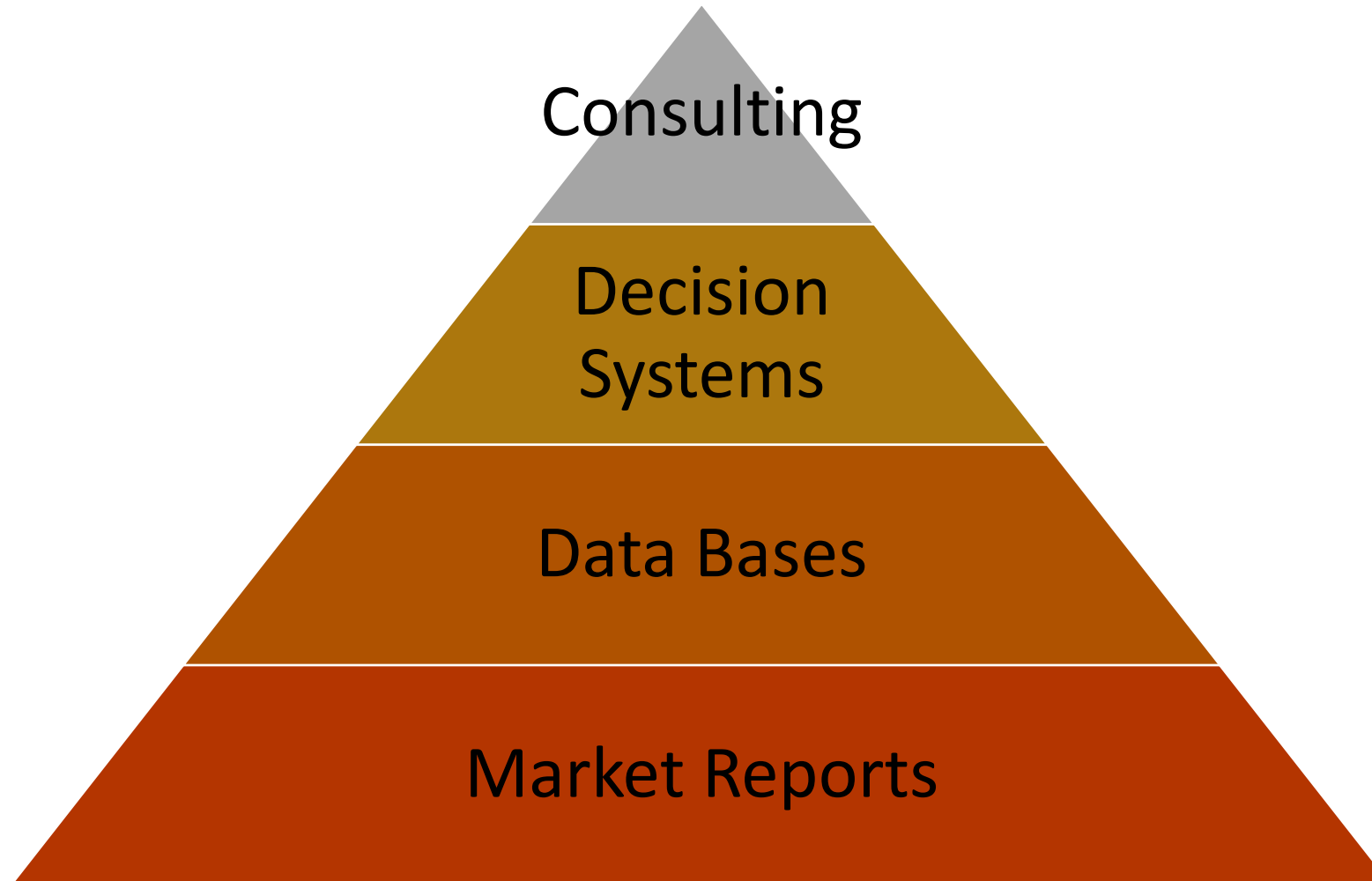




Most Profitable Market

The Most Profitable Market Program can be a cost effective foundation of a business strategy due to the digital tools and knowledge now available.

