

The Next Stage: A Causal Approach to Business

Unicist Functionalist Design

Managing the roots
of the functionality of
processes, products,
and services using
functionalist principles
and binary actions.



The Unicist
Research Institute

Pioneers in Research since 1976

Functionalism is the Standard of the 4th Industrial Revolution

Functionalism is a solution-building approach that uses the knowledge of the know-how and know-why of things and the unicist functionalist approach to make things work.

The unicist functionalist approach is the new stage to dealing with the functions of business, economic, and social organizations as adaptive systems. It uses unicist functionalist design to build solutions.

In the ChatGPT you will find the research works of The Unicist Research Institute that define the unicist approach. They include the unicist functionalist approach to science, applicative technologies, and functionalist tools to manage adaptive systems and environments.

Access

A Logical Approach to Abstractions to Ensure the Functionality of Solutions

The success of businesses or any adaptive process depends on the accuracy of the abstractions that have been made to define their functionality. Conscious abstract reasoning is required to go beyond the operability to manage the functionality of solutions.

The discovery of the unicist logic, which explains the functionality of things, made the conscious approach to abstractions possible. The unicist logic provided the structure for abductive reasoning to explain the functionality and led to the development of the “functionalist principles” to manage the functionality of the real world.

The functionalist principles define 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 principles allow for managing the unified field of systems and developing the binary actions that make them work.

This led to the development of the Unicist AI, which is a rule-based intelligence, that allows dealing with the ab-

Access

stractions needed to manage the functionality of things to generate accurate operational solutions.

The building of solutions is based on the use of functionalist design. It ensures results by developing pilot-test-driven reflection (action-reflection-action) to avoid fallacious diagnoses and dysfunctional actions.

Basic Discoveries to Manage the Functionality of Business Processes

Since 1976, The Unicist Research Institute has been focused on a functionalist approach to science to research the roots of evolution and their application in social, economic, and business environments.

The main basic discoveries applied to business are:

- 1** The discovery of the functionalist principles that define the functionality of business processes and work through synchronized binary actions to ensure the generation of value.
- 2** The emulation of the intelligence that underlies nature, by developing maximal and minimum strategies to ensure growth and results.
- 3** The discovery that human actions are driven by the concepts people have in their minds, which underlie buying arguments, allows increasing marketing effectiveness.
- 4** The emulation of the organization of nature, based on the use of driving, catalyzing, inhibiting, entropy-inhibiting, and gravitational objects to increase energy efficiency and adaptability.
- 5** The development of the unicist logic that defines the functionality of things and gave birth to unicist AI to manage adaptive systems and environments.

25 Minutes Read

Beyond Digitization & Automation: The Paradigm Shift of the 4IR

The paradigm shift is based on organizing by managing the functionality of businesses using business objects instead of managing the operability based on processes and tasks, which was the case until the 3rd industrial revolution. It increases energy efficiency by up to 30% depending on the market and industry.

It has to be considered that all adaptive environments are organized by objects to ensure the adaptability of the systems. The organs of the human body are an example of the organization by objects in nature. Amazon and Google are examples of object-driven organizations.

Object-driven organization emulates the organization of nature. The first object-oriented programming language, Simula, was also driven by the emulation of nature.

The 4IR enhanced value generation. Digitization and automation without the use of business objects are part of the 3IR. The object-driven organization is the catalyst that is being introduced by the 4IR to open the possibilities for business adaptability and to enhance energy efficiency and customer orientation.

20 Minutes Read

The 4IR opened a new stage in a business organization based on the use of social, industrial, and business objects as autonomous interdependent entities to generate value in business. We suggest that you profit from this new stage.

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The Use of Functionalist Principles

Functionalist principles define the unified field of things and why and how they work. The why is defined by their functionalist principles and the how is defined by their binary actions.

The functionalist principles define 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.

This defines the functional structure of things that works through synchronized binary actions and manages the functionality of any entity or process.

12 Minutes Read

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

The knowledge of functionalist principles is like mathematics, which is universal but needs to be understood and managed at a personal level to accept its universal application.

