

Large Prospect Profiles, Plans and Projects

Step 3 in the IIoT/IIoW Program

Large Prospects: Profiles, Plans and Projects

- This is Step 3 in the program to address the new business environment created by IIoT and IIoW
- Step 1 is access to the *IIoT* and *Remote O&M* report which provides
 - Market forecasts for guide control and measure products
 - The specific program to pursue this market for suppliers of combust, flow and treat equipment
 - Opportunities for collaboration with specific contacts
 - The details of IIoT and remote O&M progress in each industry
- Step 2 is access to the specific product market reports
 - Choose among 17 reports for a product or engage with McIlvaine in custom research
 - In addition to trends, contacts, and specific country and industry forecasts there are forecasts for purchases by the top 550 prospects. This is what sets the stage for Step 3.

2018 Valve Sales - \$ million by Purchase						
Company	Туре	Corporate Location	Industry	World Valve Purchases \$ millions	Company Percent	Company Purchases \$millions
Guodian/Sh enhua	Operator	China	Power	8468	12	1016
Huaneng	Operator	China	Power	8468	9	762
Sinopec	Operator	China	Oil & Gas	9596	7.59	728
Saudi Aramco	Operator	Saudi Arabia	Oil & Gas	9596	7.47	717
China Nat. Petr.	Operator	China	Oil & Gas	9596	7.14	686
Datang	Operator	China	Power	8468	7	593
NTPC	Operator	India	Power	8468	7	593
PetroChina	Operator	China	Oil & Gas	9596	6.13	589
EDF	Operator	France	Power	8468	6.88	583
Huadian	Operator	China	Power	8468	6	508
Eskom	Operator	South Africa	Power	8468	6	508

McIlvaine Databases for Large Prospects

- With centralized decision making based on previously generated total cost of ownership (TCO) evaluations the purchaser will be making long range and broad decisions rather than project to project decisions.
- Sales initiation will be based on identifying the opportunities at each major prospect far in advance of the final decision.
- Most CFT products will be purchased by existing corporations. Therefore the customers are already identified.
- Corporations all have multi year plans which are then supplemented by specific project planning.
- The CFT supplier can engage the client early in the decision making process and insure that final specifications are favorable.
- With IIoT & Remote O&M it is likely that annual contracts involving existing plants and new projects can be negotiated.
- The role of distributors and the use of random sales leads will be less important in the new IIoT environment

- Long range plans and specific large upcoming projects are the two basic sales needs.
- The long range plans including profiles of specific purchasers and locations of the individual plants are provided in five areas.
- Power includes separate databases on coal fired plants, gas turbine plants, IC engines and renewables
- Pharmaceutical, electronics, and food are included in several databases and reports.
- Oil, gas and refining are in another group.
- Mining, chemical, pulp & paper, steel, cement, metal working and miscellaneous industries are included together.
- Desalination, municipal water & wastewater are covered in three services.
- Custom services are available on subjects such as dredging, aquaculture, ballast water and HVAC.



Power Services

- The long range plans and large project opportunities in the power sector are contained in a number of McIlvaine Publications
- McIlvaine has been tracking individual coal fired plants around the world for over 40 years. Details on the existing equipment and plans for thousands of units are provided in the Utility Tracking System. A 15 page Alert is issued weekly. Profiles of the 100 largest operators are included. Nuclear activities are also tracked.
- A similar service for gas turbine combined cycle plants and I.C. engines provides details on each plant with a monthly Alert.
- Decision systems with technical information, webinars and other sales initiation opportunities are provided for both coal fired plants and gas turbines.
- The Renewables Database covers hydro, biomass, wind, geothermal and solar.
- There is a complete program for one utility-BHE.

Tracking Systems

- 42EI Utility Tracking System
- 42EIC Chinese Utility Plans
- 40A World Power Generation Projects
- 31I Renewable Energy Update and Projects

Decision Systems

- 4S01 Berkshire Hathaway Energy Supplier and Utility Connect
- 44I Coal Fired Power Plant Decisions
- 59D Gas Turbine and Reciprocating Engine Decisions

People

43I Utility People



Food, Pharmaceutical and Electronics

The profiles of operators and long range plans in these industries are included in services which McIlvaine has published for decades.

All these industries require ultrapure water and air which is controlled in cleanrooms.

These services are being revised and expanded to provide full coverage of the 550 largest operators in these ultra clean industries.