Basis for MPM Program



Maximizing Profits in Combust, Flow, and Treat Market

- The Combust, Flow, And Treat Market is large with annual revenues of over \$400 billion
- Among the participants there have been spectacular successes and failures
- The market is technology driven
- The market is dynamic in terms of
 - Industries
 - Processes
 - Geographies
 - Products
 - Innovation
- High growth dynamic markets include
 - Single use biopharmaceuticals - U.S.
 - Tight oil, gas and petrochemicals - U.S
 - Coal fired power - Asia
 - Indoor air purification - Asia
 - Water reuse - Asia, Middle East
 - IIoT and Remote O&M - World

A profitability forecast for each opportunity should be the foundation of the business program. The focus should then be on the most profitable opportunities given the market size and potential share



Can market forecasts be the foundation of the business program?



- A top down forecast is inherently approximate. Segmenting it further only increases the inaccuracies.
- Traditionally market forecasts have been top-down \$3000 purchases which could only be used as a very peripheral tool.
- The alternative has been extensive analyses delivered by management consultants with general expertise.
- Recognizing the value of niche experts some CFT suppliers have contracted with semi retired individuals with specific experience in the subject area.
- All of these approaches are obsolete because there is voluminous information available which can be organized to provide insights impossible to obtain with traditional efforts.
- This leveraging of available information has been labeled the Industrial Internet of Wisdom (IloW).
- IloW can be used to cost effectively calculate tens of millions of reliable revenue opportunities.
- IloW can be used to guide R&D resulting in better products which in turn results in lower total cost of ownership which in turn results in higher profits.

FORECASTS

- 120 countries plus provinces and States
- Hundreds of industries
- Hundreds of processes
- Thousands of products
- Tens of thousands of individual purchasers
- Hundreds of thousands of individual plants
- Analyses of last 40 years
- Forecasts for next 30 years

In the digital age there are billions of useful documents which when organized and utilized by experts create a new level of wisdom

Most Profitable Market (MPM)

the market which delivers the greatest profits from the resources available

The goal of Combust, Flow and Treat (CFT) companies is to maximize profits. Market forecasts should be the foundation of the business strategy. Instead they are usually treated as a peripheral tool.

The reason is that market forecasts typically quantify the Total Available Market (TAM) which includes geographies and product requirements which cannot be served. The reports are customized at some expense to provide the Serviceable Obtainable Market (SOM) which reflects a market which can be served at some profit margin even if meager.

Management does not want to be chasing orders which have meager unit margins when there are opportunities with high margins. By creating a Most Profitable Market (MPM) forecast a very valuable foundation for the whole business program is created.



Most Profitable Market Determined by Four Factors

- SOM: The foundation of the Most Profitable Market Program is the Serviceable Obtainable Market which is derived from McIlvaine Multi Client Reports.
- LTCO: Each product needs to be evaluated to determine the cost of ownership differential to competitors - Lowest Total Cost of Ownership.
- LTCOV: A route needs to be determined for Lowest Total Cost of Ownership Validation.
- MKT SHR: A determination can then be made as to the Market Share which can be achieved at various profit margins for each product.
- MPM: The various product, industry, and geographic options are evaluated in terms on the margins and market share which can be obtained. The most profitable selections are then made based on resources available.



McIlvaine Serviceable Obtainable Market (SOM) Reports

- The Serviceable Obtainable Market (SOM) is extracted from the Total Available Market. Many McIlvaine market reports have much more segmentation than is typical.
- Selected segments of the TAM can then be leveraged to create the SOM.
- SOM includes low margin opportunities at profit margins which are not high enough to be considered.
- Profit margins can be varied to increase or decrease market share.
- The SOM is an aggregation of products, industries and geographies

McIlvaine multi client reports

Air: These are divided into indoor air and external air. Separate reports are available for each pollutant including

- Particulate: Fabric Filter, Precipitator
- Gases: Scrubber, FGD, DeNOx, Thermal Oxidation

