**Business in the
4th Industrial Revolution**

The Functionalist Principles of Business Processes

The functionalist principles allow managing the roots of the functionality of things and the root causes of problems

**The Unicist
Research Institute**

Pioneers in Research since 1976

The Functionalist Principle

The functionalist principles allow managing the roots of the functionality of things and the root causes of problems

The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. Their interaction defines the functionality of the binary actions that make functionalist principles work.

Binary actions are two synchronized actions that, one the one hand, open possibilities establishing a functional context and, on the other hand, close processes to generate results.

The functionalist principles of things are defined by the intrinsic concepts that manage their functionality and the extrinsic concepts that manage their use. They are based on the ontogenesis of evolution that was discovered by Peter Belohlavek.

The Use of Binary Actions

Binary actions are intuitively used by those who need to achieve results. Binary actions make things work. 100% of the business models of expansive businesses are based on binary actions that include the use of catalysts.

The discovery of the functional structure of binary actions made the systematic design of synchronized binary actions possible, which simplified and ensured the results of business processes.

The Functionalist Approach in the 4ᵗʰ Industrial Revolution
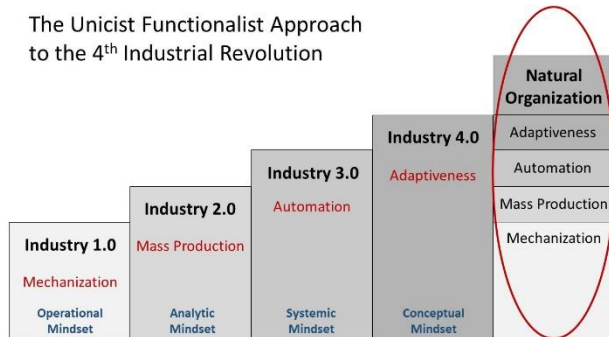
The 4ᵗʰ Industrial Revolution introduced the functionalist approach to businesses based on managing the functionality of their processes to make them adaptive and customer centered.

It requires integrating the Internet of Things and the Intelligence of Things.

What For?

The functionalist approach manages the root causes of problems, accelerates processes, and diminishes costs:

- To manage the functionality of business processes
- To design and develop business strategies
- To define and manage marketing and sales processes
- To install peopleware
- To develop cobots and applications

How?

The unicist functionalist technologies manage the fundamentals of business processes using:

1. Synchronized binary actions and business objects to ensure results
2. Unicist functionalist design to build adaptive processes
3. The functional structures of business processes to make them work
4. Unicist AI to develop intelligent systems and cobots

The Use of Binary Actions
to ensure results

The use of functionalist principles is based on the installation of binary actions, that are driven by the use of unicist AI and business cobots.

Binary actions are two synchronized actions that, on the one hand, open possibilities and, on the other hand, ensure the achievement of results.

The use of unicist functionalist design allows developing the binary actions and business objects that are needed to empower business functions.

Example: The Functionalist Principle of Strategy Building

The purpose of strategy building is the achievement of goals in environments where the results depend on the feedback of actions. These goals must have been confirmed as being possible to be achieved.

The active function is based on the development of maximal strategies that aim at growth and drive towards the expansion of boundaries.

The energy conservation function is given by minimum strategies that fully depend on the actor and aim at ensuring survival or results.

The binary actions are based on the delivery of added value to have the necessary influence to expand the boundaries and, on the other hand, on the payment of prices to achieve the goal of surviving or ensuring results.

Examples of Evident Binary Actions

- Learning + Teaching = Knowledge acquisition
- Efficacy + Efficiency = Effectiveness
- Participation + Power = Leadership
- Root Causes + Triggering Causes = Solutions
- Productivity + Quality = Production
- Desirability + Harmony = Aesthetics

Unicist Functionalist Knowledge
To Manage the Root Causes of Problems

The unicist functionalist knowledge allows managing the root causes of problems. Functionalist knowledge deals with the functionalist principles of things that define the roots of their functionality.

Functionalist knowledge describes and defines the functionalist principles that drive things and the binary actions that make them work. It defines the roots of the functionality of things and the root causes of the problems that may exist.