The processes have been extensively analyzed in the pump, valve and filtration market reports

Webinars in the IIoT report provide rankings of operators and details on IIoT utilization.

Services

- N029 Ultrapure Water: World Market
- N6F World Cleanroom Markets
- 80A World Cleanroom Projects

Sample Webinars

Cleanrooms

https://youtu.be/Xe_NYnLmmAA

Food https://youtu.be/q50ewS_ozC8

Pharmaceutical

https://youtu.be/q50ewS_ozC8

Semiconductor

https://youtu.be/l2FnXdS8lk4

Ultrapure Water

https://youtu.be/gRucY_BN47E



Oil, Gas & Refining Services

- For the last 10 years Mcilvaine has provided daily input to a tracking system on all oil, gas and refining projects.
- The system also has market reports on specific subjects such as oil sands, shale, sub sea extraction, LNG, and Gas to Liquids.
- Recently the detailed profiles of operators have been added and the focus changed to identifying just the large projects and long range plans of the 100 largest refineries and 100 largest oil and gas companies.
- Refinery decision systems now includes ambient air monitoring decisions.
- Decision systems already have been initiated in catalytic cracker NOx control, molecular sieve switching, choke valves and valves for in excess of 5000 psi.
- Other subjects will be added as the need arises.

Databases and Markets

Oil, Gas, Shale and Refining Markets and Projects

Decision Systems

A refinery decision system is in place and was the subject of a webinar on January 10, 2018.

Webinars on related subjects include

- Shale Oil and Gas on February 7 2018
- Offshore Oil and Gas Extraction February 28, 2018

An earlier webinar covered the whole industry and can be viewed at https://youtu.be/o7kJSXixFHs

Decision guides on various valves for oil and gas applications can be accessed at <u>High Performance Valves and IIoT</u>

A large ongoing effort is being made to assure that subscribers have the latest plans for the large operators and have a way to interface with them.



Desalination, Municipal Wastewater, Municipal Water

For more than 20 years McIlvaine has been populating databases on municipal water and wastewater plants in the U.S. and Canada. This has included detailed information on the 80,000 largest plants and basic information on the 25,000 plants smaller than 1 mgd.

A monthly world municipal wastewater project report has been published for 10 years.

A number of private services on desalination have also been created.

A municipal wastewater treatment system website and intelligence system includes decision guides on aeration and sewage sludge mercury control. Other decision guides will be added as merited.

These are all being combined into a service providing profiles and plans for the largest 300 operators including many private companies who are providing third party O&M.

The complete evolution will take some months. As a result the initial subscription prices are discounted.

Services

- 62EI North American Municipal Wastewater Treatment Facilities and People Database
- 67El North American Public Water Plants and People
- 246-E Desalination Forecast

Decisions

Municipal Wastewater Decisions with intelligence system, webinars and updates

Webinars

Here are recorded webinars with IIoT applications and operator rankings

- Desalination https://youtu.be/5uC3KliNx5s
- Water and Wastewater https://youtu.be/AWB-vZlj5gk



Mining, Chemical, Pulp & Paper, Steel, Cement, Metal Working and Miscellaneous

For the last decade McIlvaine has been populating a website with specific project and plant information and also creating special databases, some of which are from government sources on more than 10,0000 plants in the U.S. European information is limited to plant location and emissions.

The present focus is on world-wide identification of the top 1000 operators and assessing the long range plans of each.

An intelligence system provides access to articles on projects and technology.

The service also includes access to the fabric filter, scrubber, precipitator, and monitoring newsletters and intelligence systems with access to all articles from 1999 forward.

Recent webinars have analyzed the use of IIoT & Remote O&M in these industries. Rankings are also provided. You can view them at

- Mining https://youtu.be/IDOV96IYrlo
- Chemical Manufacturing https://youtu.be/mP5fFnHLoCs



Services

Databases and Project Tracking

- N032 Industrial Air Plants and Projects
- N033 Industrial Water Plants and Projects

(the two systems are now combined as part of the IIoT/IIoW program)

Decisions (included in the NO32-33 package)

- 1ABC Fabric Filter
- 2ABC Scrubber/Adsorber/Biofilter Knowledge Systems
- 4ABC Electrostatic Precipitator Knowledge Systems
- 9ABC Air Pollution Monitoring and Sampling Knowledge Systems

People

- 53DI OEM Networking Directory
- 55DI End User Directory