The Next Stage:
A Causal Approach to Business

The Use of Unicist Business Cobots

Cobots are collaborative robots based on the use of unicist logic and unicist AI to manage the synchronicity of 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.

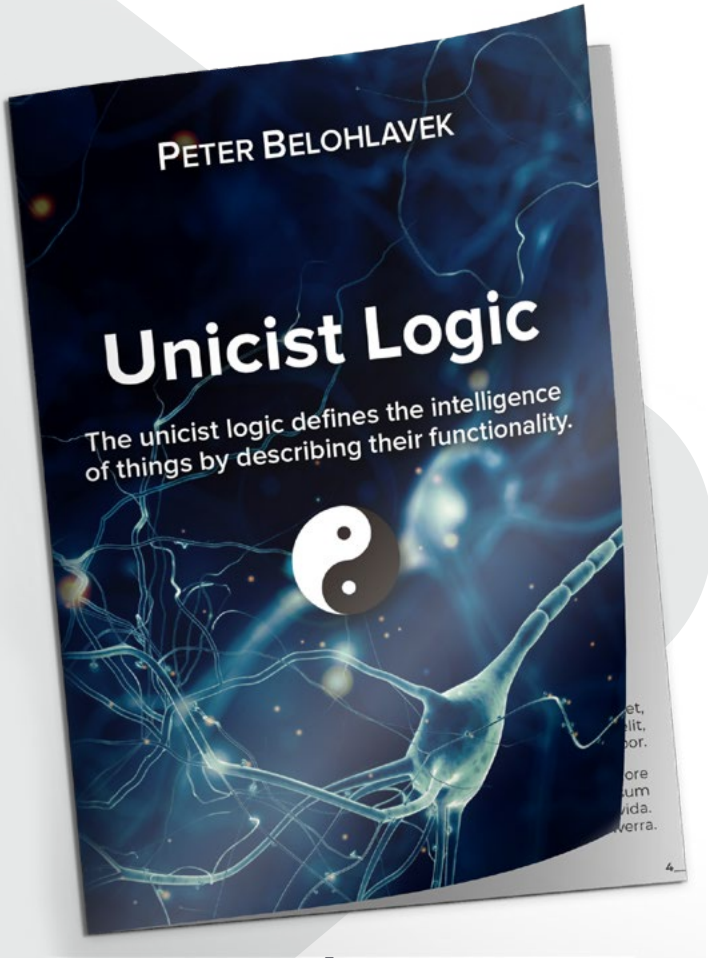
The unicist functionalist approach is the new stage to dealing with the functions of business, economic, and social organizations as adaptive systems. It uses unicist functionalist design to build solutions.

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 operationality to manage the functionality of solutions.



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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.

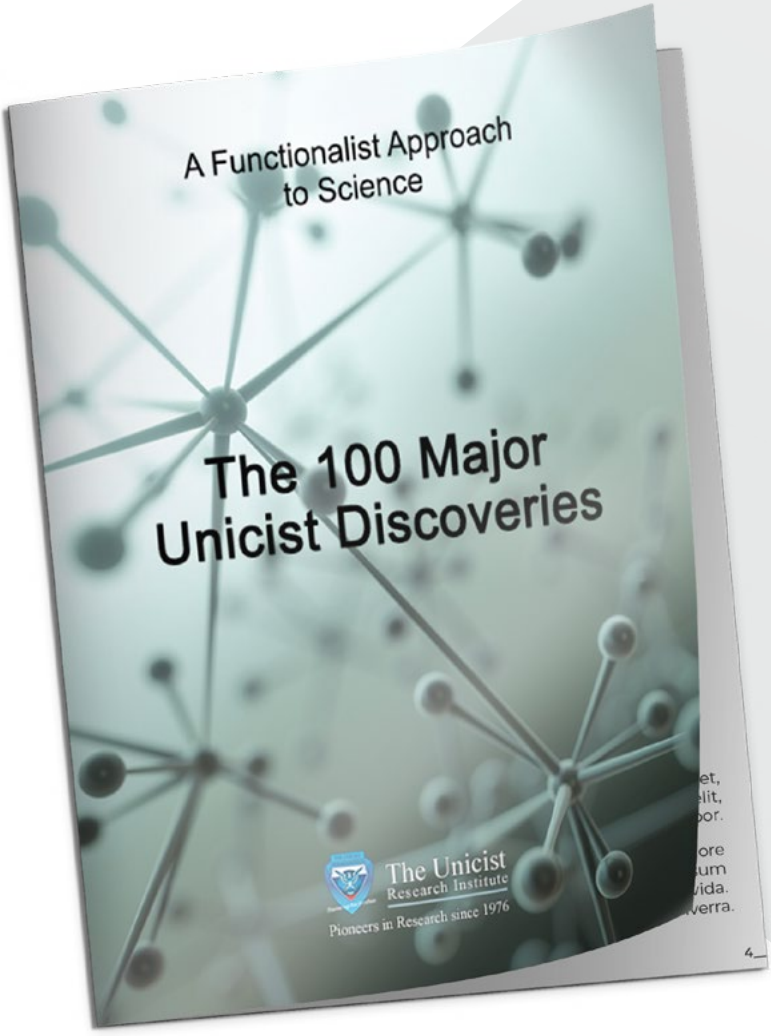
The functionalist principles define that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function. These principles allow for managing the unified field of systems and developing the binary actions that make them work.

