



# **GRAKEN** CORP.

## **Process Map, Concept to Reality**

### Concept Exploration (no idea is off-limits)

- Goal should be a list of objectives to go from the 'As-Is State' to the 'Desired End State.'

### Concept Down-select

- Goal should be to identify multiple (potential) solutions
- Screen and converge on the preferred solution(s)
- Survey existing technology for applicability
- Glean enabling attributes and 'must have' features for success

### Categorize the information into two groups:

1) that which we know something about, and

2) that which we know little (or nothing) about.

- Once the information has been categorized, work in the category 'that we know something about.' By doing so, the number of unknowns is reduced; thus simplifying the remaining unresolved problem(s).

### Design Experiments to validate solution(s)

- Goal should be to simulate the 'in-use' environment as much as practical to ensure results are applicable and scalable.
- Design solutions for things 'that we know little about'
- Confirm the 'newly developed solutions' actually produce the desired result(s)

### Construct a Prototype Unit

- This is the first attempt to combine all the known information and produce the 'Desired End State' (emphasis on the hardware, less on the documentation because changes are likely)
- Run tests to validate performance
- Access the weakness and shortcomings
- Define the limitations and caveats of the prototype unit as it pertains to becoming over confident and/or unrealistic for the success of the production unit.

### Generate a Comprehensive Drawing Package

- Document with a drawing package (mono-detail drawings, and exploded assembly drawings for items slated for outside fab).
- Goal should be to collect the actual costs estimates for the production units.
- Compare the actual cost estimates with the cost targets
- Perform manufacturability studies to make use of best practices and reduce fab costs.