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

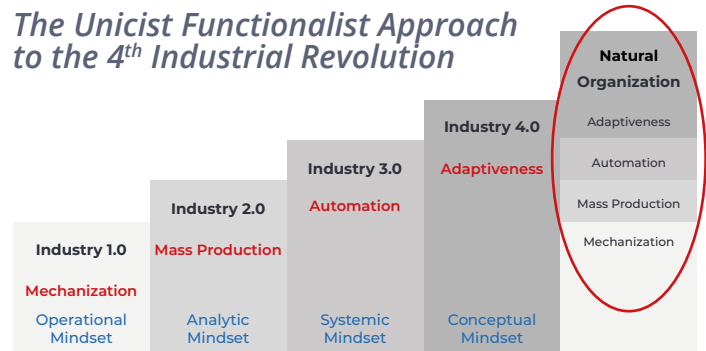
15 Minutes Read

Adaptability & Customer Orientation in the 4th Industrial Revolution

The Unicist Functionalist Designers (UFDs) provide the intelligent structures of business functions to develop the adaptive and customer centered processes required by the 4th Industrial Revolution.

The UFDs give access to the functional structures that drive the use value and the operation of what is being designed.

The Unicist Functionalist Approach to the 4th Industrial Revolution



Where is Functionalist Design Necessary?

These designers manage the roots of the functionality of business processes, products, and services. They are necessary to:

- Design and develop solutions for complex problems
- Develop the functionalist design of adaptive business processes
- Design products and services
- Design and implement binary actions to ensure results
- Design and develop intelligent systems, cobots and apps

Which are the Basics?

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

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

Unicist Functionalist Design

The unicist functionalist design was developed to enhance the functionality of business processes based on the use of functionalist principles. We suggest experiencing the use of functionalist principles at a personal level.

The unicist functionalist approach to the 4IR is based on the use of functionalist principles and binary actions using the Internet of Things and the Intelligence of Things that allow the development of intelligent systems.

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

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

11 Minutes Read

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

Managing the Root Causes of Problems

Functionalist design implies managing the functional structure of the solution, based on the functionalist principles that define a process. It ends with an operational solution that can be managed by anyone without needing to manage the functionalist principles of what is being done. It uses binary actions to simplify this process.

The unicist logic allows managing the root causes and developing binary actions that manage maximal strategies to grow and minimum strategies to ensure results. It is the approach needed to manage adaptability in the 4th Industrial Revolution.

12 Minutes Read

Functionalist design is also used to solve complex problems:

- **Triggering causes:** that define the operational causes that generate a problem.
- **Root causes:** that define the functional causes of the problem.
- **Limit causes:** that define the boundaries of what is possible to be achieved.

Functionalist design requires an empathetic approach to the problem that is being managed to be able to emulate its functionality in mind.

10 Minutes Read

The Use of Binary Actions to ensure the functionality of business processes

The use of functionalist principles is based on installing 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 the development of the binary actions and business objects that are needed to empower business functions. Example:

The Functional 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 the 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.



Examples of Evident Binary Actions

- Learning + Teaching = Knowledge acquisition
- Productivity + Quality = Production
- Marketing + Selling = Generation of revenue
- Root Causes + Triggering Causes = Solutions
- Efficacy + Efficiency = Effectiveness
- Empathy + Sympathy = Influence building
- Participation + Power = Leadership
- Processes + Objects = Organization
- Desirability + Harmony = Aesthetics

Intuitive Design Module – Open Access

The intuitive design module helps to develop the initial solutions when using functionalist design in adaptive environments. It provides final solutions when simple problems are being solved.

The use of the functionalist principles of processes avoids making fallacious diagnoses and developing dysfunctional actions in adaptive environments.

Open Access

Functionalist design implies managing the functional structure of the solutions, based on the functionalist principles that define processes. It ends with an operational solution that can be managed by anyone without needing to manage the functionalist principles of what is being done.

If you need guidance in the use of the design module you can access our Collaboration Center. [Access](#)

The Unicist Functionalist Designer

The Unicist Functionalist Designers are tools to develop the participative design in adaptive environments to empower the functionality of business processes. They are based on a unicist ontological approach that allows managing the functionality and operation of adaptive systems.

Roles in Functionalist Design Groups

The participative process includes three roles to simplify and accelerate the design processes:

- 1 A coordinator** to organize the development of the design processes.
- 2 An ombudsperson** who is responsible for ensuring the benefits for customers and users.
- 3 A fallacy-shooter** who is responsible for ensuring the testing processes.