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

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. It included the development of unicist logic and the unicist AI that allowed the emulation of human intelligence to build intelligent systems and cobots.



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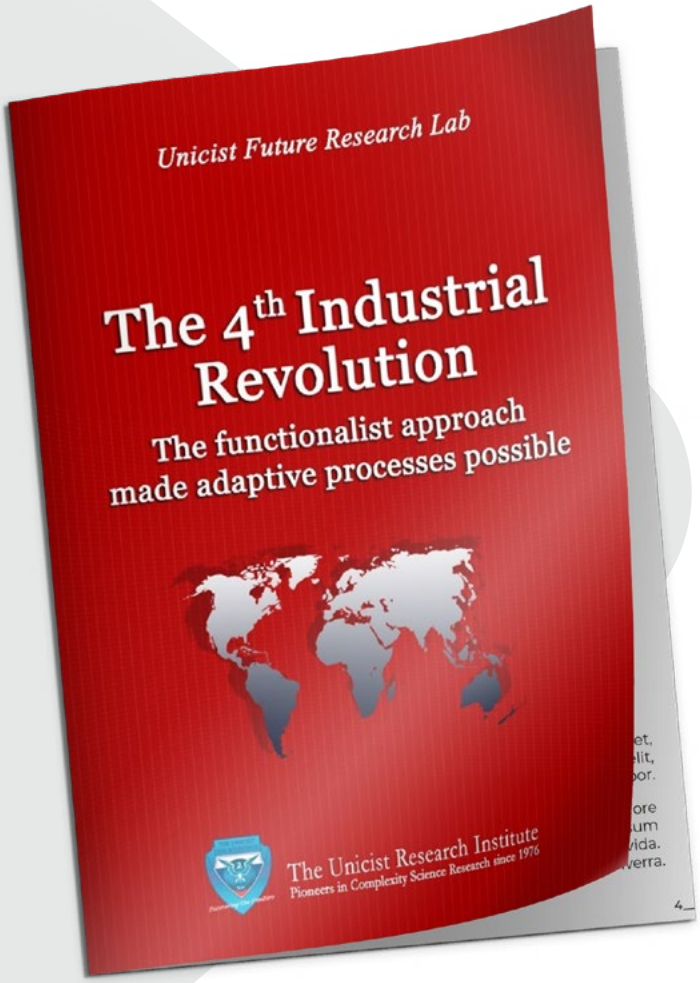
The main basic discoveries applied to business are:

1. The discovery of the functionalist principles that define the functionality of business processes and work through synchronized binary actions to ensure value generation.
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 for increasing marketing effectiveness.
4. The emulation of the organization of nature, based on the use of driving, catalyzing, inhibiting, entropyinhibiting, 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.

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 operationality 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.



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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.

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.

