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**Process Industries Consultants**

Maximizing Profitability with Innovative  
Products & Optimized Processes

[www.processindconsultants.com](http://www.processindconsultants.com)

**Process Industries Consultants, Inc. -- a Chemical Engineering Consultancy.  
We work with start-up companies to scale their processes to Pilot and  
Commercial production; and work with established companies to debug  
their processes to improve their profitability.**



**Dr. Joel Shertok, Ph.D.**  
Founder/CEO

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**Interview conducted by:**  
**Lynn Fosse, Senior Editor**  
**CEOCFO Magazine**

**CEOCFO: Dr. Shertok, what is the overall vision behind Process Industries Consultants and how has it evolved?**

**Dr. Shertok:** As a chemical engineer I founded Process Industries Consultants in 2014 after forty years in the industry. We are a chemical engineering consultancy with three strengths. One strength is we work with startups; we take their processes and laboratory equipment or small-scale process equipment and scale their process up into a pilot plant unit. Then, if successful, we scale the pilot process into commercial production.

Our second leg is we work with established companies that have processes that are fully commercial but are not happy with their profitability and are not happy with their efficiency. We come in and do a survey of their processes and try to understand what the bottlenecks are; and propose ways of clearing up the process issues so they can produce more material at greater profitability.

Our third leg: Because I am an engineer who likes to write, I develop White Papers for Advertising and Marketing agencies, along with commercial organizations, where we take a technical concept and make it understandable. I have built this upon for the forty years I spent

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Dr. Joel Shertok, Ph.D.**

working for companies like Union Carbide, Amoco Corporation and smaller companies. My vision has remained essentially the same today as when I started - to apply sound engineering principles to small and medium-sized companies for their greater profitability.

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**CEOCFO: *What has changed in the availability of new information and technology which has enabled you to do things differently than you might have ten years ago?***

**Dr. Shertok:** I could not survive as a consultant in 2024 with the tools that I had when I got out of graduate school in 1975. Flashback to 1975: there was no Internet, no cell phones or personal computers, except for a couple of kits from hobbyists. Therefore, if you wanted to do any sort of research you would have to go through Chemical Abstracts, you would have to go to research libraries and dig out information. I had in my home office Perry's Chemical Engineers' Handbook, Handbook of Physics and Chemistry, and the CRC Handbook. These contained engineering concepts and principles, and conversion tables; they were 800 to 900-page books. They cost \$30-\$60 a piece and that would probably be \$300 to \$500 today.

Back in 1975 if you wanted to drive anywhere you called the AAA and got a TripTik, or you obtained maps at your local gas station and then tried to figure out where to go – getting totally lost on the road was an expectation. Today we have the Internet, GPS, Google, and AI, and finding information now is simple. You just type your request into your search engine and out comes the data you need. If I want to find a conversion constant, I just type it into Google and the conversion factor comes out. It is amazingly simple compared to what it was fifty years ago.

**CEOCFO: *Was it a hard process to understand all the resources available to be able to interact with clients today?***

**Dr. Shertok:** I had a client, and his company was making fuel cells. He said, "Hey, Joel - can you write a white paper for my company on The Hydrogen Economy, so I can have a document to give out to my customers so they can understand what I am trying to do?" Even ten to fifteen years ago, let alone 1975, it would have been hard to dig out all the information from all the various reference books. You would have had to extract each one, copy it, and make it coherent. It would have been at least three or four days of work.

I used ChatGPT – I was able to use AI to find all the relevant articles, chemistry, and all the corresponding background. All I had to do was to make sure I understood the technology, and edit it so that it was one coherent whole. Instead of taking two days, it was about five hours to complete. It would have been unheard of ten years ago.

**CEO CFO: *How do you reach out to potential clients now?***

**Dr. Shertok:** For my last three or four projects, clients have contacted me, and asked if I could help, which certainly saves time and effort. Today, you live and die on LinkedIn. That took me a long time to learn when I got into consulting in 2014. LinkedIn is 'the' tool. It will lead you to people and allow you to communicate with those people. If you do posts, it is a way to show off what you know. It is important to have those first-degree connections. It is important to use Sales Navigator and other LinkedIn premium features so that you can customize your outreach. LinkedIn is incredibly important.

**CEO CFO: *Would you tell us about the range of industries you work with, and what are some of the differences?***

**Dr. Shertok:** I work with specialty chemical companies that make high-margin, low-volume specialty materials. I work with commodity chemical companies that make high-volume materials; it is all chemical engineering. I work with biotech companies that do a lot of experimental biotech development because fermentation is a major process tool today. I work with Materials companies that use a variety of methods to make novel materials.

