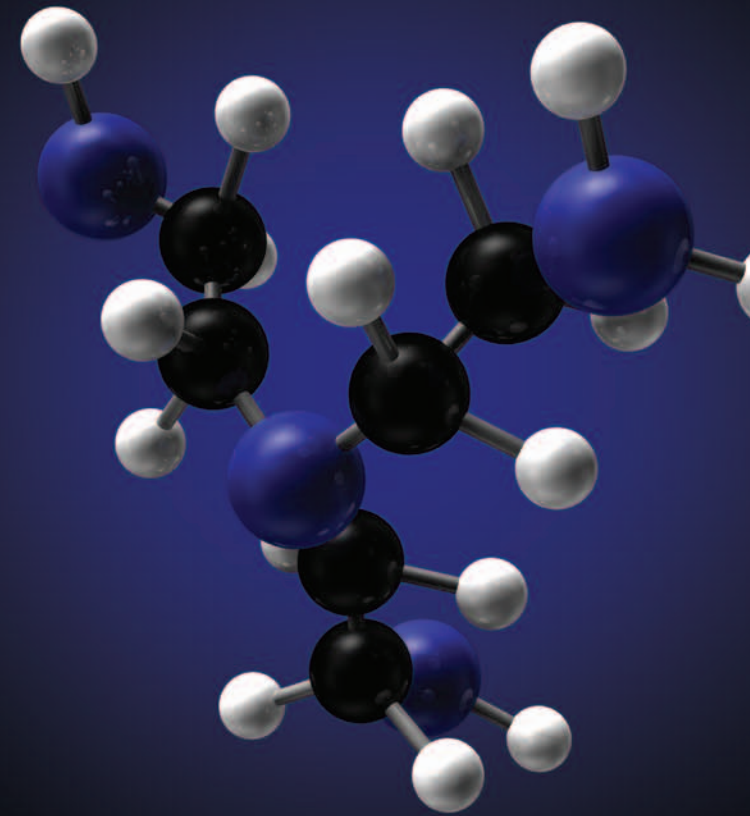
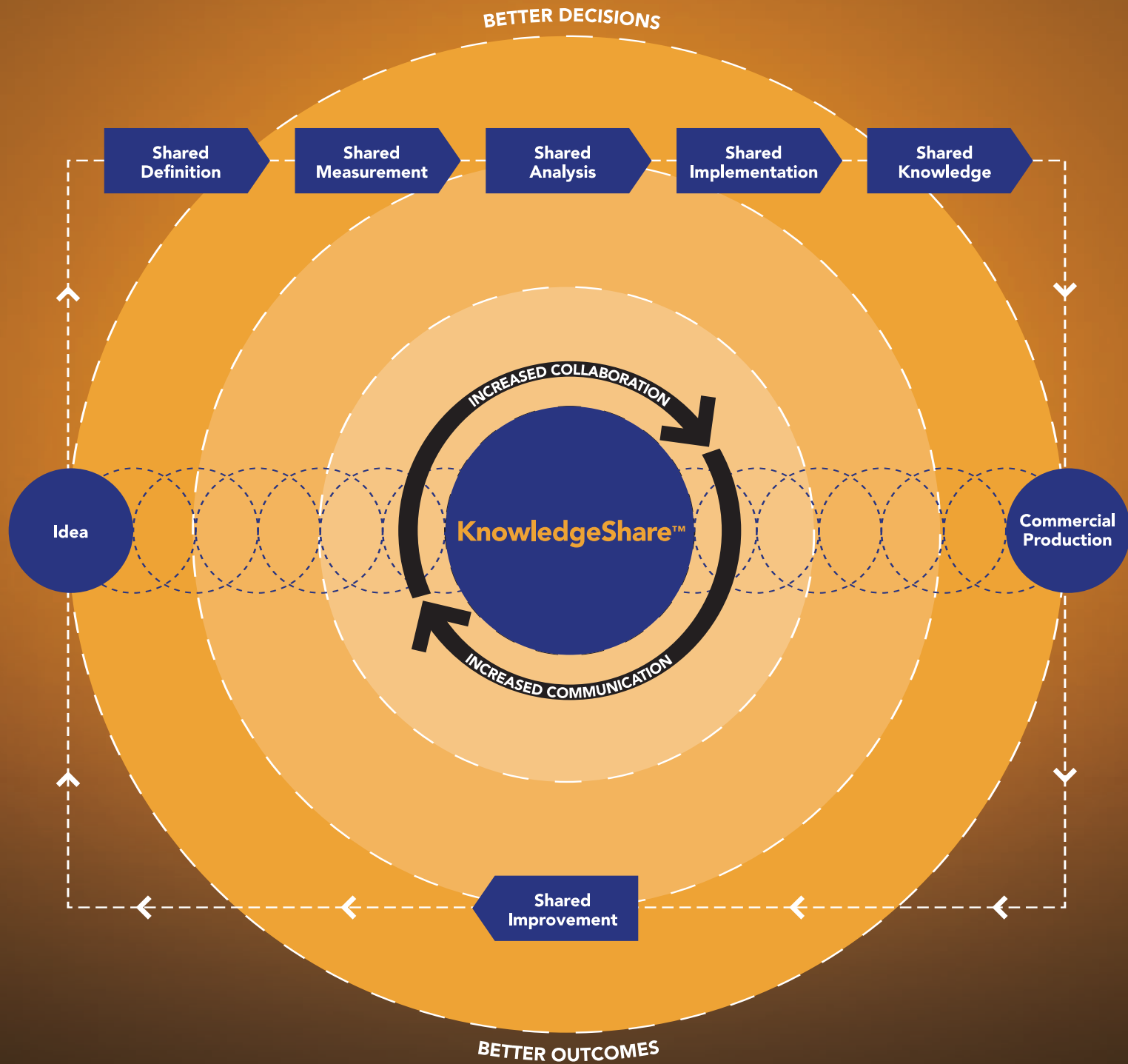
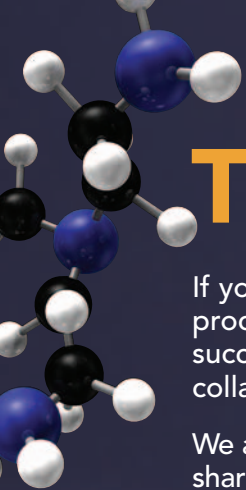