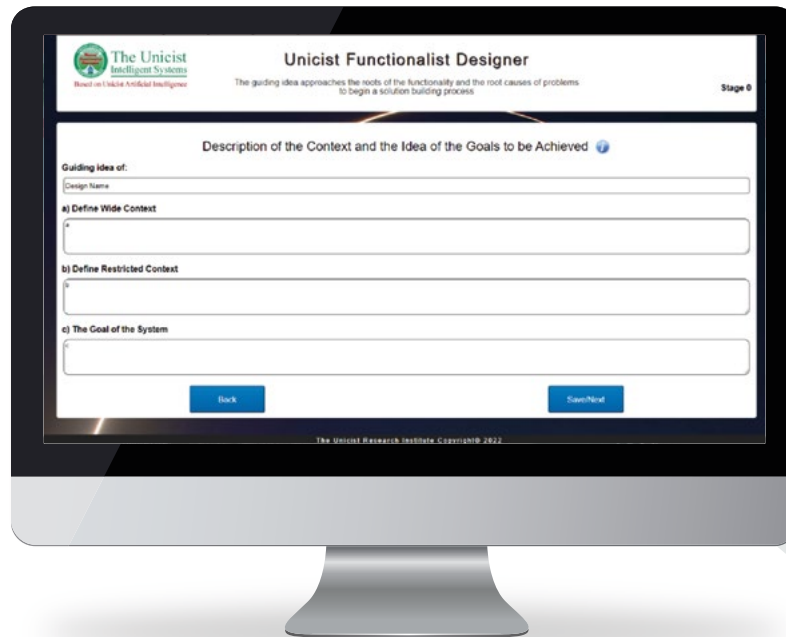
The Functionalist Design Process

The input to any functionalist design is the conceptual structure of the functionality of the entity that is being designed and the output is the definition of the operational design that includes the definition of the necessary binary actions. The process includes the following modules:

Input Module

The unicist functionalist designer is a tool to design solutions based on the management of the requirements of a solution, the roots of its functionality, and the root causes in the case of problem-solving.

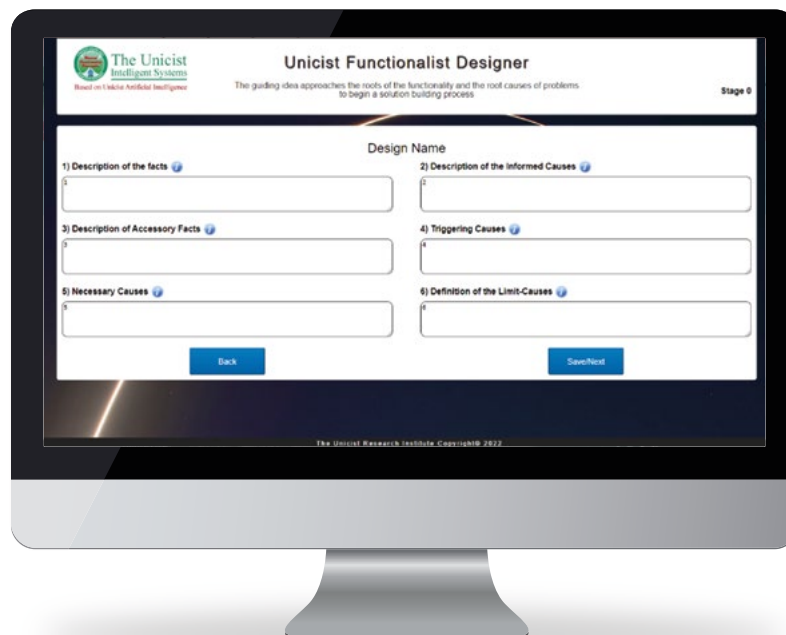
The design work begins by defining the wide context that influences the system and the restricted context that catalyzes its functionality. When the design of a specific solution occurs in a field where the functionalist structure of the category of the solution has been researched it is necessary to use the ontogenetic map of the functionalist principles.



When it is a new category of system it is necessary to research the functionalist principle which takes time and therefore requires developing a solution using palliative solutions. In this case, the design in itself is part of the research project to find the functionalist principles.

Diagnostics Module

When the design includes the solution of a problem, it is necessary to develop a research work that includes all aspects that begin with the description of the facts and end with the definition of the solution and its test. This is the case in 90% of the design processes including the design of innovative solutions.



It is necessary to have sound knowledge of the field that is being approached and in the case of innovations, it is necessary to have the concept of the solution. In the case of innovation, the initial objective is to begin by designing a prototype. If there already exists a prototype there is no need for dealing with problem-solving.

