Competitor and Customer Sales Forecasts

Competitor market share and customer purchases are important building blocks to Market Wisdom

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Flow and Treat Competitor and Purchaser Knowledge Essential for Market Wisdom

In this electronic age, market wisdom for flow and treat is so prolific and valuable that it can be the foundation of the business program rather than a peripheral tool. Instead of pursuing a sales lead and asking the prospect what he needs, it is now possible to identify the prospect and explain why the product is what he needs.

In every flow and treat application for every product it is possible to determine the market and predict the growth. The needs for the product can be determined from the available industry and process information.

Competitor market shares can be gathered with segmentation by industry and location. The influence of OEMS, consultants and other decision makers can be evaluated. Specific purchase predictions can be made for every major prospect. Competitor market shares and forecasts of purchases by each major prospect are invaluable in planning a profitable strategy. Accurate determination is possible with a complete Market Wisdom approach.

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Validated by aggregating competitor market shares

Competitor share knowledge is essential to market wisdom

Competitor and Purchaser Knowledge Essential to a SWOT Analysis

Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis relies on knowledge of your competitors and their market shares by application and location. Are their shares growing and how well do they address the customer needs? How are they going to market? Are they working with the OEMS and consultants as well as other decision makers? What is their share for each major customer?

In the past this level of detail was impossible to obtain at any price. However with the ability to count the cars in the parking lot with Google Earth and to track all exhibition space and advertising, a great amount of detailed analysis is cost effectively available. There is a profusion of information on applications with case histories and discussions from which the success of competitors can be extracted.

The forecasts for prospects who purchase 50% of the flow and treat equipment are included in standard McIlvaine market reports. Forecasts for those purchasing 90% of the flow and treat products are available with satellite services

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References

Case Histories

Exhibition Space

Advertising

Industry Segmentation

Competitor shares and customer purchases are provided in each industry segment with the option for further segmentation

Multi Client Reports

Air
Air Filtration (HVAC)
Fabric Filter
Cleanrooms
Scrubber-Adsorber
FGD
DeNOx
IIoT & Remote O&M
Thermal/Catalytic

Water
Liquid Filtration
Sedimentation - Centrifugation
Cartridge
RO/UF/MF
Ultrapure Water
Membrane
Bioreactors
Coalescers
Water Treatment- Chemicals

Energy
Oil, Gas, Refining
LNG
Petrochemicals
Fossil and Nuclear Power
Hydraulic Fracturing

Flow
Valves
Pumps
Compressors
Blowers
Fans
Dryers
Hose & Couplings
Nozzles
Dampers
Pneumatic-Conveying

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Industries Covered

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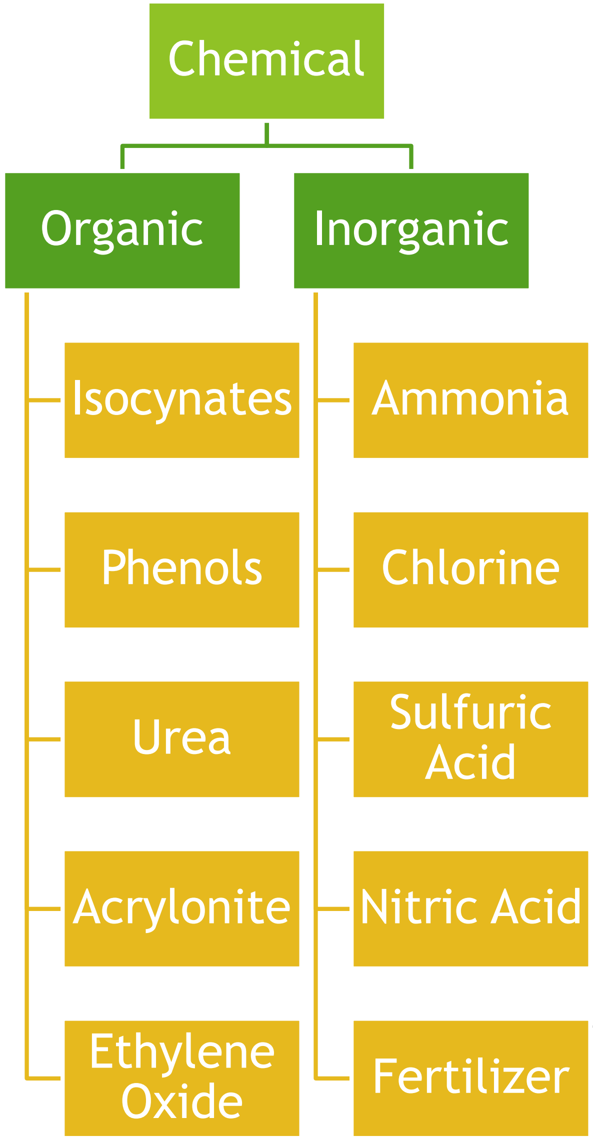
Chemicals

The Chemical industry comprises many disparate processes which require designs and materials unique to the operation. As a result there are many smaller flow and treat companies who have specialized in niches.