One of the things I did in my past was to work in the Advanced Composites arena - carbon fiber prepreg materials and carbon fiber composites for the aerospace industry. Therefore, I have a background this area. I am pretty eclectic; engineering principles are applicable across all these areas. They may be called different names and have different classifications, but engineering is engineering and scale up is scale up.

**CEO CFO: *Are there particular types of projects you prefer, given a choice?***

**Dr. Shertok:** I am pretty open to most assignments. I like engineering so certainly the projects that have knotty issues to be solved are of interest to me. I am working with several projects involving commercializing new processes, which is always fascinating. I am working with several companies that need to have their processes debugged and made more efficient, and that is interesting. I am pretty open and if it is engineering, I like doing it.

Networking is also very important. You have to get out and show your face. I belong to several network organizations in the Delaware/Pennsylvania area, mainly in Philadelphia and Southern New Jersey, and a couple of biotech networking groups in Newark, Delaware. I always carry business cards with me. Face-to-face contact is important, because even if the person you are talking to isn't involved in what you are doing, he may have a friend who is.

**CEO CFO: *What is your global footprint?***

**Dr. Shertok:** I am centered in the United States because it is easier to make your contacts and maintain communications. I have some work in China, and some work in Saudi Arabia that is on hiatus right now

because they are trying to get their funding in order. I have had a couple of projects in the UK, but generally 90% of my work is US-oriented, it is just a lot easier.

**CEOCFO:** *When you are looking at a project what might you consider that less knowledgeable people do not think is important?*

**Dr. Shertok:** There are some important aspects that I consider that others may miss. For example: what type of laboratory-based research work is backing your technology up; what sort of facility design have you considered; have you considered what you are going to do with your waste streams; and have you considered process safety. Also important is the SDS (Safety Data Sheets) of your various raw materials, by-products, and products; how are you going to ship them? Does it involve special OSHA classifications for hazardous materials?

If you are going to scale up, you need to have specific heat and mass transfer considerations. You may need to have Class-1, Division-2, explosion-proof design. You have to consider possible freezing at room temperature or boiling at room temperature. Is the process pressurized, is the process cryogenic? These are all things that come into play. Inexperienced practitioners think that if they have done a process on a small scale then can just scale up the process by doubling and tripling everything, but it does not work that way.

**CEOCFO:** *How do the macro events of the day, like inflation or political unrest, come into play for Process Industries?*

**Dr. Shertok:** They do not. I suppose if we had a major economic depression, I might have an issue, but I did my consulting work with COVID and it was no problem as everything was on Zoom, to begin with. Along with the other technical advantages, Zoom allowed me to do my work when I could not see people face-to-face anymore.

At the level I work at, which is technical, political issues do not really come into play. I suppose if there was a recession, I might even get more business because people would be anxious to squeeze more money out of their processes. When things are good you do not worry about these issues; when times are bad, squeezing every penny becomes important. I had good years during COVID and good years before and after COVID.

**CEOCFO:** *How do you work with your clients who may be a bit too close to what they want to do to recognize you are leading them in the right direction?*

**Dr. Shertok:** Typically, people respect facts, and the nice thing is if they are coming to me, they have a specific goal in mind. It is not like Marketing where you are trying to get someone to buy a certain soap or drink. If you are a consultant in a technical field, clients understand that they have a problem and that they have to do something about it; so they are open to accepting what you say.

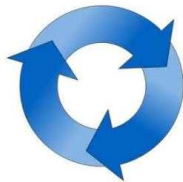
If there is an issue, it typically is a technical issue that they are aware of; sometimes they are equipment limited, sometimes they are materials limited. I can come up with a variety of technically sound solutions that may or may not be initially practical for their particular facility. However, through constant conversation, and constant interaction, we bring things to the surface.

**CEO CFO: *What is ahead for Process Industries Consultants?***

**Dr. Shertok:** Hopefully I will continue along the same road. People sometimes say that with a certain degree of "Oh my Gosh," but for me, if I can keep on doing what I am doing now - which is to have a number of clients that have technical issues and are willing to engage me, I can keep on doing this until I am 80. It is a pretty self-sustaining model.

**CEO CFO: *Final thoughts, when looking to engage with you what might people miss about your organization that they should understand?***

**Dr. Shertok:** Because we are small - just me - you get individualized attention. You get my expertise, which is not common today. Many senior engineers have retired and do not want to be bothered anymore. You are getting my fifty years of background and my expertise in using technical resources, along with ChatGPT and various AI type programs, along with Google. I am someone who knows how to exploit these resources. Finally, you are getting someone who enjoys what he is doing, which results in a much more positive experience.



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