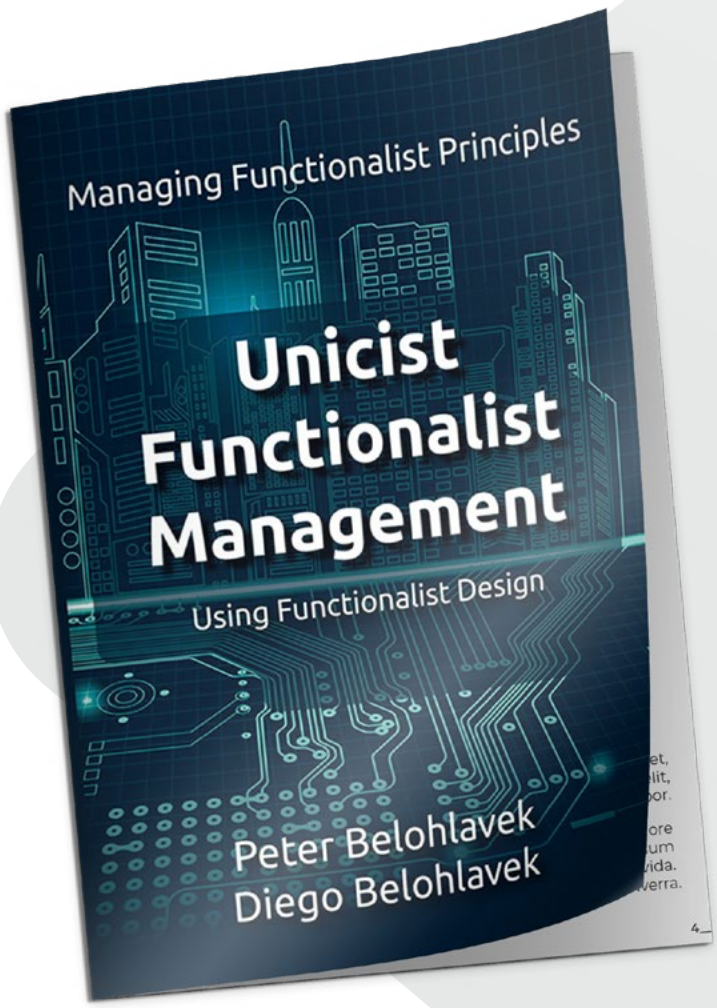
Intelligent Business Objects are Cobots

Unicist business objects (UBO) are encapsulated adaptive systems that produce predefined results, which are defined by their concepts, that can be inserted into work processes to increase productivity, quality, and increase energy efficiency.

The use of unicist logic to define the synchronicity of processes and of unicist AI transforms business objects into collaborative robots (cobots).

The purpose of business objects is defined by the result they can produce. As objects, they have a concept, an added value, and quality assurance.

The organization by objects and roles is a model that, according to the predefined objectives, designs the necessary processes and uses business objects to produce the necessary results. Objects only exist within a process. When they are not part of a process, they are things.



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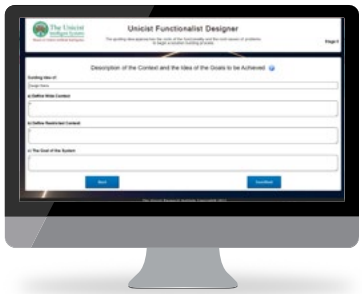
There are different types of objects according to their functionality:

- Driving Objects: To drive processes
- Entropy Inhibiting Objects: To inhibit the entropy of processes
- Inhibiting Objects: To inhibit dysfunctional actions in a business
- Catalyzing Objects: To open possibilities and accelerate processes
- Gravitational Objects: To make the results of processes possible

The first three belong to the process of a system while the catalysts are part of the restricted context, and the gravitational objects belong to the wide context of a system.

Prototype driven Solutions

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

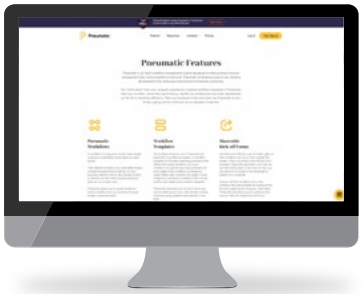


Unicist Functionalist Design Tool

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.