The general segmentation by organic and inorganic chemicals and by major applications is displayed here.

In the case of chlorine there are plants making hydrochloric acid and then using and recovering the acid multiple times. Each involves a distinct process.



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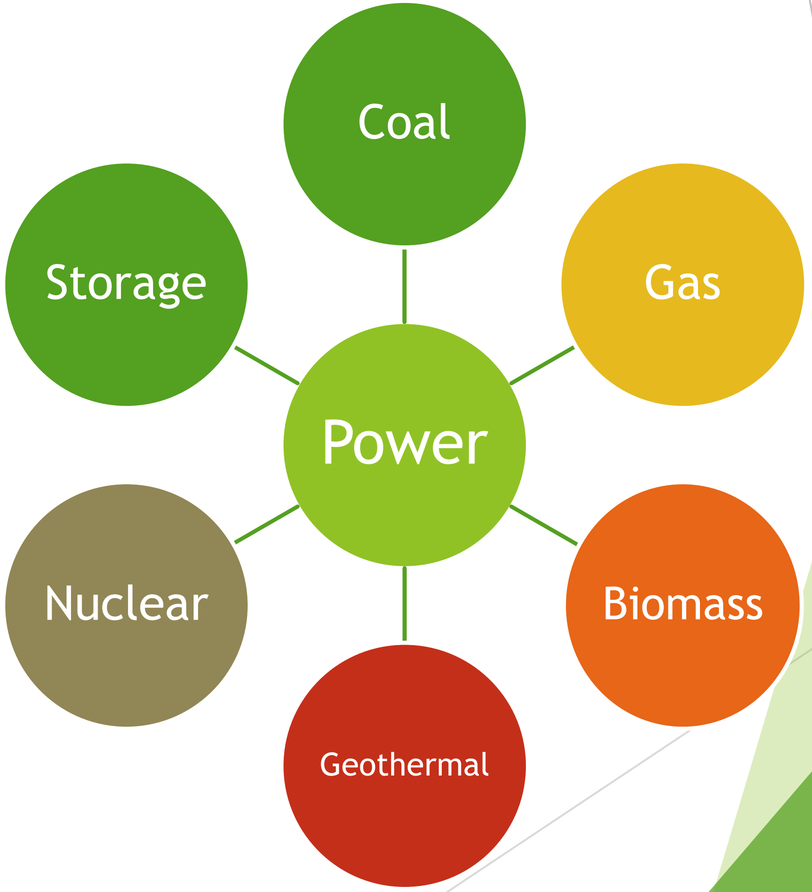
Mining

Coal and iron are the largest mining applications. Copper is a big application in a few countries. Lithium is a smaller but fast growing segment

Power

Coal fired power is the largest segment and continues to grow due to new construction in Asia and flyash reclamation in the U.S.



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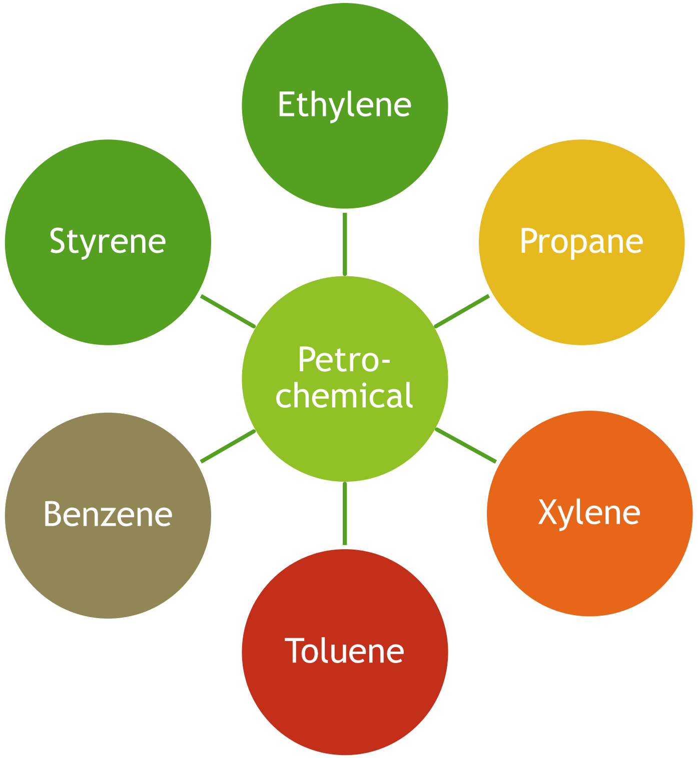
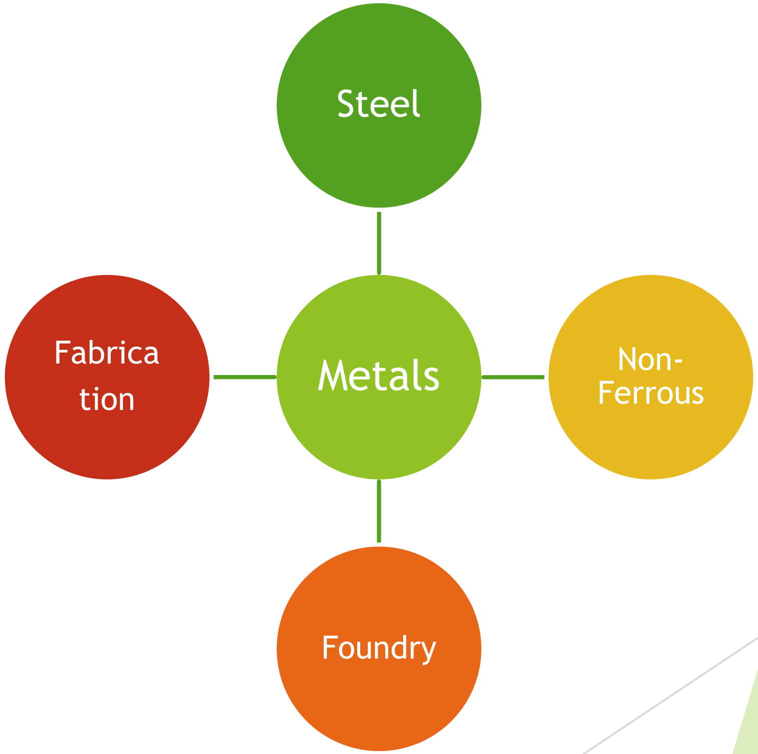
Petrochemicals