Solution Design Process

There are different levels of complexity of problems. Three dimensions define their complexity:

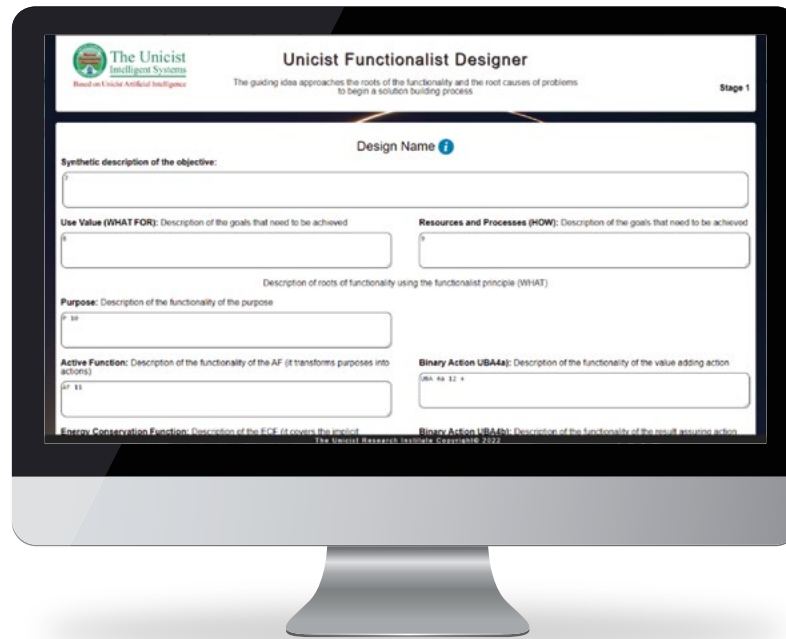
- 1** The level of dependence on the feedback from the environment, which is defined by the credibility and influence a solution has. The more dependent, the higher the level of complexity.
- 2** The size of the solution that is being built. The larger the scope of activities included in a solution the higher the level of complexity.
- 3** The level of adaptability of the solution, which defines the intrinsic complexity of its functionality.

The Functionalist Designer manages three levels of complexity which are integrated into one system. It is necessary to minimize the design effort by making solutions as simple as possible maximizing the influence on the environment to minimize the costs. The levels are:

- 1** Level 1 of complexity, where the solution does not depend on the feedback from the environment. The solution only needs to ensure its intrinsic functionality.
- 2** Level 2 of complexity, where the solution needs to be adaptive to the environment and has no intrinsic complexity.
- 3** Level 3 of complexity, where the solution needs to be adaptive and has and is complex in its intrinsic functionality.

Module for Complexity Level 1

This level of complexity is based on managing the central purpose, active function, and energy conservation function of a solution.



They allow defining the synchronized binary actions that make the solution work and define the pilot tests to ensure the intrinsic functionality and the destructive tests that ensure the use of the solution. This tool is guided by a concept map that defines the logic implicit in the different steps.

Module for Complexity Level 2

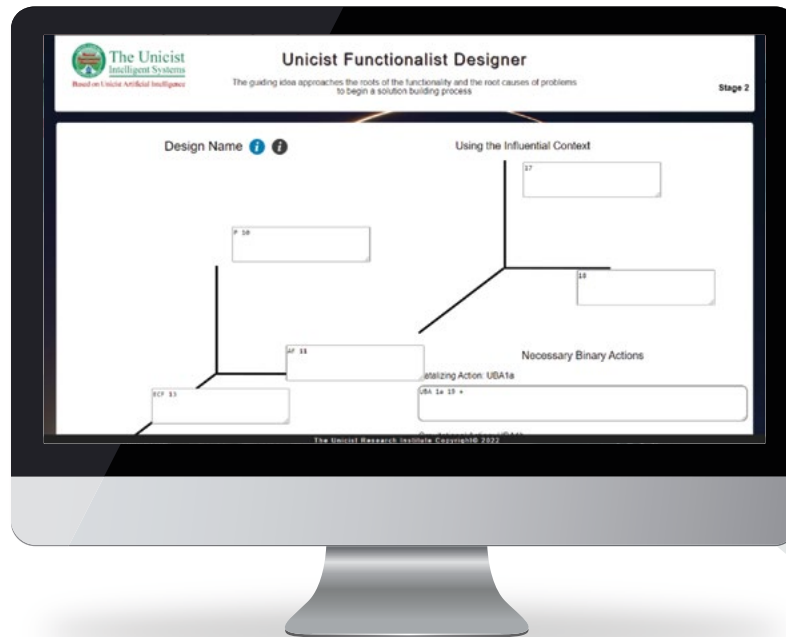
When a solution is focused on the functionality of things the level of complexity is 1. When the solution aims at the use value of something the level of complexity is 2 or 3.

