Value Innovation
using
Function Analysis

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Value and Innovation
Value = Benefit / Cost

1) Lower cost, maintain benefit
2) Increase benefit, maintain cost
3) Increase benefit and lower cost

Function Analysis

Breakfast exercise
Active verbs have duration over time:

Run  See  Turn  Measure
Support  Contain  Release

Passive verbs reflect states of being:

Know  Believe  Suppose  Be

Defining Functions Exercise
Function defined as:

This action is taking place on this object of

Active verb
Measurable noun

Value = Benefit / Cost

Benefit as function specifies what has to happen to what for value to be created
Benefits of using Function Analysis

- Stimulates creative / divergent thinking
- Clarifies assumptions
- Ensures a reality check
- Ensures nothing is skipped over
- Focuses on decisions, not positions
- Builds engagement and commitment through equal participation

The FAST Diagram

Goal as Function \(\rightarrow\) Basic Function \(\rightarrow\) Dependent Function \(\rightarrow\) Dependent Function

Scope of the Problem Under Study

How? \(\rightarrow\) Why?
The FAST Diagram

How?  

Scope of the Problem Under Study

Why?

Value creation occurs via implementation of basic functions

The FAST Diagram

How?  

“and” situation designated by functions linked vertically

Why?

Scope of the Problem Under Study
The FAST Diagram

How ?

“or” situation designated by functions exiting separately

Why ?

Goal as Function
Basic Function
Supporting Function
Supporting Function
Supporting Function
Dependent Function

Scope of the Problem Under Study

Functions support functions

How can this function be accomplished ?
Functions support functions

*How can this function be accomplished?*

By this function

*Why does this function exist?*
Functions support functions

*How can this function be accomplished?*

Between [square] → [square]

To accomplish this function

By this function

*Why does this function exist?*

Functions depend on supporting functions to the right

*How?*

Between [square] → [square] → [square] → [square] → [square]
Functions exist to support functions to the left.
Value creation takes place through implementation of basic functions

Requirements for a FAST session

• Experts representing multiple perspectives

• Willingness to do the mental effort of converting activities into functions

• Ability to leave ego behind to reach the best decision through team consensus

• Orientation to questioning and critical thinking

• Fire in the belly – passion for continuous improvement

• Working knowledge of FAST method
FAST Diagram Conventions

For information and training on the FAST Process please contact Richard R Gillen, PhD at rrgillen@yahoo.com