

# Weak IIoT programs,

In 2018 refineries will spend \$8.5 billion for valves<sup>(1)</sup>. They will also spend \$23.9 billion for guide, control and measure which are the building blocks for IIoT.<sup>(2)</sup> Those valve suppliers who have weak IIoT programs will be likely to lose market share to those with strong IIoT programs.

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Guide includes the software for process management, data analytics and the input of subject matter experts. Presently 80% of guide revenues are derived by software companies, consultants and suppliers of miscellaneous products and services. 7.6% are derived by suppliers of valves. Some valve companies have a range of consulting, condition monitoring and other “guide” services. Other manufacturers just produce valves. The guide segment will be growing at 10% per year. The valve sales will increase at 4% per year.

Refinery Purchases 2018	
Product	\$ millions
Valves	8485
Guide	5877
Control	12,400
Measure	5600
Sub total	23,877
Total	56,239

Refining guide revenues in 2028 will be close to \$17 billion. Valve companies could capture guide revenues of between \$840 million and \$1.680 billion depending on their success in leveraging IIoT. These revenues are significant. They also affect market share for the components. Let’s say a certain valve company has a present market share of 5% or sales of \$424 million. In addition, this company has guide sales of \$23 million. If in the next 10 years guide sales only increase to \$40 million it is likely that the enterprise will lose market share.

Valve and Valve - Guide Sales in 2018 and 2028 - \$ millions					
	All Companies 2018	Supplier X 2028	All companies 2028	Supplier X Weak IIoT 2028	Supplier X Strong IIoT 2028
Valves	8485	424	12557	376	878
Guide-Valve	450	23	840-1680	40	117
Total Revenue	8935	447		416	995

# declining market shares

New approaches to succeed in the IIoT world		
Subject	Old Approach	New Approach
Market Research	Top down yearly general estimates based on opinion	Bottoms up forecasts with detailed continuously updated analyses
Sales Initiation	Uncoordinated Sales Leads	Identification and pursuit of large prospects
Sales Persuasion	Sales Experts	Application Experts
Selection Criteria	Price and Service	Total cost of ownership (TCO) and service
Location of Specifiers	Individual Plants	Corporate staff with TCO data
Acceptance of New and Better Products	Slow	Rapid
Collaboration with Other Suppliers	Haphazard	Important to Success
Decision Process	Not Systematic	Decision Systems
Subject Matter Experts (SMES)	Lots of SMES but not well utilized	Subject Matter Ultra Experts (SMUES) contributing to and improving decision systems
Remote Monitoring	Unusual	Prevalent
Data Analytics	Unusual	Prevalent
TCO Analyses	Expensive and Inadequate	Voluminous and Continuous
Third Party Operation	Minor	Major
Component Supplier Role	Initial Sale, Spare Parts, Service On Demand	Cloud Based Continuous Involvement

In this case the market share drops to 3% with weak IIoT but would increase to 7% with strong IIoT. Total revenues for the company in 2028 with weak IIoT are \$416 million. With strong IIoT the revenues are just under \$1 billion. There are also major differences in profits. The company with strong IIoT is likely to have twice the profit margins as the company with weak IIoT. So total profits are five times higher by taking the strong IIoT route.

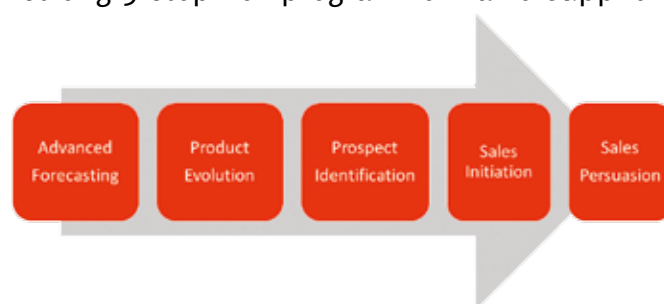
The industrial internet of things (IIoT) will greatly increase opportunities but it also poses a threat to valve suppliers. The opportunities include larger markets and higher margins. The threats include the insertion of third parties between the supplier and his traditional customers. The process management system supplier will share profits with the valve suppliers based on the application and product

knowledge each has. Suppliers who leverage the Industrial Internet of Wisdom (IIoW) to empower IIoT will be the beneficiaries. Leveraging will require 14 new approaches impacting 5 business steps: advanced forecasting, product improvements, large prospect identification, sales initiation, and sales persuasion.

The strong IIoT approach involves identification of the top 200 refineries which account for most purchases. The top 22 refineries purchase more than 50% of all the valves. They range in size from ExxonMobil with nearly 6% of all purchases to refineries with just a fractional % of the total.

Valve suppliers should be pro-active and initiate a strong IIoT program starting with the introduction of new approaches. The result can be profits 10 years from now which are five times higher than they would be without the program.

## Strong 5 Step IIoT program for valve suppliers



- (1) *Industrial Valves: World Markets published by the Mcllvaine Company*
- (2) *IIoT and Remote O&M published by the Mcllvaine company.*

	Total	LUKOIL	Aramco	SK	Repsol	Exxon
%		1.27	2.53	0.85	1.15	5.87
Valves	8485	107	215	72	98	498
Guide	5877	75	149	50	68	345
Control	12,400	157	314	105	143	728
Measure	5600	71	142	48	64	329
Sub total	23,877	303	605	203	275	1402
Total	32,362	410	820	275	373	1900