Hydraulic fracturing of shale is creating the feed (NGL) for petrochemicals and eliminating a step at the refinery making value this a separate segment



Metals

There are many flow and treat processes in the Metals industry. They involve melting, and various fabrication processes with lubricants, dust capture, water and wastewater.



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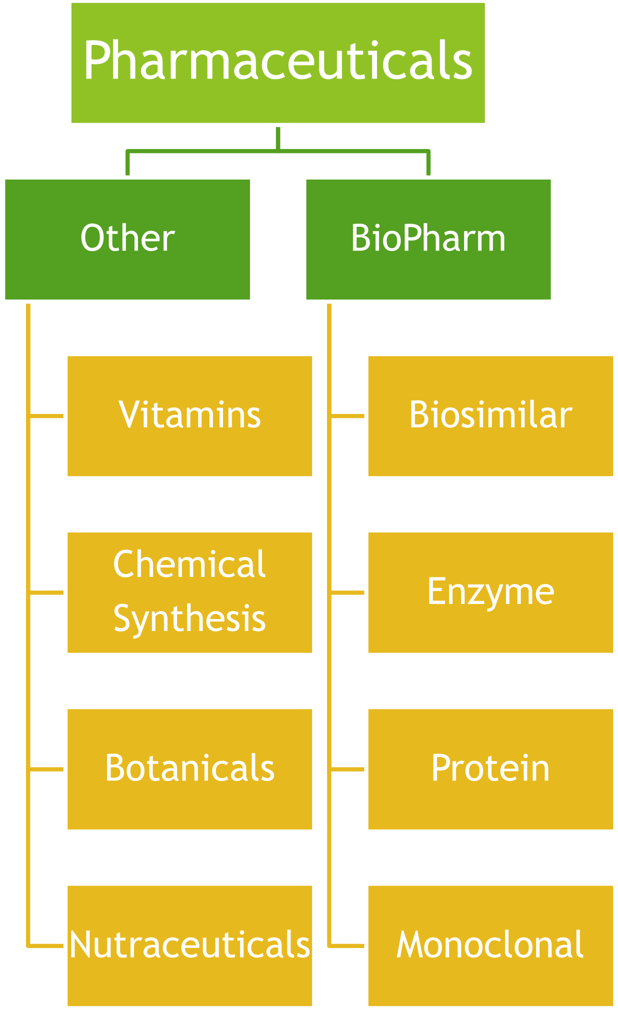
Pharmaceuticals