The Evolution of Functionalist Knowledge

Based on the conjunction "AND"

Functionalist Principles (KNOW WHY)
To Manage Adaptive Environments

C

Empirical Sciences (KNOW HOW)
To Manage Systemic Environments

B

A

Dogmatic & Common Sense (WHAT)
For Universal Application

Based on the disjunction "OR"

A) The knowledge of WHAT, was provided by the dominant beliefs and commonsense
B) The justified empirical knowledge, the KNOW-HOW, prevailed over beliefs
C) The KNOW-WHY provided reliable functionalist and operational knowledge

Functionalist knowledge requires integrating the know-how of solutions with the know-why that is defined by the functionalist principles of the solutions, using the necessary reasoning patterns to develop functional solutions.
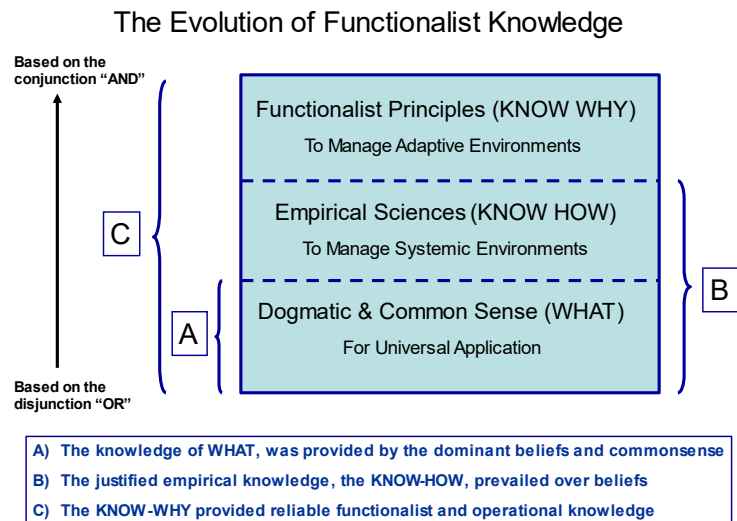
Levels of knowledge

There are different levels of knowledge that have different uses:

1) Dogmatic knowledge that establishes the subjective limits of actions. Commonsense knowledge is a type of dogmatic knowledge.
2) Empirical knowledge that deals with the know-how of things
3) Conceptual knowledge that deals with the functionalist principles of things and provides the know-why of their functionality.

Functionalist knowledge integrates these three levels of knowledge. It is the knowledge that defines and describes the functionality of things based on their functionalist principles.

It establishes the bridge between empirical knowledge and metaphysical principles.

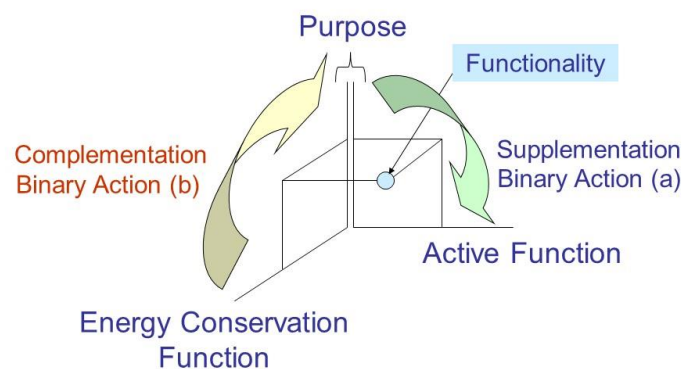# The Basics of the Functionalist Principles Applied to Business

The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function.