The 2nd level of complexity is driven by the need of developing an adaptive solution that manages its interdependence with the environment. It uses the intrinsic functionality that has been designed before and adds the influence of the wide and restricted context.

The wide context makes the solution exist. Without fitting into the wide context solutions cannot be recognized.

The restricted context expands the possibilities of the solutions by exposing the possibility of approaching a solution based on the features of the existent alternatives plus the satisfaction of latent needs.

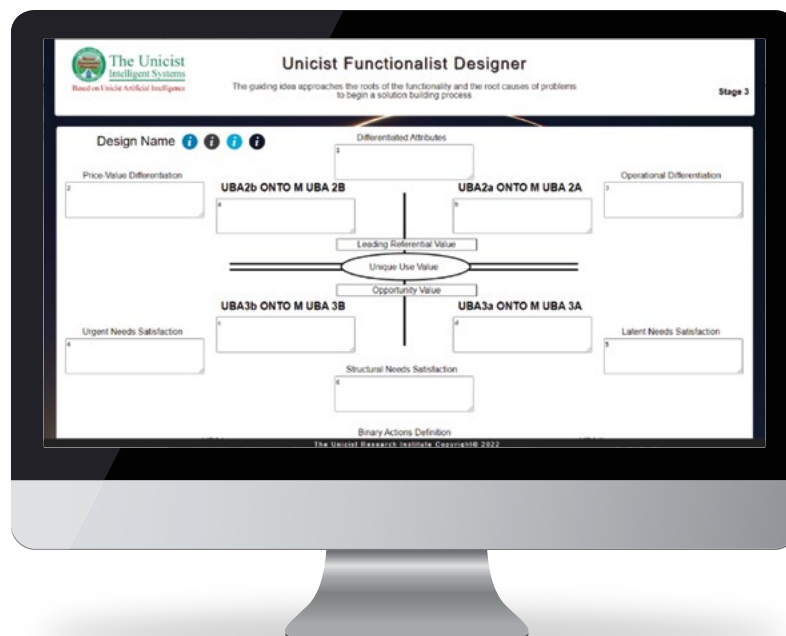
It implies developing the binary actions to manage the influence of the wide context and using the binary action implicit in the restricted context to open possibilities.



This level of complexity is managed by developing the necessary pilot tests of the functionality of the solution and the destructive test to test the limits of the functionality based on the possible changes in the environment.

Module for Complexity Level 3

The 3rd level of complexity needs to be managed when the solution needs to be adaptive in the environment but is also integrated by intrinsic adaptive entities that influence the external adaptability.



This level uses the input from the preceding levels that define the context and the functionality of the solution.

The third level of complexity manages the operational complexity which is defined by the development of the necessary binary actions that drive the maximal strategy of the solution and the minimum strategy of the solution.

The maximal strategy drives growth by developing the necessary added value and the minimum strategy ensures results by focusing on the purpose of the solution.

The third level includes the binary actions of the first and second levels of complexity which implies that it ends by developing the following binary actions:

- 1 The actions to manage the influence of the environment
- 2 The actions to generate value
- 3 The actions to ensure the achievement of results
- 4 The actions that satisfy the purpose of the solution

Operational Design

The output of the UFD is a detailed operational design of the solution based on tools that fully depend on the design that is being made or the problems that are being solved. UFD is compatible with the design tools that are available in organizations such as BPMN, CAD, Adobe, etc.

The operational design includes the building of a prototype of the final solution.