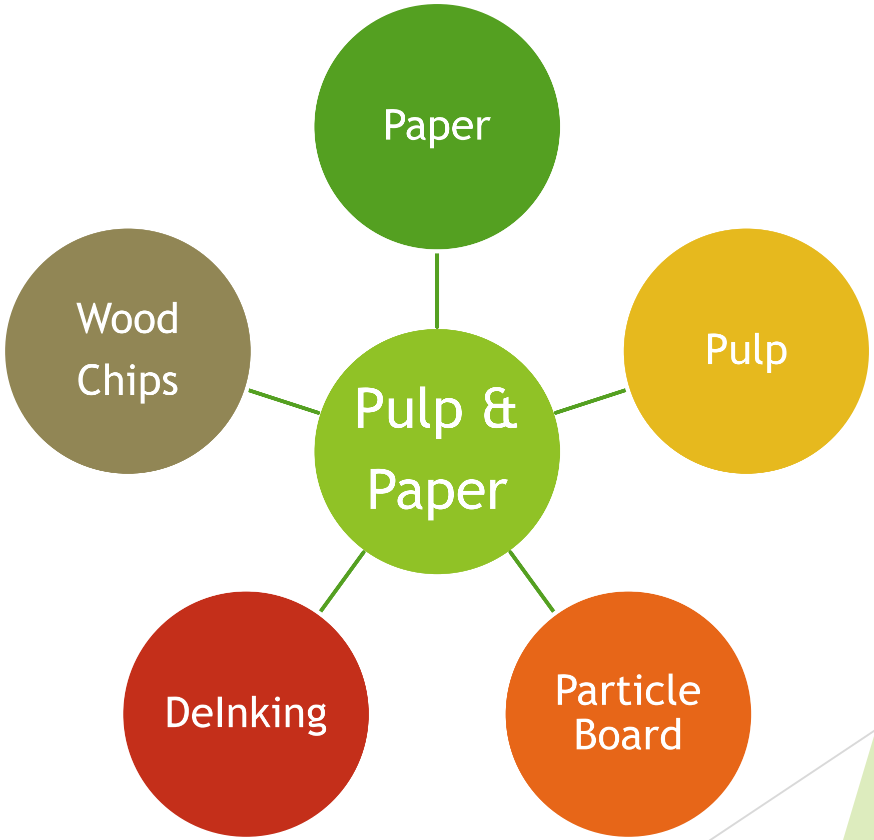
There is rapid growth in the U.S. biopharma segment



Pulp and Paper

The big virgin pulp market is Asia

Recycled pulp is significant elsewhere



Market Shares in Food Segments

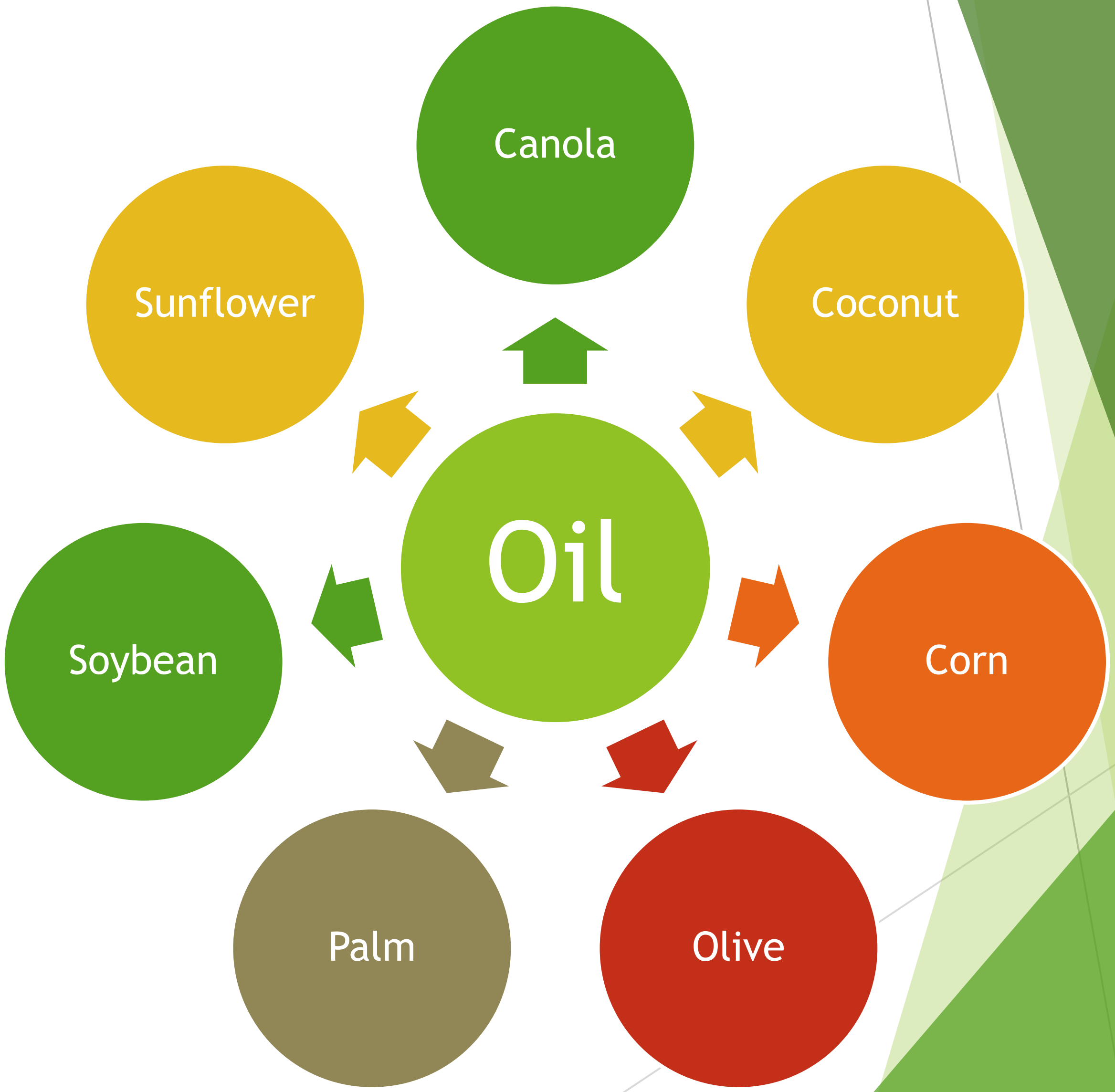
The flow and treat applications in food vary widely from the extraction of sugar from cane in Brazil to the purification of wine in France. The leaders in each segment vary considerably. Alfa Laval and GEA are very active in the dairy industry. Andritz is active in the sugar from cane segment.