These elements are integrated by the complementation and supplementation laws established by the unicist logic.
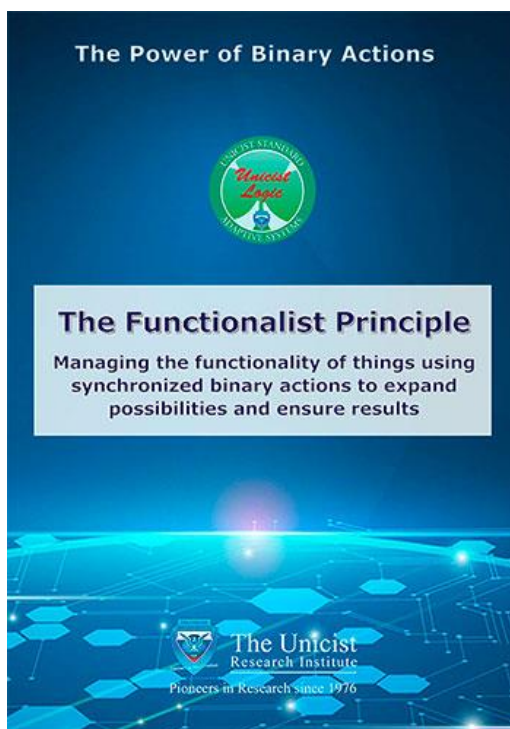
This structure works through unicist binary actions (UBA) that produce the functionality of any entity or process, whatever its kind.

The Functional Structure of Things
Ontogenetic Map in Unicist Standard Language

Purpose

Functionality

Complementation Binary Action (b)

Supplementation Binary Action (a)

Active Function

Energy Conservation Function

The Power of Binary Actions

The Functionalist Principle

Managing the functionality of things using synchronized binary actions to expand possibilities and ensure results

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The 4th Industrial Revolution introduced the functionalist approach to businesses based on managing the functionality of their processes to make them adaptive and customer centered.

This approach is based on the discovery of the intelligence that underlies nature that defines the principles of its functionality and led to the development of the unicist logic that allows managing the intelligence that deals with the functionality of "things".

It is based on the use of functional knowledge to manage the real world that integrates the know-how and the know-why of "things".

Core Differences with First Principles

Aspect	First Principles	Functionalist Principles
Purpose	Develop Solutions	Develop Solutions
Structure	Undefined	Triadic (*)
Initial Approach	Reverse Engineering	Ontological Reverse Engineering
The structure of solutions	Based on Cause-effect Actions	Based on Binary Cause-effect Actions
Solution Building	Abductive Reasoning	Conceptual Engineering & Abductive Reasoning
Analytical Method	Root Cause Management	Unicist Logic Driven
Testing	Pilot Testing	Pilot Testing & Destructive Testing

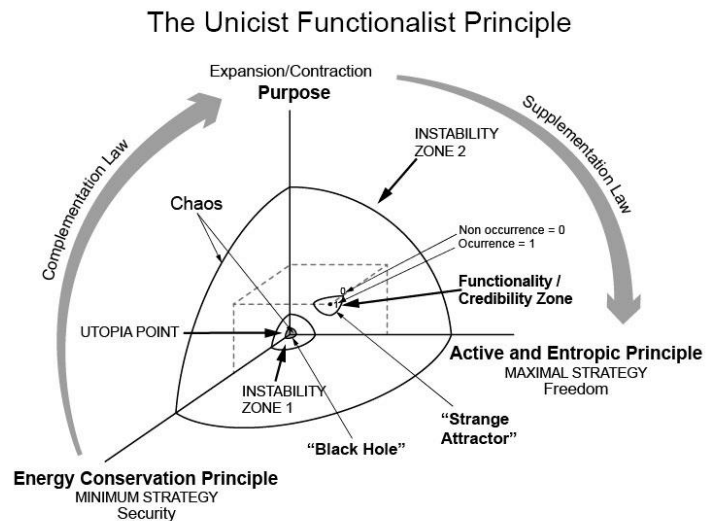(*) Defined by a Purpose, an Active Function, and an Energy Conservation Function.

Core Differences with Design Thinking

Aspect	Design Thinking	Functionalist Design
Purpose	Develop Solutions	Develop Solutions
Structure	Undefined	Triadic (*)
Initial Approach	Empathic	Ontological Reverse Engineering
The Structure of Solutions	Based on Cause-effect Actions	Based on Binary Cause-effect Actions
Solution Building	Abductive Reasoning	Conceptual Engineering & Abductive Reasoning
Analytical Method	Inductive and Deductive	Unicist Logic Driven
Testing	Pilot Testing	Pilot Testing & Destructive Testing

Mathematics of the Functionalist Principles

The mathematics validates the use of functionalist principles. It is provided by the mathematics of the unicist logic that allows measuring the functionality of things. It allows measuring the intrinsic functionality of things and credibility of things in the environment.

