



GRAKEN CORP.

The Value of Results Driven Engineering

The best way to ensure success is to control the project's "What", "When" and "How". This is obvious at first glance; but, harder to achieve than it seems.

In an ideal world, the "What" and the "How" should be defined prior to initiating the fabrication. We don't live in an ideal world; so we are forced to start the fabrication before everything is fully defined.

There's a very real danger that the control of the project can be lost if the house doing the project's definition is a 'Fabrication Dominated House'.

A couple of definitions are needed before continuing:

*Def. [as used here]: **Fabrication Dominated House**, means a shop that is dominated by fabricating things and engineering (such as design, drawings and analyses) is an after thought or all together missing.*

*Def. [as used here]: **Project Definition Dominated House**, means a shop that is dominated by engineering to include tasks and resulting products that define "what" is being made and "how" it is being made; such as designs, drawings and analyses.*

It is important to have a 'Project Definition Dominated House' (i.e., an Engineering House) responsible for defining the 'What' and the 'How' to ensure all the pieces fit together.

The potential to get a lot of pieces that don't fit together occurs when a fabrication dominated house decides how to solve the "What" and the "How". This is because they arrive at solutions that fit within their capabilities, which may not be best solution for the project(s). And their motivations are different too. A fabrication house is motivated by making stuff. While an Engineering house is motivated by defining solutions. **A successful project has both in balance!**

These different approaches are in stark contrast, an engineering house solves problems by redefining the solution to remain congruent with the overall projects objectives and goals; whereas, the fabrication house takes a much more narrow view of the problem at-hand (i.e., how to make use of what's already been made and to get that to work).

And this is why Engineering and Manufacturing are so distinctly different in their approaches. It is a challenge to find an example of a large project successfully implemented by a manufacturing dominated organization. But there are many examples of Engineering dominated companies successfully implementing large projects.

In summary, the best shot at success is an engineered solution implemented by a capable manufacturing house; and not the other way around!