The “other” category contains a variety of food processes. Flow and treat equipment frequently must meet high cleanliness standards as set by FDA and other regulatory agencies

Segmentation of Edible Oils

Segmentation of the oil segment of food is warranted due to the disparate locations and customers depending on the oil type. Palm oil and corn oil are produced in different countries by different companies and use unique processes which use different flow and treat products. Wilmar is a good example of a focus on one oil type

Wilmar is one of the world's largest oil palm plantation owners with a total planted area of 230,409 hectares (ha) of which about 67% is in Indonesia, 25% in East Malaysia and 8% in Africa. Through joint ventures, It owns plantations in Uganda and West Africa of about 46,000 ha.



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Expanding the number of customer forecasts as analysis deepens into sub- segments and sub-sub segments

The Liquid Filtration report has forecasts of purchases by 10 food companies. With a segmentation by food category the number increases to 100. This expands to more than 1000 when sub-sub segments such as edible oil are also analyzed

Liquid Filtration

- 10 food companies
- 1 edible oil company
- $8 billion market
- Total 100 companies
- Purchases $80 million each

Food Filtration

- 100 food companies
- 10 edible oil companies
- $800 million market
- Purchases $8 million each

Edible Oil

- 100 Edible oil companies
- $80 million market
- Purchases $800 K each

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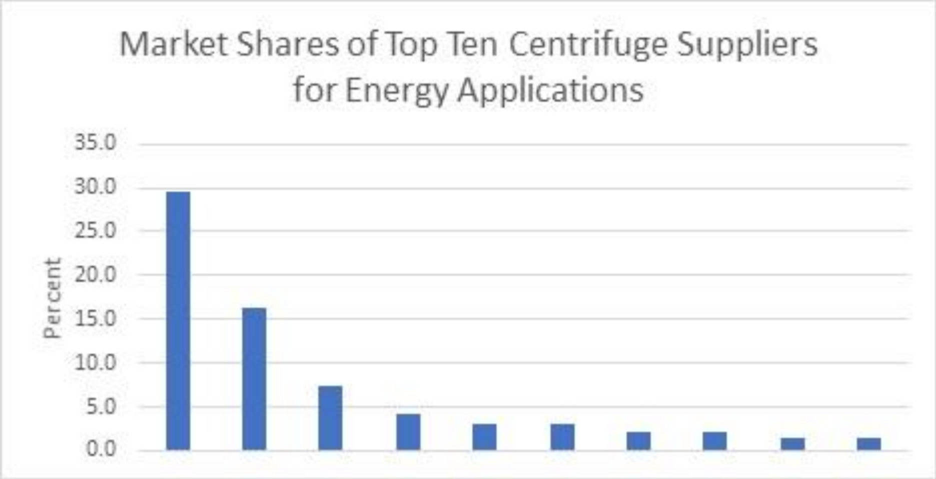
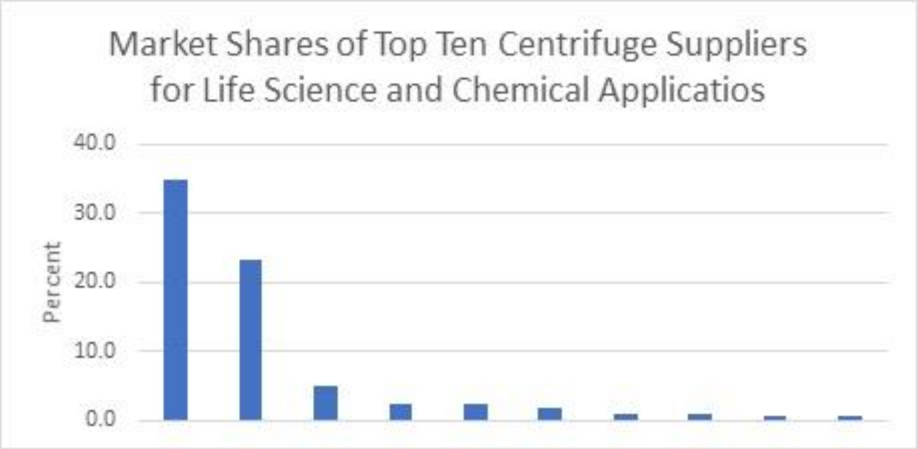
Competitor Market Shares