Pressure Chemical Company **Methodology**





The KnowledgeShare™ Approach



The Pressure Chemical Methodology

If you need help to develop a new process or product, your odds for success increase dramatically by collaborating with Pressure Chemical.

We adhere to the principle that knowledge sharing in a trusting relationship produces the best possible outcome. Achieving success depends upon making the best decisions, and consistently good decisions require the most complete information.

To ensure superior results, we developed The Pressure Chemical Methodology. It uses a unique approach called **KnowledgeShare™** to improve collaboration among members of a product development team, and in so doing, ensures that the best information is available upon which to base decisions leading to new or improved products or processes.

When combined with Pressure's creativity and experience, the customer's own knowledge gains new power to increase the odds of moving an idea successfully through development and scale up into the commercial marketplace.

Customers who appreciate Pressure Chemical's approach the most are those who have experienced the value of openness we offer and have benefited from improved overall results and returns on their product development investments.

Shared Definition:

Open collaboration is never more important than at the inception, when identifying the problem, defining requirements, clarifying scope, and setting goals. There is an innate tendency for people to withhold information. This may result

from an unclear understanding of the "need to know" or, perhaps, simply an underappreciation of the value of information thought too insignificant to share.

Our Shared Definition step is the first structured and critical collaboration with a customer. Our team works very closely with the customer to define carefully all requirements and desired outcomes by asking questions regarding required pricing, capital vs. unit costs, specifications vs. cost, and product performance needs. Questions might include: Is the specification sufficient to assure performance of the product and, if not, what is the cost for performance testing? What information is available regarding sources of key raw materials? Will the possibility of changes in raw materials result in altered performance of product as scale is increased? What are the issues

Idea Phase

Lab Research / Feasibility Phase

Idea Phase

Lab Research /
Feasibility Phase

Detailed literature search

Property identification

Hazard ID / Market research

Process Research Phase

Detailed impurity profile /
analytical method development /
regulatory assessment

Detailed market studies / customer
sampling / draft specifications

Identification of product form

Detailed IP evaluation

surrounding product requalification and how might these restrict future process improvements?

These issues need to be discussed honestly and openly. Our approach is specifically designed to identify and detail all key assumptions upon which the project scope, including goals and objectives, is based, sharing experience-based knowledge of economics, market dynamics, and technical hurdles.

This management function can make or break a project, but is often overlooked. Our Methodology assures that the goals of your project will be rigorously defined and reviewed during all subsequent steps as more information becomes available.