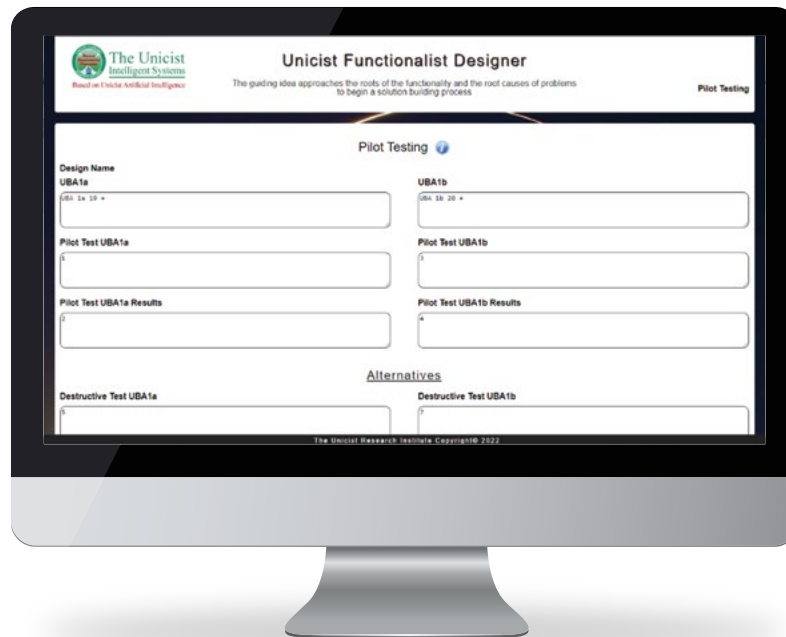
Pilot Testing and Destructive Testing Module

The designer is driven by the results of pilot tests. Pilot tests ensure the achievement of results and drive the recycling of the solutions that are being built.

Therefore, the pilot testing tool is simultaneously a learning tool that expands the available knowledge.

Each level of complexity is based on an autonomous pilot and destructive testing approach according to the binary actions that are used.

The pilot tests validate the operationality, while the destructive tests validate the functionality which includes the validity of the functionalist principles and the operationality of the synchronized binary actions.



Destructive testing validates the operationality of the solution, its adaptability due to the management of the roots of the functionality, and the validity of the functionalist knowledge that has been used.

Recycling

The recycling process of failures requires moving back to the diagnosing stage to confirm the validity of the information that is tested during the destructive tests. Destructive tests are applied after the pilot tests demonstrate the functionality of a solution.

It has to be considered that pilot tests work even if the root causes are not addressed, and palliatives are being used. This is not the case with the destructive test which only works if the adaptability of the process has been achieved.

The Context

Functionalist design implies managing the functional structure of the solution, based on the functionalist principles that define a process.

Comparison with First Principles

Aspect	First Principles	Functionalist Principles
Purpose	Structural Solutions	Structural 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 Root Cause Mgmt.
Testing	Pilot Testing	Pilot/Destructive Testing

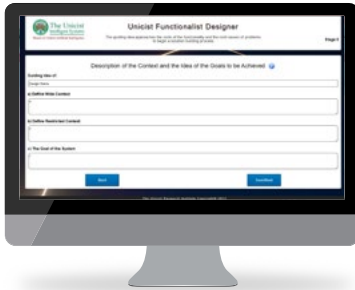
(*) Defined by a Purpose, an Active Function, and an Energy Conservation Function.

Comparison with Design Thinking

Aspect	Design Thinking	Functionalist Design
Purpose	Develop Solutions	Develop Solutions based on Root Causes
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

Prototype driven Solutions

All business solutions are based on building, monitoring, and learning from prototypes until their functionality has been confirmed. Access

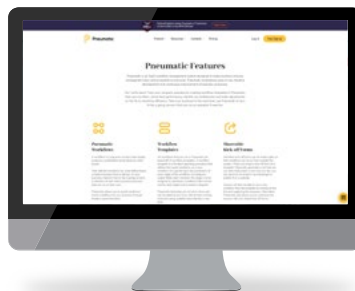
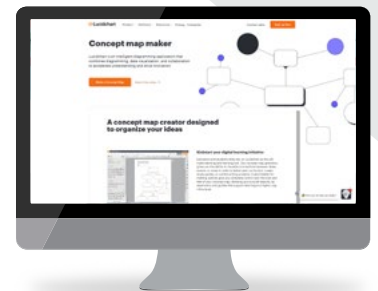


Unicist Functionalist Design Tool

The functionalist design is based on the use of functionalist principles, binary actions, and catalysts.

Conceptual Mapping Tool

The conceptual map is used to define the unified field of the solution that is being built.