Water: These are divided into ultrapure water, water treatment chemicals and multiple reports on water treatment hardware and consumables including Liquid Filtration, Sedimentation, Centrifugation, Cartridges, Cross Flow Filtration

Flow Control: These are divided into Valves, Pumps, Automation and Instrumentation

Cleanrooms: Consumables and hardware

Energy: Oil, Gas, Refining, Fossil Fired Power, Nuclear, Renewables, Biofuels

Special SOM reports are available on a number of other subjects including compressors, manufactured frac sand plants, lithium, single use biopharmaceuticals, couplings, ballast water treatment, site remediation, oil field chemicals



Lowest Total Cost of Ownership

based on lower production, M&O and performance costs

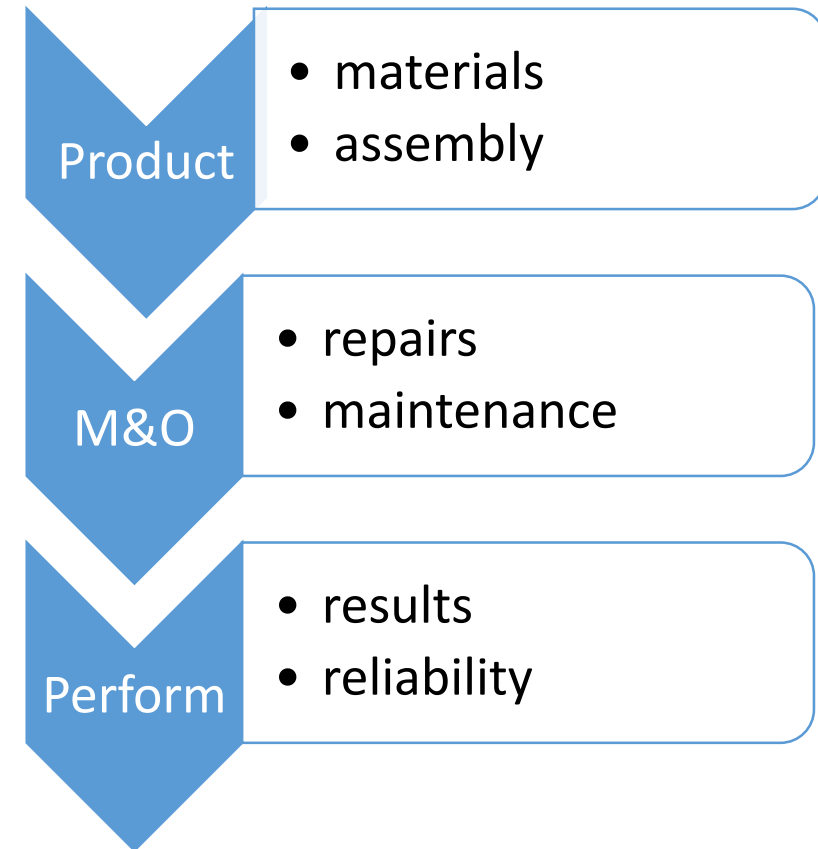
The aggregation of products, industries, geographies and individual purchasers needs to be evaluated in terms of total cost of ownership.

The total cost of ownership varies depending on whether the product is high performance or general performance. A high performance product is in severe or critical service. These products are generally purchased based on life cycle costs and not initial price.

A general performance product is likely to be purchased based on price or convenience. The initial price plays a large role in total cost of ownership.

Determining the TCO requires knowledge of industries and processes as well as the anticipated performance of the product in the various circumstances

Ascertaining the lowest total cost of ownership entails an analysis of competitive products.



There are external costs such as distribution and benefits such as supply of multi product packages or even total solutions

LTCOV-Lowest Total Cost of Ownership Validation

- Validation of lowest total cost of ownership requires convincing decision makers. The supplier is equivalent to the lawyer making a case to a jury.
- The other side will be making their arguments to counter the supplier.
- The process is sequential and continuous.
- The process is made by multi media: websites, magazine articles, conference speeches, and in person.
- Validation needs to be based on accepted
 - Process variables
 - Labor, downtime, energy and other costs
- Subject matter expert testimony is more convincing if the expert has a body of evidence to support his conclusion.