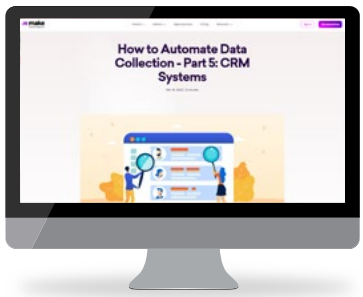


Operational Task Building Tool

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

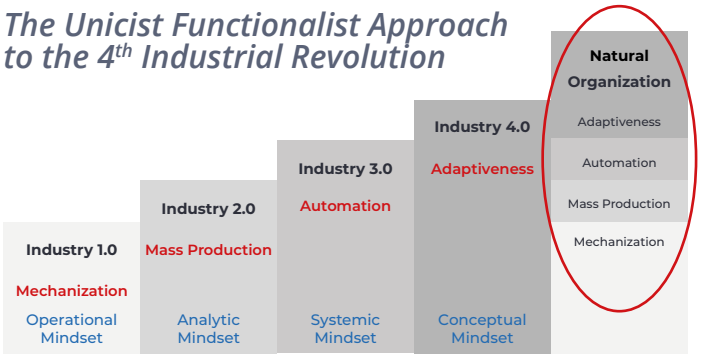
When needed, the unicist logic and the unicist AI are used to develop cobots to increase efficiency.

Technology Transfer Processes

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

The Use of Cobots in the 4th Industrial Revolution

The Unicist Functionalist Approach to the 4th Industrial Revolution



The 4IR introduced the functionalist approach to businesses based on the use of business objects that made the development of business cobots necessary.

It required integrating the unicist logic to manage the synchronicity of actions and the use of unicist AI to emulate human intelligence.

Some Applications of Unicist Cobots

To increase value generation in adaptive business environments using intelligent automation, such as:

- CRM, risk management & monitoring cobots
- Knowledge management, BI, talent management design cobots
- Project management, performance management, selling, & talent development cobots
- Contingency room, strategy building, quality assurance & marketing cobots

Functionalist Technologies to build Cobots

The unicist functionalist technologies allow building intelligent business cobots using unicist logic and unicist AI. They are based on:

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

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Cobots use Functionalist Principles

12 Minutes Read

Functionalist principles define the unified field of things and why and how they work.

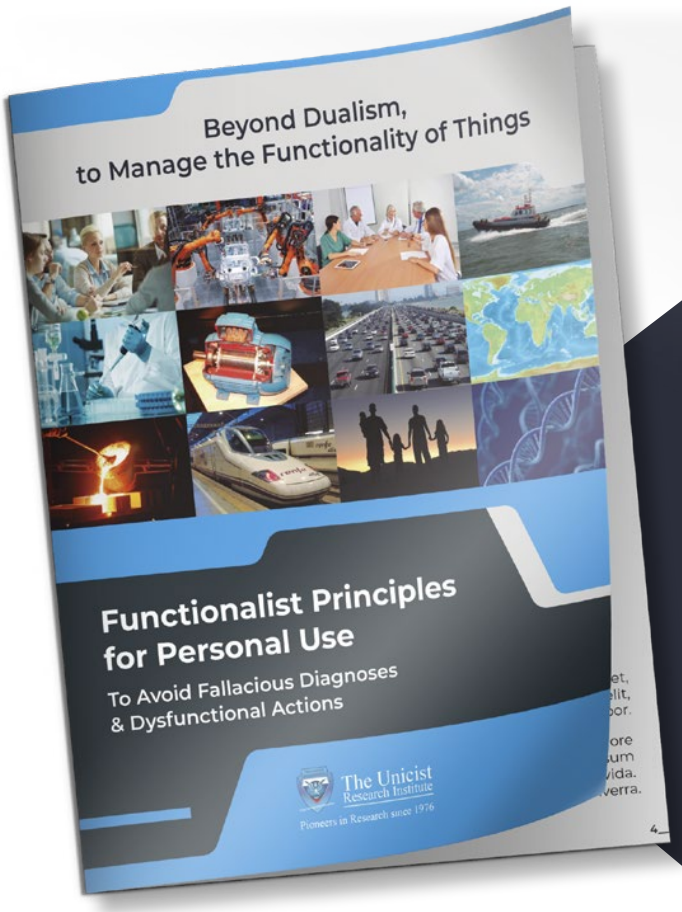
The functionalist principles define that there is nothing in the universe, which is part of a system, that does not work with a purpose, an active and entropic function, and an energy conservation function.