McIlvaine Market Reports Now Include Competitor Market Shares and SWOT Insights





The multi client Sedimentation and Centrifugation report http://home.mcilvainecompany.com/index.php/markets/water-and-flow/n005-sedimentation-and-centrifugation-world-markets has market shares by broad industry categories for total centrifuges but a level of detail as specific as screen scroll centrifuges for coal mining can also be supplied.

One company has less than 2 % of the total market for centrifuges but 60% of the screen scroll market for centrifuges in coal mining

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Metso 2018 Globe Control Valve Sales and Market Shares for Selected Industries			
Industry	Estimates of Metso 2018 Sales $ millions	World Valve Sales $ millions	% of total valve market
Chemical	35	1162	2.0
Power	40	1739	2.3
Refining	39	1606	2.4
Wastewater	14	789	1.7

The analysis above shows Metso market share for one type of valve while the chart below shows the ITT knife gate valves installed in power plants in one State.

ITT Knife Gate Valve Installations in West Virginia Power Plants							
startup	**plant name**	**unit id**	**utility name**	**state**	**reagent**	**process**	**size MW**
2006	Mitchell-AEP	2	American Electric Power	WV	limestone	wet	816.3
2007	Mitchell-AEP	1	American Electric Power	WV	limestone	wet	816
2008	Mountaineer	1	American Electric Power	WV	limestone	wet	1300

Advertising and Exhibition Analyses provide Insights to Competitor Strategies

- The type of exhibition and location where they exhibit reveal considerable insight into the sales strategies of flow and treat companies. The size of stands is also of importance. They can vary from less than 100 ft2 to over 1000 ft2. Sponsorship should also be noted.
- The type of magazine and the frequency of advertising in magazines is also indicative of the strategy. The size of advertisements can range from ¼ page to 2 pages. The content of the advertisements is also revealing. Some promote a particular product while others cover a range of products.
- The balance between industry related events or media and product related events and media is also significant.
- The membership in associations is also indicative e.g. Hydraulic Institute, VMA, NAFM, WWEMA, INDA. Process Equipment Manufacturers, ICAC.

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Hydrocarbon Processing - September 2018 - Advertising

Company	Pages	Subject	Service
Air Liquide	1.0	PSA, Membranes	Scrubber/Adsorber, RO, UF, MF
Ametek	0.5	On Line Sulfur Analysis	IIoT
Ametek	1.0	Moisture in Gas Analyzer	IIoT
Aqseptence	1.0	Johnson Screens	Liquid Filtration
Ashcroft	0.5	Pressure Measurement	IIoT
Automatic	0.2	Automatic Backflush	Liquid Filtration
John Zink	1.0	Combustion Systems	Thermal/Catalytic
DuPont	1.0	Scrubbers, Desulfurization	Scrubber/Adsorber

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Hydrocarbon Processing - September 2018 - Advertising

Company	Pages	Subject	Service
Honeywell UOP	1.0	Integrated Solutions	IIoT
Koch-Glitsch		Separation Columns	Scrubber, Adsorber
Linde	1.0	Range of Technologies	IIoT, Scrubber/Adsorber
Magnetrol	1.0	Level Control	IIoT
Merichem	1.0	Contactor and Coalescer	Scrubber/Adsorber
Sentry	0.5	Sampling Equipment	IIoT
Spraying Systems	1.0	Nozzles	Scrubber/Adsorber
Swagelok	1.0	Pressure measurement system	Valve, IIoT
Veolia	0.5	Water reuse, DAF webinar	Sedimentation, Centrifugation
Yokogawa	1.0	Oprex Automation	IIoT
Zeeco	0.5	Thermal oxidizers	Thermal/Catalytic

Chemical Engineering - September 2018 - CFT Advertising			
Company	**Pages**	**Subject**	**Service**
Cleaver Brooks	1	Boilers, Water Systems, Controls	Ultrapure Water
Emerson	1	Automation	IIoT
Endress +Hauser	1	Flow Meters, pH	IIoT
Badger Meter	1	Flow Meters	IIoT
Flottweg	0.5	Centrifuges	, Centrifugation
Load Controls	0.5	Viscosity Measurement	IIoT
Gemu	0.5	Valves, Water Treatment	Valves
Swagelok	1	Valves	Valves
NOV	1	Pumps, screens, mixers	Pumps
Krohne	0.5	Level Transmitters	IIoT
Ekato	0.3	Mixing	FGD
A-T Controls	0.2	PFA Lined Ball Valves	Valves