- Evidence: A good lawyer assembles all the evidence and presents it in a way to support his assertions.
- McIlvaine has created decision guide templates which can be expanded to provide the body of evidence.
- A subject matter expert who helps prepare and then is most knowledgeable about the decision guides becomes subject matter ultra expert (SMUE) and provides the most credible testimony.

550 Purchasers buy 60% of the CFT Products and Services

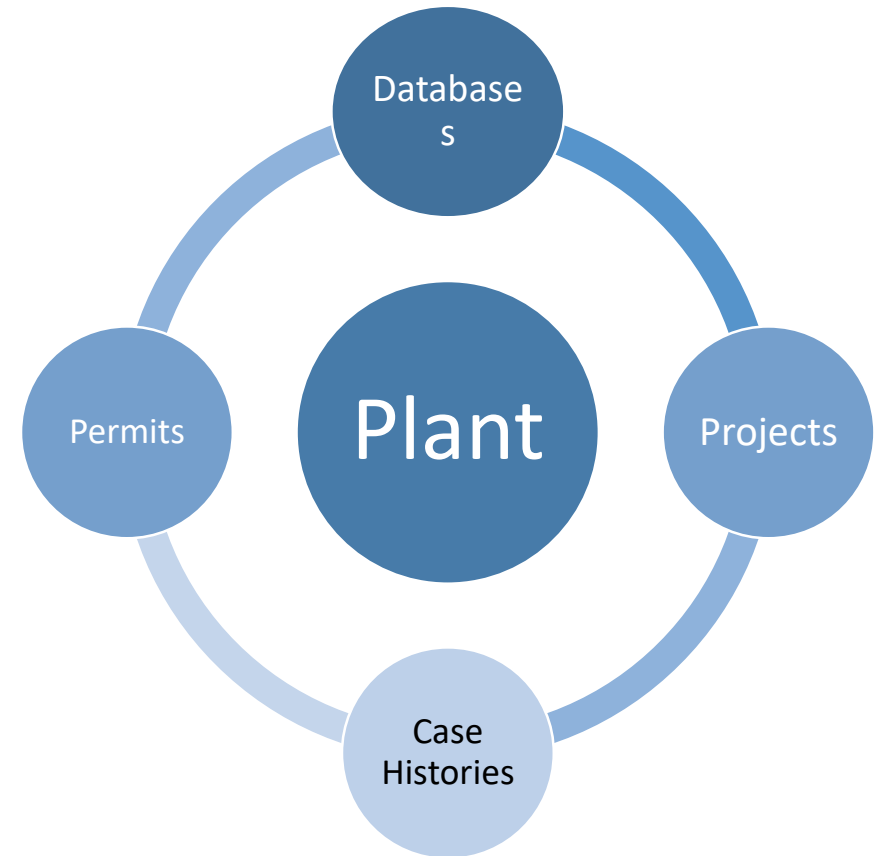
Industry	Purchasers
Total	555
Chemical	40
Electronics	15
Food	40
Metals	30
Mining	20
Oil and Gas	50
Pharmaceutical	30
Power	70
Pulp & Paper	50
Refinery	60
Stone	50
Wastewater	50
Water	50

LTCOV for Individual Purchasers

- 550 companies buy 60% of CFT products
- 5000 companies buy 85% of CFT products
- 12,000 companies buy 90 % of CFT products
- Trend toward centralized purchasing with LTCOV
- Forecast for each product in each division for a prospect is invaluable as a collaboration tool for local sales people
- MPM market program is most effective if the largest individual purchasers are included
- Big potential to sell multi product packages and to provide total solutions
- Cost of the MPM program can be shared among divisions