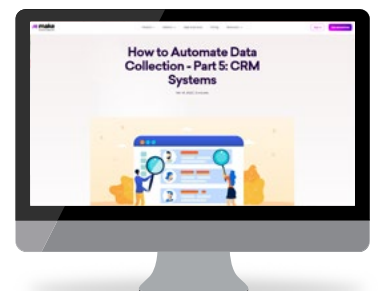


Operational Task Building Tool

This tool is used to build the tasks of the operational processes of the prototype.

The Automation Tool

This tool is used to integrate the unified field of workflows and install automated processes.




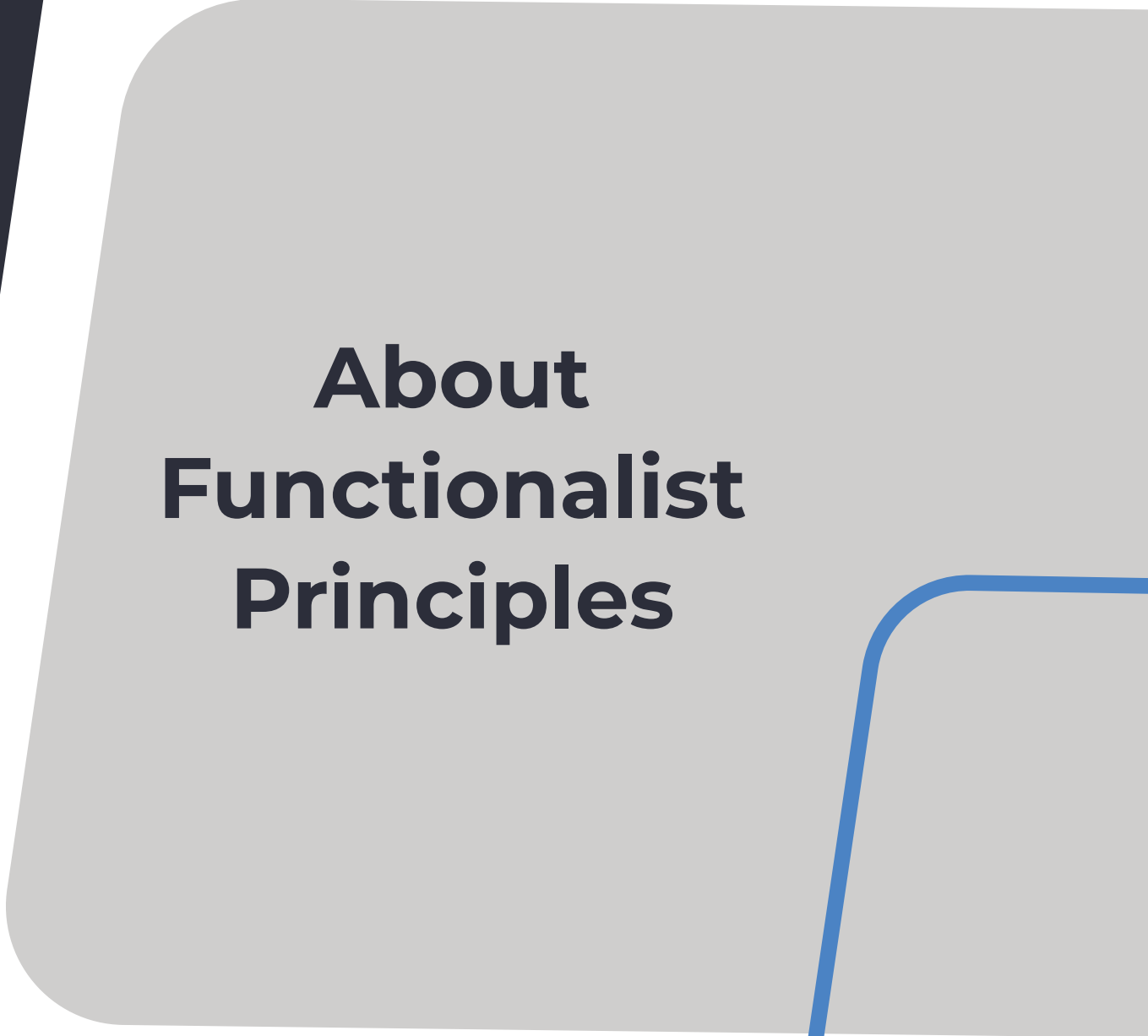

Building of Unicist Business Cobots

When needed, the unicist logic and the unicist AI are used to develop cobots to increase efficiency.