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Chemical Engineering - September 2018 - CFT Advertising			
Company	**Pages**	**Subject**	**Service**
Material Transfer	0.5	Bulk Bag Discharger	Fabric Filter
Proco	0.2	Check Valve	Valves
Seepex	0.5	Pumps, Metering System	Pumps
Bionomic	0.5	Modular Scrubbers	Scrubber/Adsorber
Ametek	0.3	Viscosity Analyzer	IIoT
Finder Pompe	0.3	Centrifugal and Plunger	Pumps
Myron L	0.5	Liquid Measurement	IIoT
Arkema	0.5	Kynar	Valves

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Exhibition Analysis

There are hundreds of exhibitions with flow and treat displays held each year. Here are some where centrifuges were displayed.

Venue	Companies
Beer X 2020, Liverpool	GEA (only 170 exhibitors)
China Coal and Mining	Andritz only centrifuge manufacturer listed for last 3 years
FI and Food Tec 2019	Andritz, GEA and FT27 with peeler centrifuge
Dairytec, UK 2020	GEA (only 100 exhibitors)
Frac Sand , Houston	Andritz
Interphex Japan 2020	Alfa Laval, IHI
Interphex NYC 2019	Rousselet
IFAT 2018 Munich	Andritz, Centrisys, Flottweg, GEA , Hiller, Pieralisi, Vitone
SME Mining 2020	Alfa Laval, Broadbent, Flottweg, Petroleum Solids rents centrifuges
WEFTEC 2019 and 2018	More than 8 exhibitors ---Complete analysis at http://home.mcilvainecompany.com/index.php/silobusters/municipal-wastewater-services

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CFT Advertising in October Processing 2018			
Company	**# of pages**	**Subject**	**Service**
AT Controls	1	Valves and Controls	Valve
Automation Direct	1	Drives	IIoT
Dynamic Air	1	Conveying, Fabric Filters	Fabric Filter
Discflow	0.5	Pump	Pump
Blue-White	1	Pump, Flow Meter	Pump, IIoT
Tuthill	0.5	Blower	Fan, Blower
Gorman Rupp	0.2	Pump	Pump
Motion Industries	1	Pump	Pump
Jefferson	0.2	Valve	Valve
Everlasting Valve	0.5	Valve	Valve
Fluke	2	Vibration Monitoring	IIoT
Cashco	0.5	Regulator, Valve	IIoT, Valve
NOV	1	Pump	Pump
Griffco	0.5	Valve	Valve
Assured Automation	0.2	Valve	Valve
Magnetrol	1	Level Control	IIoT
Fluke	1	Monitoring	IIoT

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Individual Purchaser Forecasts

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Liquid Cartridge Purchases by Top 10 Wineries

In 2019 $18 billion was spent for cartridges. Of this total $600 million was spent by food and beverage companies. The sub-segment for wineries was $40 million.

The U.S and France account for 25 percent of the world's wine consumption. Italy, Germany, and China account for another 25 percent. The top 20 countries consume most of the wine.

The top 10 wine makers spent $18 million for cartridge equipment and consumables. The applications for cartridges include pre filtration and final filtration and also filtration of water and steam used for filter regeneration.

The filtration is an important factor in the quality of the wine and it affects the taste. Removal of yeast is a safety issue which could result in CO_2 buildup and explosions. So a series of decisive classification steps are needed to review alternative options for reaching each of the goals with least cost.

Company	2019 Cartridge Purchases $ millions
E.J Gallo	5
Constellation Brands	3
The Wine Group	2
Treasury Wine Estate	2
Viña Concha y Toro	1.5
Castel Frères	1.5
Accolade Wines	1.5
Pernod Ricard	1.5

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Planned and Existing Coal Fired Capacity

Ninety-nine percent of all the combust, flow, and treat products and services are purchased by just 500 companies. Fifty percent are purchased by just 50 companies.

With data analytics and centralized monitoring an increasing percentage of the purchases are made based on lowest total cost of ownership. The decision making involves multiple individuals.

McIlvaine Utility Tracking System and weekly Utility E Alert have details on the suppliers being chosen by the plants.