There are functionalist principles that define the intrinsic functionality of things and explain how they work and functionalist principles that define the extrinsic functionality of things that explain their use value in the environment. The mathematics of intrinsic functions defines their possibility of working and the mathematic of extrinsic functions defines the possibilities of their use.

The Unicist Functionalist Principle

As it can be seen on the description of the functionalist principle, it is composed by the conjunction of a purpose (P), an active and entropic function (AF) and an energy conservation function (ECF).

This implies that the mathematics that defines the functionality of something requires the multiplication of the values of P, AF and ECF. The value of the functionality of things varies between 1 and 0.

Intrinsic Functionalist Principle (IFP) = P*AF*ECF

This defines the different values of each element of the triadic structure of a functionalist principle. The values of the elements are defined by the value generated by the operational components of things.

The instability zones 1 and 2 define the influence of the wide context, which works as a gravitational force (GF) that makes things possible. The displacement of the functionality or credibility zone is influenced by the restricted context, which works as a catalyst (C) to open possibilities and accelerate processes.

Functionality = GF*C*IFP/EFP

Mathematics to measure Functionality
Measure of the Functionality of ………………………

	Substitute	Wide Context	Restricted Context	Function	Concept of the system that transforms qualitative and quantitative indicators into mathematical algorithms.
0					1 Indicator
					2
.25					3 Indicator
					4
.50					5 Indicator
					6
.75					7 Indicator
					8
1.					9 Indicator

Substitute		
Wide Context		
Restricted Context		
Function		

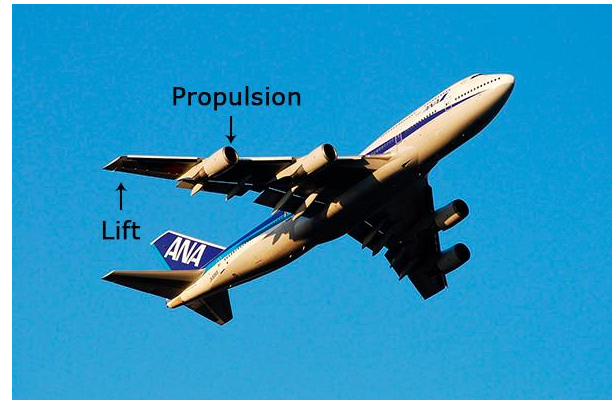# The Functionalist Principles in Everyday Life
A description of the Functionality of Things

The Functionalist Principle of Airplanes

The purpose of flying an airplane can be considered to move from one airport to another.

The active function is given by their propulsion and the energy conservation function is given by the lift provided by the wings.

The binary actions to make an airplane fly begin by producing the propulsion that generates the necessary speed of the airflow on the wings of the airplane to generate the lift.

The Functionalist Principle of Bicycling
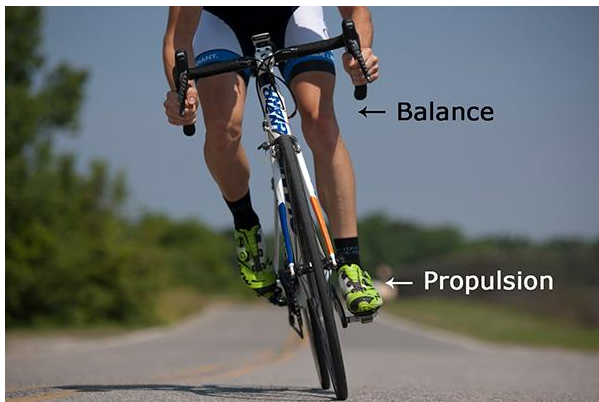
The purpose of riding a bicycle is to travel from one place to another.

The active function of the riding of bicycles is given by the actions on the pedals while the body of the rider is the energy conservation function that sustains the balance to ensure their functionality.

The binary actions of riding a bicycle begin by producing the propulsion to be able to balance on it.

The Functionalist Principle of Electric Motors

The purpose of an electric motor is to convert electrical energy into mechanical energy. DC motors and AC motors are based on the same essential principles that define their triadic structure.

