

Idealize Useful Functions (IFRs)

The Ideal Product for Useful Functions

1. Identify and Isolate the Main Modification
2. Modification Not Required
3. Remove Transmission Elements
4. Remove the Product
5. Comes that Way
6. Modify Minimum Part
7. Different Product
8. Natural Groupings

The Ideal Modification

1. Describe a Variety of Ideal Modifications
2. Consider an Ideal Inverse Modification
- What is the Ideal Level of Modification?
- What is the Ideal Sequence of the Function?
- What is the Ideal Duration?
- What is the Ideal Duty Cycle?
- What is the ideal Adjustability?
 - Extreme Environments
 - Different Products
 - Granularity of Adjustment
 - Continuous or Feedback
- Ideal Use of Energy
- Turn Burdens to Blessings
- When Should It Be Excluded? (The Zero Function)

Time for a New Physical Phenomenon?

- Evolutionary History
- Disruptive Technologies
- System Maturity (Patents)
 - Technical Parameter
 - Level of Invention
 - Patents in time
- Time for New Phenomenon?
 - Specialized
 - Diminishing Return
 - Feedback
 - Multiple Conflicts
- Line of Evolution Instead?

The Ideal Physical Phenomenon

- Identify the Competitive Alternatives
- Internet Product Search
- Observe Existing Products
- Known Disruptive Technology
- Patent Searching and Study
- Evolution of Field Phenomena
- Library of Effects
- Analogous Products—Patents Outside Your Industry
- Analogous Products—Mega Trend
- Analogous Products—Bio-mimicry
- Transition to use of Bulk Properties
- Hybrid Combination of Physical Phenomena
- Merge or Interact with Multiplied Tools
- Chaining Physical Phenomena

Discovering New Physical Phenomena

- Intelligent Little People
- Drive Measurement and Detection to the Extreme
- Bio-Mimicry
- Analogous Phenomenon
- Drive Fields to the Extreme
- Drive Order to the Extreme
- Drive Attributes to the Extreme

Filter for Ideal Phenomenon

- Abundance
- Inherent Harm
- Multiple Functions
- Scalable

The Ideal Tool for Useful Functions

- Self Service
- Already Poorly Performed by Native Fields
- Abundant Native Fields
- Use of Cheap Abundant Substances
 - Powders—Foams—Voids—Water—Ice—Steam—Hydrates—Air—Nitrogen—Carbon Dioxide—Oxygen—Corrosion—Decay—Sand—Soil—Rocks—Waste—Waste Water—Sawdust—Waste Glass—Waste Gases—Waste Paper—Garbage—Yard Waste—Industrial Wastes—Hybrid Substances—Disassociated Forms of Any of the Above—Products of Interactions—Starting Materials—Final Products—Semi-Finished Elements.
- Nearby Similar Tool
- Simplified Copy of the Current Tool
- Theft of Functions from Super-System
- Theft from Alternative or Competing Objects
- Boost Incidental Functions
- Steal Human Interaction
- Consolidation of Objects

Idealize Informing Functions (IFRs)



The Ideal Observer for Informing Functions

- The Ideal Observer Doesn't Need to Know

The Ideal Subject of Measurement

- Measurement Not Required
- Non-Existent Subject
- Direct Acting Sensors (Operation about Critical Points)
- Comes Pre-Measured
- The Minimum Part or Constituents
- Multiple Subject Elements (Natural Groupings)

The Ideal Modification for Informing Functions

- Describe Measurement in a Variety of Ways—if I could snap my fingers
- Ideal Level
- Ideal Sequence
- Ideal Duration
- Ideal Duty Cycle
- Ideal Adjustability
- When Excluded?

Time for a New Physical Phenomenon?

- Evolutionary History
- Disruptive Technologies
- System Maturity
 - Technical Parameter
 - Level of Invention
 - Patents in Time
- Time for New Phenomenon?
 - Specialized
 - Diminishing Return
 - Feedback
 - Multiple Conflicts

The Ideal Physical Phenomenon

- Competitive Alternatives
- Internet Product Search
- Existing Products
- Disruptive Technologies
- Patent Searching
- Library of Effects
- Analogous Transformation
- Analog—Mega Trend
- Analog—Bio-mimicry
- Transition to Use of Bulk Properties
- Chaining Phenomena
- Secondary Phenomena
- Measure a Copy or Facsimile
- Successive Detection
- Resonance
- Derivative Detection
- Multiple Subjects
- Field Markers
- Markers
- Intelligent Little People
- Evolution of Fields
- Interacting Multiples
- Hybrid Combination


Filter for Ideal Phenomenon

- Abundance
- Inherent Harm
- Multiple Functions
- Scalable

The Ideal Chain of Objects for Informing Functions

- Already Poorly Performed by Native Fields
- Abundant Native Fields
- Laundry List of Adjacent Elements
- Use of Cheap Abundant Substances
 - Powders—Foams—Voids—Water—Ice—Steam—Hydrates—Air—Nitrogen—Carbon Dioxide—Oxygen—Corrosion—Decay—Sand—Soil—Rocks—Waste—Waste Water—Sawdust—Waste Glass—Waste Gases—Waste Paper—Garbage—Yard Waste—Industrial Wastes—Hybrid Substances—Disassociated Forms of Any of the Above—Products of Interactions—Starting Materials—Final Products—Semi-Finished Elements
- Nearby Similar Measurement Device
- Simplified Copy
- Steal Human Service to System
- Theft of Functions from Super-System
- Theft from Alternative or Competing Objects
- Boost Incidental Functions
- Steal Human Interactions

Idealize Harmful Functions (IFRs)



Simplify by Adding Functions

- ### **The Ideal Tool for Harmful Functions**
- Tool Not Required
 - Non-Existent Tool

- ### **The Ideal Modification for Harmful Functions**
- #### **Make Useful**
- Reframing Harmful Functions as Useful Functions
 - Perform Anti Function
 - Reverse Fields or Action
 - Work With
 - Aesthetic Incorporation
 - Make Adjustable
 - Fixed—Adjustable—Continuous—Feedback
 - Perform Accurately
 - Harmonize Sequence
 - Perform Stages when Useful
 - Storage of Harmful Action
 - Combine with Other Harmful Actions
 - Intelligent Little People

- ### **The Ideal Product for Harmful Functions**
- Product Not Required
 - Eliminate the Product
 - Non-Existent Waste Product

- ### **Avoid Harm**
- Weaken or Misinform the Harming tool
 - Maximum Action with Minimum Field
 - Mediator
 - Alien—Modified Tool or Product Substances—Void
 - Redirect Harm to a Pre-weakened, Expendable Product
 - Redirect Extreme Action
- ### **Diminish Harm**
- Neutralize the Harming Field
 - Channel Harm
 - Strengthen while Harming
- ### **Remedial**
- Detection of Harm
 - Healing
 - Previously Placed Cushion
- ### **Verify that the System is Simpler**
- ### **Evaluate Candidate Systems**

Table of Fields

Elastic Stress		Gravity	Friction	Adhesion	
Buoyant Force		Hydrostatic Pressure	Jet Pressure	Surface Tension	
Centrifugal Force		Inertial Force		Coriolis Force	
Oder & Taste		Diffusion	Osmosis	Chemical Fields	
Sound	Vibrations & Oscillations		Ultrasound	Waves	
Thermal Heating or Cooling			Thermal Shocks		Information
Corona Discharge	Current	Eddie Currents	Particle Beams		Nuclear Forces
Electrostatic Fields		Magnetic Fields		Electromagnetic Fields	
Radio Waves	Micro Waves	Infrared	Visible Light	Ultraviolet	X-Ray Cosmic