

9th Annual CMS Workshop

The Expansion and Evolution of the CMS Model

Total Cost of Ownership

TCO

Purpose of TCO?

ISU

What is the total financial
impact of _____
on our company?

Why is TCO important?

ISU

Starting point to estimate (and ultimately measure) the benefits of improved chemical management.

Key Question

ISU

Which costs are both relevant and practical?

Hard vs. Soft

Existing vs. Contingent

Key Question

ISU

Which activities are both relevant and practical?

Life cycle limits

Direct vs. Indirect

Ongoing vs. Intermittent

Key Question

ISU

What level of precision is needed?

±1%

±20%

±50%

TCO work from ISU

Summary of hidden costs and performance leverage for three case studies.

Hidden Costs: Ratio of Hidden Costs to Fluid Purchase Costs

<u>PLANT</u>	<u>RATIO</u>	<u>GREATEST COSTS</u>
Plant A	3.5:1	Electricity, chemical additives
Plant B	1.5:1	Waste disposal
Plant C	5.5:1	Fluid clean-up

Performance Leverage: Ratio of 20% Performance Benefits to Fluid Purchase Costs

<u>PLANT</u>	<u>RATIO</u>	<u>GREATEST BENEFITS</u>
Plant A	2:1 to 5:1	Tool purchases, scrap/rework, process cycle time ^a
Plant B	0.3:1	Tool rework
Plant C	5.2:1	Tool purchases, scrap