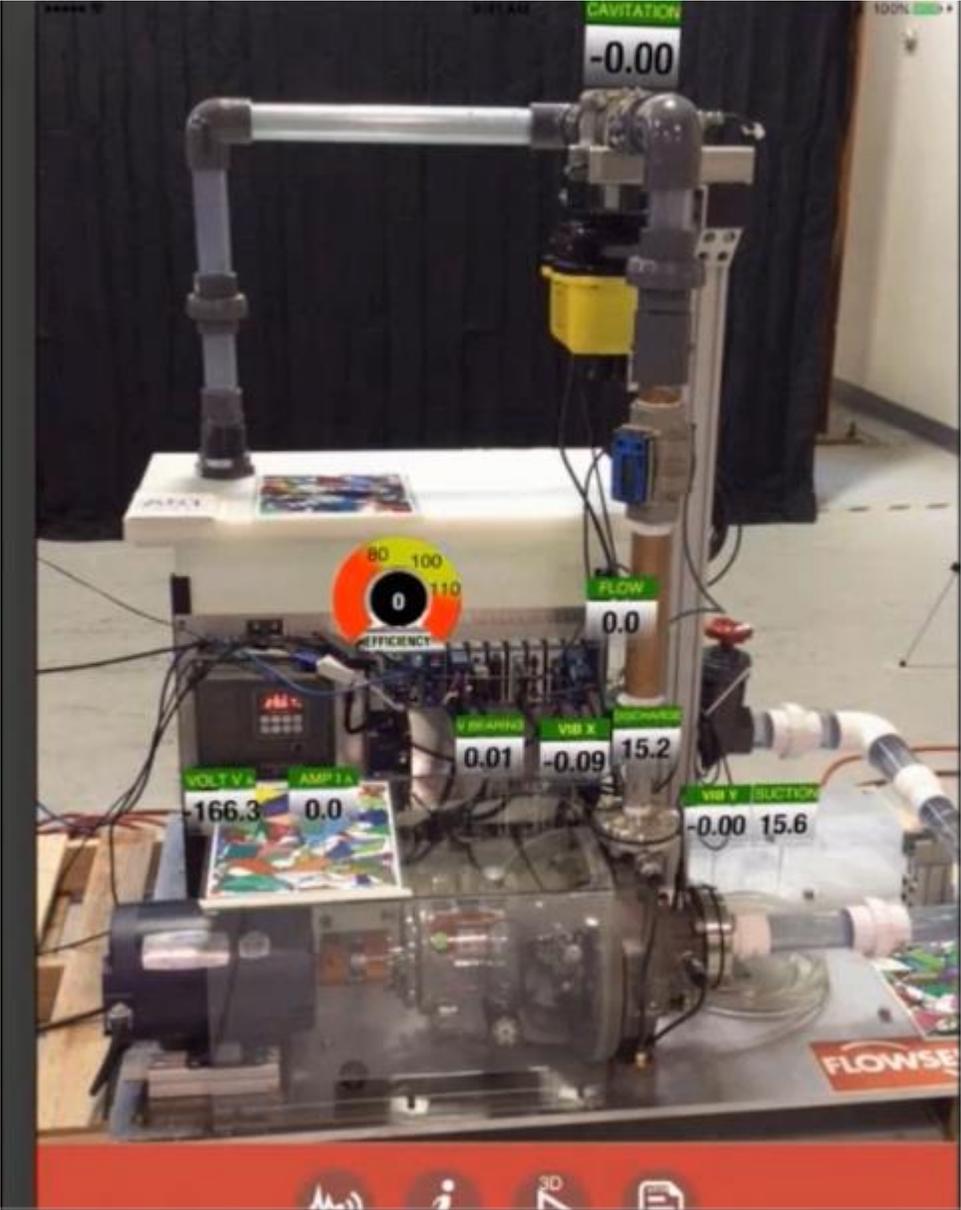
ENGAGE



PEOPLE



ENGAGE – EXAMPLES



A FOOD & BEVERAGE LEADER INCREASES PRODUCTIVITY



5 to 8% improvement in productivity

GE | Food & Beverage

Operator > Keyser > All Lines > Line 1

June 26, 2015

Date: June 26, 2015 Start Time: 12:04:03

Line 1 Detail

Line 1 OEE: 68%

Order 2501879
Product: Milk Chocolate Chips
SKU#: 14141414
Start: 05/25/2015 22:30 / 05/25/2015 21:27
End: 05/26/2015 01:30 / PENDING

Complete: 11% (6467/70,000)

Waste: 1,500/1,000

Downtime/Uptime: DT 43%, UT 57%

Speed: 2,050/2,100

Current Event Status: Break 24:41:00

Order Events Detail (7)

Start Time: 05/25/2015 09:00:00 End Time: 05/26/2015 11:00:00

Shift Events Detail

Event	Start	Stop	Duration	Reason 1	Reason 2	Reason 3	Comments
BREAK	05/25/2014 14:00:23	05/25/2014 14:15:20	0hr 15min	Not sure what to put...	Not sure what to put...	Not sure what to put...	1
DOWNTIME	05/25/2014 16:45:07	05/25/2014 17:47:00	1hr 02min	Not sure what to put...	Not sure what to put...	Not sure what to put...	3
DOWNTIME	05/25/2014 23:47:24	05/25/2014 24:02:01	0hr 15min	Not sure what to put...	Not sure what to put...	Not sure what to put...	4
WASTE	05/24/2014 01:54:11	05/24/2014 01:56:09	0hr 2min	Not sure what to put...	Not sure what to put...	Not sure what to put...	6
BREAK	05/24/2014 05:21:10	05/24/2014 05:51:00	0hr 31min	Not sure what to put...	Not sure what to put...	Not sure what to put...	8
DOWNTIME	05/24/2014 03:14:26	05/24/2014 04:34:02	1hr 20min	Not sure what to put...	Not sure what to put...	Not sure what to put...	...
WASTE	05/24/2014 03:27:49	05/24/2014 03:28:43	0hr 01min	Not sure what to put...	Not sure what to put...	Not sure what to put...	5

WEEKLY GOAL: 77% complete

HEALTH: Alarms 5, 10, 20

Waste: 4,700/25,500 lb/min

TOP: M, T, W, T, F



"In just six short weeks, we've gained more visibility into our operations than ever before, reinforcing our investment and belief in the power of the IoT," – **Justin Hester, Senior Researcher**



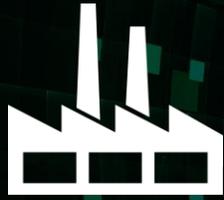
GERDAU – MANUFACTURING STARTER APPS



“Within 10 minutes of downloading and configuring the apps I was already trending two of our signals -- amazingly quick!”

– Jason Magill, IT Team Lead





Purpose-Built
for Industrial
IoT



Quickly & Easily
Develop, Deploy
& Extend



Ultimate
Flexibility



Vibrant
Ecosystem

thingworx[®] platform