Technology Transfer Processes

The transfer of the technologies to develop solutions is made with the support of teaching cobots.





About Functionalist Principles

The Basics of the Functionalist Principles Applied to Business

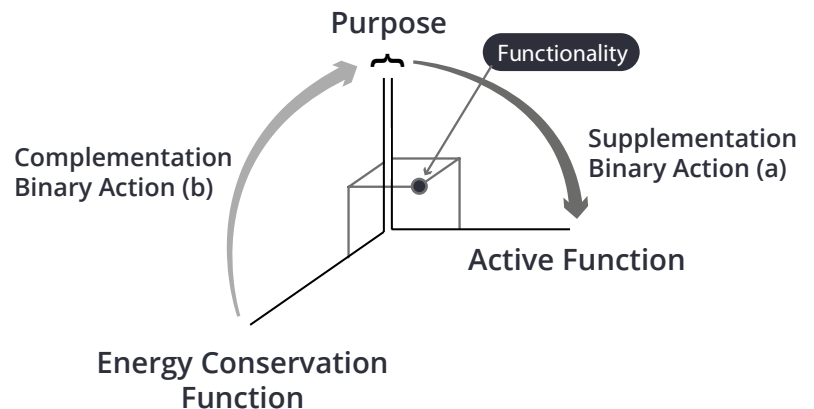
The functionalist principle defines that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function.

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



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The research of functionalist principles is based on the use of unicist ontological reverse engineering of facts to find their functional structures.

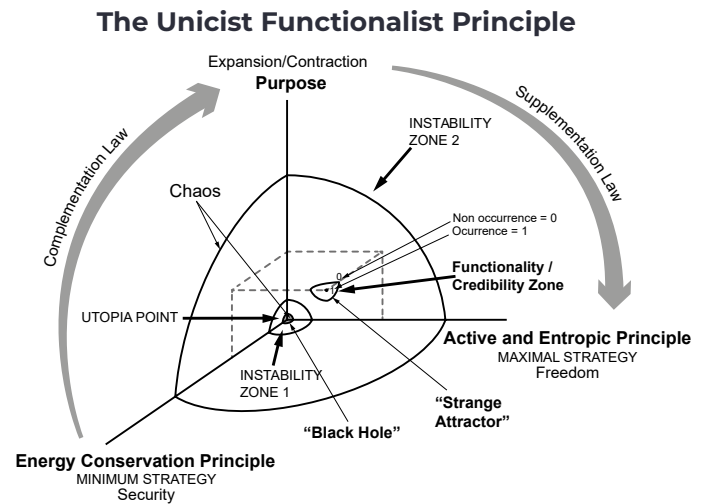
This approach is based on the discovery of the intelligence that underlies nature that defines the principles of its functionality and led to the development of the unicist logic that allows managing the intelligence that deals with the functionality of “things”.

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”.

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.



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.

$$\text{Intrinsic Functionalist Principle (IFP)} = P * AF * ECF$$

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.

$$\text{Functionality} = GF * C * IFP / EFP$$

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 Knowledge Base for Functionalist Design

The Unicist Library is provided to manage functionalist design to build solutions for the adaptive aspects of businesses. It provides information on the functionalist principles in unicist standard language (USL). It is a functionalist knowledge base that provides the functionalist principles to design business solutions and the necessary binary actions to make them work.

These libraries, which are provided to companies, include the knowledge base of the specific functionalist principles and binary actions that are being installed in companies and access to more than 100 consultation books and 3,000 articles on functionalist knowledge.

This knowledge base was developed at The Unicist Research Institute, based on the more than 5,000 research works that were developed since 1976 to find the concepts and fundamentals that define the functionalist principles in the field of social, economic, and business applications.

The use of functionalist principles structures the timing, synchronicity, and accuracy of business processes. The library also provides information on the catalysts that are needed to expand possibilities and achieve the critical mass and speed that is required to adapt to the environment.

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, motor-bike, 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 Business Arm

The business arm is organized as a Confederation of partners and academic associates to develop collaborative corporate partnering with companies. [Access](#)

Learn about The Unicist Research Institute

Since 1976, The Unicist Research Institute has been the world-leading research organization that developed and introduced the functionalist principles of the real world to manage root causes. [Access](#)