Their active function is based on transforming electrical energy into magnetic energy. The energy conservation function transforms the magnetic energy into mechanical energy.

The binary actions of the process are, on the one hand, the transformation of electrical energy into magnetic energy and, on the other hand, the transformation of the magnetic force into mechanical energy. These processes happen within the rotor and the stator of an electric motor.
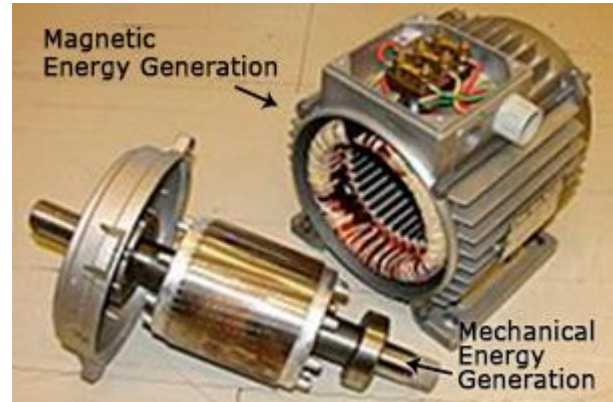
Applications of the Functionalist Principles
To experience the binary actions that make things work

Manage the Functionalist Principle of Leadership

The purpose of leadership is ensuring the authority of a leader by driving people towards the achievement of something. It applies to all kinds of leaderships, whether they are in familiar, social, or business environments.

The active function is given by the participation of the members of a group who aim at achieving their goals while they challenge the authority.

The energy conservation function is based on the non-exerted power the authority has to sustain the functionality of the participation and the achievement of goals.

The binary actions are, on the one hand, the participative activities between the leader and the members and, on the other hand, the existence of the necessary power to influence people without needing to exert it.

Manage the Functionalist Principle of Relationship Building

The purpose of relationship building is to establish a complementation between two or more people. This applies to all types of relationships, whether they are familiar, personal, business, or social relationships.

The active function of relationship building is the demonstration of the existence of a functional value, which means that the participation of the person who is building a relationship is necessary.

The energy conservation function is the existence of a personal common space that can be shared.

The binary actions of the process are, on the one hand, the demonstration of the value that is being added and, on the other hand, the finding of a personal common goal that integrates the participants.

Manage the Functionalist Principle of First Choice Marketing

The purpose of first choice marketing is to achieve the perception of superior subjective value propositions.

The active function is defined by the differentiation and the energy conservation function is given by the satisfaction of the needs of the client.

The basic binary actions are, on the one hand, generating expectations and then having fully segmented value propositions and, on the other hand, managing the differentiation of the segmented value propositions.

We suggest that you recognize the functionality of the binary actions you already use

Unicist Functionalist Design

The unicist functionalist approach to the 4IR is based on integrating the Internet of Things with the Intelligence of Things that allows developing intelligent systems.

The development of the unicist logic allowed managing the intrinsic functionality and the use value of things and gave birth to the Unicist AI that emulates the intelligence of nature and human intelligence.

The unicist functionalist design was developed to enhance the functionality of business processes. The unicist functionalist design is developed in participative solution-factories to design in adaptive environments.

This approach manages the functionality, dynamics and evolution of business functions and processes and is necessary to:

- Develop the functionalist design of adaptive business processes

- Design business strategies

- Design and implement binary actions to ensure results

- Design and develop intelligent business cobots

- Design and develop intelligent systems and applications

- Design and manage R&D processes of products, devices, and processes

- Develop business objects and catalysts to manage processes

- Design market expansion processes

- Manage process improvement, innovations, and changes

- Design software that includes intelligent functions

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The functionalist design process begins with the existence of a solution that needs to be built and ends with the installation of the solution.

Unicist AI to Build Intelligent Automation

The installation of binary actions in automation processes requires using unicist AI to manage the adaptability and synchronicity. Unicist AI is based on the unicist logic that was developed emulating the intelligence that underlies nature and human intelligence.