Coal Fired Capacity for Individual Owners		
Above MW	Planned Cumulative # Of Owners	Operating Cumulative #
80,000		1
60,000		2
50,000		3
40,000		3
30,000		8
20,000	2	10
10,000	8	27
5000	25	63
3000	50	110
2000	70	164
1500	90	196
1000	150	255
700	200	307
500	250	379
300	300	491
200	350	570
100	400	710
< 100		900

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Example of Flow and Treat Purchases by a Semiconductor Manufacturer							
TSMC Flow and Treat Purchases 2019 $ millions							
Flow		***Cleanroom***		***Chemicals***		***Environment***	
Type	**$ Mill**	**Type**	**$ Mill**	**Type**	**$ Mill**	**Type**	**$ Mill**
Pumps-Cen	11	Wipes	55	Act Carbon	5	Absorbers	7
Pumps-Rot	5	Gloves	90	Chelants	0.3	Adsorbers	8
Pumps Rec	3	Furniture	9	Cor. Inhib	6	Therm-Ox	1
Pumps - Dia	5	Ionizers	2	Defoamers	0.6	Dust Coll-	7
Valves-Ball	11	Disinfect	50	Inorg-Coag	11	Filter Press	0.1
V-Butterfly	8	Floors	5	Ion Exch	4	Leaf Filter	0.1
V-Check	2	HVAC	40	Odor	0.5	Sand Filter	0.6
V-Gate	16	Walls	4	Org. Floc	13	Centrifuge	2

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Example of Flow and Treat Purchases by a Semiconductor Manufacturer							
TSMC Flow and Treat Purchases 2019 $ millions							
Flow		***Cleanroom***		***Chemicals***		***Environment***	
V-Globe	17	Dispos. garment	16	Ox/Biocide	15	Clarifier	4
V- Plug	5	Rent/ Launder	50	Ph Adjust	6	Hydrocyl-	0.2
V-Safety R.	1	Rooms	90	Scale Inhib	30	RO	30
Hose/ Coupling	16	Engineer	9	***Air Filtration***		UF-MF	5
Guide	50	Devices	45	Gas Phase	20	Cart- Membrane	60
Control	75	Monitor	9	HEPA	50	Cart Non-Woven	15
Measure Liquid	18	Filters/FFU	25	G1-4	5	Cart - String	0.2
Meas Gas	25	Walls	4	M5-9	18	Cart-Cerm.	0.5
Measure Solid	8	Paper	5				
Sub -Total	276		508		184.4		140.7
Total	**1109.1**						

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Valve Purchases by Large Companies
Home Based in France and Germany - 2019

Company	Home	Industry	$ millions
Air Liquide	France	Chemical	84
EDF	France	Power	583
Engie	France	Oil & Gas	143
LaFarge Holcim	France	Stone	72
Sanofi	France	Pharma	50
Schlumberger	France	Oil & Gas	57
Total Refineries	France	Refinery	235
Total SA	France	Oil & Gas	339
BASF	Germany	Chemical	311
Covestro	Germany	Chemical	65
Evonik	Germany	Chemical	73
Heidelberg	Germany	Stone	36
Linde	Germany	Chemical	82
Merck	Germany	Pharma	50
Uniper	Germany	Power	51

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Four Operators account for 39% of Nuclear Power Treatment Chemical Purchases

Sales of water treatment chemicals exceeded $28.5 billion in 2019. This includes a number of different chemicals such as biocides, flocculants, and corrosion/scale inhibitors. These totals are from the supplier perspective and include the revenues of the manufacturers plus the revenues of the formulators. They also include the traditional service supplied by companies such as Suez/GE, Ecolab/Nalco and Danaher/Chemtreat. They do not include revenues for distributors.

The advent of IIoT and remote O&M is facilitated by some of these mergers. Suez is already providing 24/7 monitoring of chemical usage at wastewater plants around the world. The GE Chemicals acquisition gives it the opportunity to provide its own chemicals rather than purchase them. Danaher combines the Pall processes, the Hach monitoring and the Chemtreat chemicals.

The power industry spent $5.6 billion for treatment chemicals. The nuclear segment spent $1.4 billion. 39% of that total was spent by just four companies.

Nuclear Power Plant Combust, Flow and Treat Purchases 2019 - $ millions					
	World	**EDF**	**Bechtel**	**KEPCO**	**Exelon**
Percent	100	20	10	5	4
Treatment Chemicals $ millions	1400	280	140	70	56

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Forecasts of Valve Purchases by Vietnamese Coal Fired Power Plant

Corporate Name: EVN	Unit size: MW 660
Plant Name: Genco 3 Vinh Tan 2	Vĩnh Tân commune, Tuy Phong district, Bình Thuận province. Vietnam
Unit # 1	Specific product purchases 2019 $1000
Forecasts can be supplied for sixteen types of valves, four types of pumps, actuators, limestone, lime, precipitator internals, dust bags, gas instrumentation, liquid instrumentation, controls, treatment chemicals, ammonia, urea, catalyst, cartridges, dewatering filter belts, membrane modules, linings, nozzles, mist eliminators, fans, air compressors, oxidation compressors, motors, VFD, seals, packing, hose, couplings, compressed air filters, lubrication filters	Ball valves $170,000 Butterfly Valves: $120,000 Globe Valves $190,000 Plug Valves: $100,000 Gate Valves: $150,000

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