Shared Measurement:

Shared Measurement is the process by which all data sources are mutually agreed upon and a collection and sampling plan prepared. With this evaluative foundation in place, continuous real-time measurement and communication follow. Our communication plan allows immediate feedback and response to exceptional data.

Shared Measurement dramatically reduces waste caused by delays in reaction to changed circumstances. Working collaboratively, project team members can review unanticipated results and adjust objectives and outcomes accordingly. Changes that may require new priorities and reporting lines to be established are identified early.

Shared Analysis:

Shared Analysis is the process by which team members work together to develop and validate hypotheses about the project, suggest best practices, assess process designs, look at breakdowns and disconnects, brainstorm alternate paths, and refine requirements. In the ideal circumstance, the client is present in the Pressure Chemical facility, working shoulder to shoulder with our personnel. The close collaboration engendered allows the most thorough communication that ordinarily is nearly impossible in complex projects. Our years of experience have shown us that such close working relations and communications can result in substantial savings of time, money, and other resources.

Process Research Phase

Identify raw material sourcing showstoppers

Economic viability analysis

Scale-up / Process Development Pilot Plant Phase

Tox and hazard testing

Market development / Qualification samples / Launch strategy

Regulatory notification (TSCA, EPCRA, METI, NRC, etc.)

Finalize raw material, final product, and packaging specifications

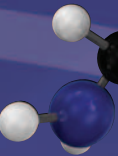
Analytical method validation

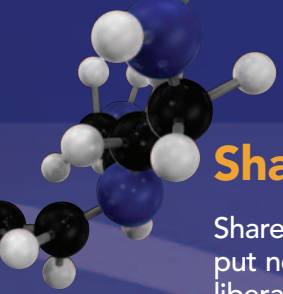
Qualify commercial scale raw material suppliers

Update economic viability analysis

Commercial Manufacturing Phase

Scale-up / Process Development–Pilot Plant Phase





Shared Implementation:

Shared Implementation describes how we put new procedures into practice; apply a liberal dose of creativity; test, standardize and validate solutions; measure results; challenge assumptions; revise and, perhaps, repeat the entire process.

The Pressure Chemical Methodology flourishes with customers who appreciate the creative environment. In our plant, chemists and engineers interact at each stage with operators, management, and sales personnel in a setting that encourages a free exchange of ideas. Working directly with our customers' technical experts allows more rapid resolution of problems.

The most astounding successes have evolved from the informal sharing of knowledge between the narrowly focused **expert** in a new technology and our **generalists** who have assisted hundreds of customers solve not so fundamentally dissimilar problems.

Shared Knowledge:

Knowledge is power! In the typical toll processing arrangement, improvements, and particularly the subtle process techniques employed by the toll processor, remain hidden from the customer. Should the relationship be terminated for whatever reason, the customer may find it difficult, costly, and time-consuming to reinvent and implement an efficient process. Without a true partnership and processes in place to assure that valuable information is shared at every level, the knowledge that is gained by a processor remains hidden and much of its value is lost once the relationship has ended.

Pressure Chemical provides its **partners** with the direct knowledge as well as the documentation required to implement the technology independent of our company, if necessary.

Shared Improvement:

Efficiencies come with time, understanding and sharing of the best information from both the customer and the supplier. With closely integrated partnerships, Pressure Chemical can deliver continuous improvement of the process and the product over time. The goal is to achieve an optimal tradeoff of price versus performance, and to enable the customer to achieve not only the original goal of the project, but to benefit from better systems, methods, and capabilities for the development, scale-up, commercialization, and growth of the market for the product or process.

Customers return to us time and again because of our unique approach, and we are pleased to provide them with a rewarding, profitable experience.

Commercial Manufacturing Phase

Product Decline Phase

Set forecast

Production capacity —
prepare for growth

Establish inventory levels /
product lead time

Establish continuous
improvement program

Update market and
economic analyses

Product Decline Phase

Reevaluate inventory position

Identify alternate source

Establish exit strategy

Notify customers

Exit

**Sharing knowledge in tight partnership for
continuous improvement in product development**



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Pressure Chemical provides an Economic Viability Analysis to companies interested in more effective product development efforts. To schedule an Analysis, call us today at 412-682-5882 ext.111 and ask for a Fit Assessment, or submit an inquiry through our web site at www.pressurechemical.com