MPM Forecasts for Each Plant are also Produced Cost Effectively

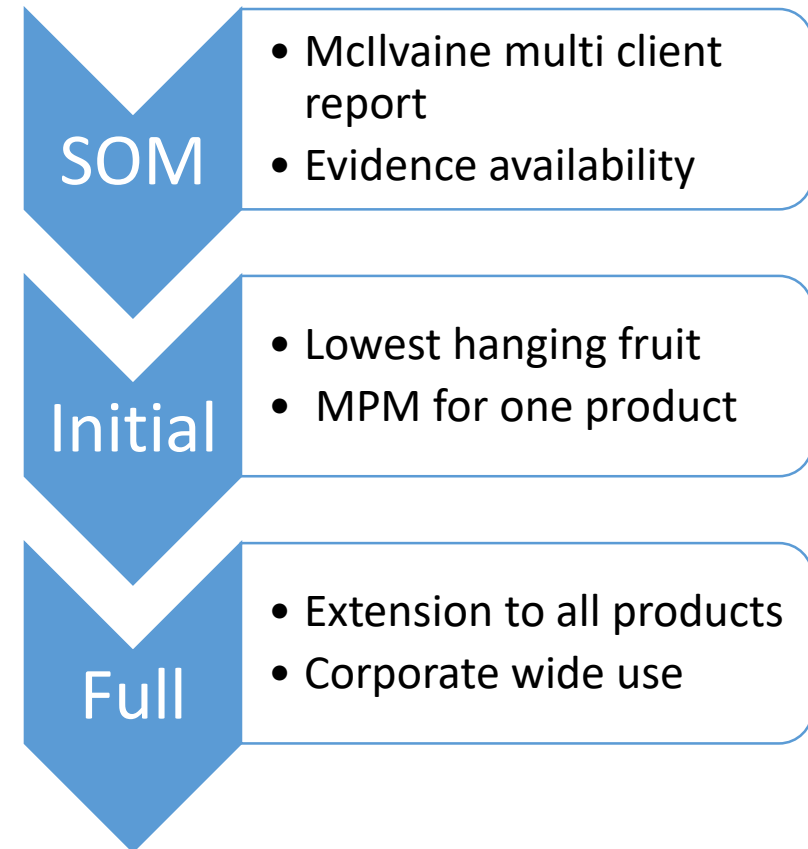
- The top 550 companies with 60% of CFT purchases operate 10,000 plants.
- MPM for the individual plants is important in terms of service and purchase of general performance products.
- Most CFT purchasers have environmental emissions as well safety issues resulting in the availability of detailed government information.
- The production of power in MWh, tons of iron, ethylene or pulp can all be determined and accurate MPM forecasts made.
- 95% of CFT purchases are made for existing plants whether it be replacement or expansion.
- The purchase of high performance products can be anticipated months or years in advance.
- Sales leads are not the route to selling high performance products.
- McIlvaine maintains plant and project databases for many industries.



Moving forward with an MPM Program

*Start with one Mcilvaine Report identifying the SOM
and proceed with lowest hanging fruit*

- The MPM program can become the foundation of the business strategy one step at a time
- One Mcilvaine multi client market report with SOM and evidence availability can be purchased as the first step.
- An initial consulting assignment can establish the lowest hanging fruit and the basis for the LTCO analysis.
- A larger consulting contract will determine the MPM for this product or products in the selected industries.
- The program can be extended to the full range of products within the division.
- Collaboration with other divisions including cost sharing can then be implemented.
- Full use for R&D, production, and sales can then be undertaken.



Full implementation results in a bottoms up program with participation from everyone from the local salesman to the CEO

More Information

For more information on Markets click on

<http://home.mcilvainecompany.com/index.php/markets>

For More information on Databases click on

<http://home.mcilvainecompany.com/index.php/databases>

For more information on People click on

<http://home.mcilvainecompany.com/index.php/people>

For more information on Decisions click on

<http://home.mcilvainecompany.com/index.php/other-services>

Bob McIlvaine can answer questions. You can contact him at

rmcilvaine@mcilvainecompany.com office 847 784 0012 ext. 122 cell 847 226 2391