Unicist AI is based on the rules of the unicist logic that deals with the functionality of things. It is a fundamentals-based AI that allows managing the functionality of processes of any kind and building intelligent systems and cobots. When necessary, these cobots are installed in mobile applications.
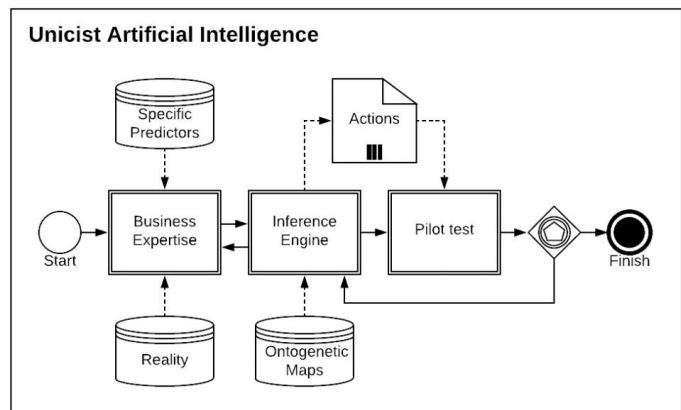
The Use of Rules and Predictors
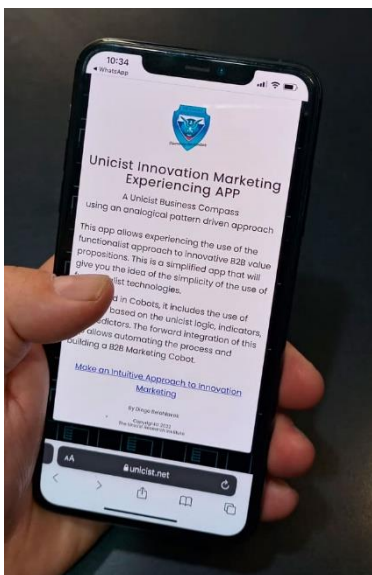
Fundamentals based AI provides the meaning of data, its integration with data-based AI allows managing processes using adaptive automation.

Fundamentals-based AI uses indicators and predictors both to monitor the functionality of processes and as an input to the inference engine.

It uses the rules of the unicist logic and allows developing solutions and learning from the pilot tests of their implementation until their functionality has been confirmed. Fundamentals-based AI allows automating the use of binary actions, catalysts, business objects, and marketing objects to develop processes of any kind.

Main Markets

• Automobile • Food • Mass consumption • Financial • Insurance • Sports and social institutions • Information Technology (IT) • High-Tech • Knowledge Businesses • Communications • Perishable goods • Mass media • Direct sales • Industrial commodities • Agribusiness • Healthcare • Pharmaceutical • Oil and Gas • Chemical • Paints • Fashion • Education • Services • Commerce and distribution • Mining • Timber • Apparel • Passenger transportation –land, sea and air • Tourism • Cargo transportation • Professional services • e-market • Entertainment and show-business • Advertising • Gastronomic • Hospitality • Credit card • Real estate • Fishing • Publishing • Industrial Equipment • Construction and Engineering • Bike, motorbike, scooter and moped • Sporting goods

Country Archetypes Developed

• Algeria • Argentina • Australia • Austria • Belarus • Belgium • Bolivia • Brazil • Cambodia • Canada • Chile • China • Colombia • Costa Rica • Croatia • Cuba • Czech Republic • Denmark • Ecuador • Egypt • Finland • France • Georgia • Germany • Honduras • Hungary • India • Iran • Iraq • Ireland • Israel • Italy • Japan • Jordan • Libya • Malaysia • Mexico • Morocco • Netherlands • New Zealand • Nicaragua • Norway • Pakistan • Panama • Paraguay • Peru • Philippines • Poland • Portugal • Romania • Russia • Saudi Arabia • Serbia • Singapore • Slovakia • South Africa • Spain • Sweden • Switzerland • Syria • Thailand • Tunisia • Turkey • Ukraine • United Arab Emirates • United Kingdom • United States • Uruguay • Venezuela • Vietnam.

Learn about The Unicist Research Institute

Since 1976, The Unicist Research Institute has been the world-leading research organization that introduced the functionalist approach to science to research and develop the functionalist principles of the real world. In its origins, the objective was to find the functional roots of evolution so that they could be used to build future scenarios and develop strategies.

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