The functionalist principles and the unicist logic allowed developing the unicist AI, which emulates human intelligence and made the development of cobots possible, by using binary actions to make things work.

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, and allowed building cobots.



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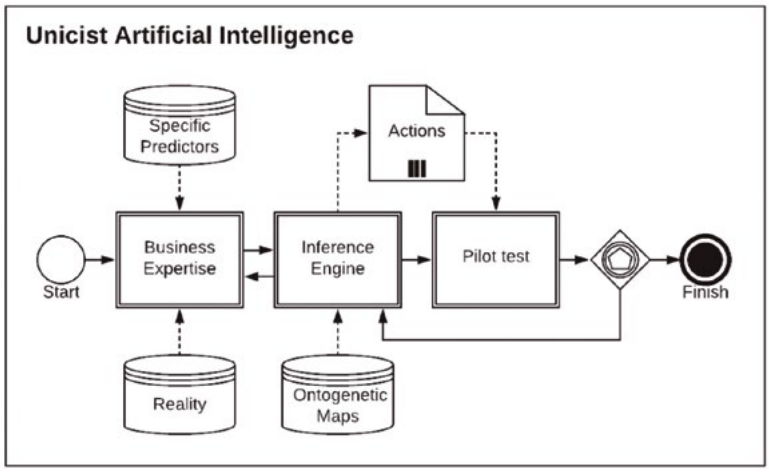
Unicist AI to Build Cobots

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



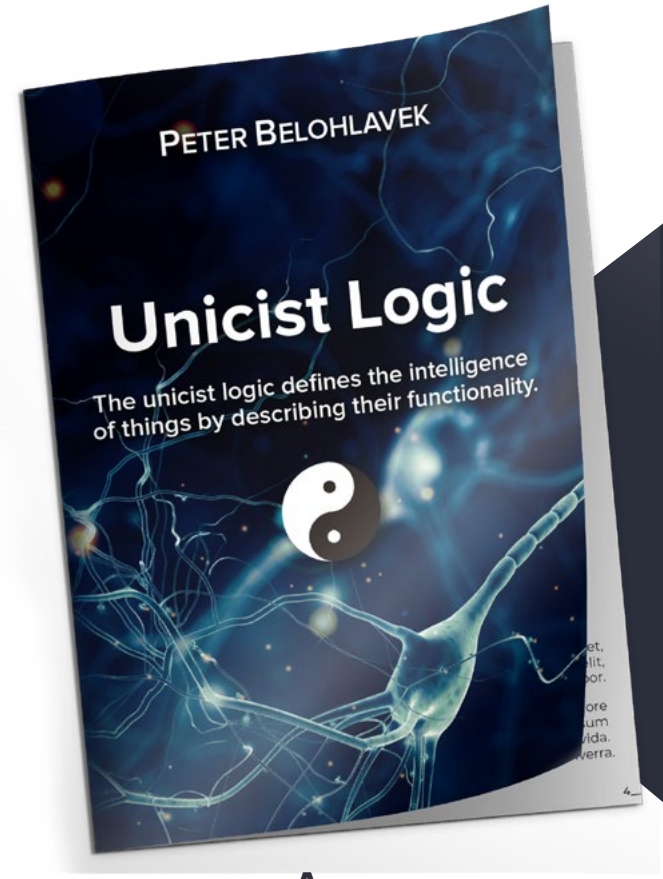
Unicist AI is based on the rules of the unicist logic that deals with the functionality of things. It is a fundamentals-based AI that allows managing the functionality of processes of any kind and building intelligent systems and cobots. When necessary, these cobots are installed in mobile applications.

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.



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Unicist Cobots manage the Roots of Functionality

Cobots are collaborative robots that are based on human-robot interaction to complement human actions. In business, there are two possible uses:

1. As part of backward integration, to sustain decision processes.
2. As part of forward integration, to transform decisions into actions.

The business application of Cobots became possible due to the development of fundamentals-based AI and the binary actions that ensure the generation of results. Cobots are based on functional rules to build empirical solutions.

Cobots provide a safe framework to generate value in adaptive environments. They are now the next standard of the object-driven organization that became necessary to manage this stage. It is also needed in all types of telework processes including telemedicine.

The fundamentals of the ontogenetic map of the context allow defining the binary actions that ensure the functionality of cobots, which includes on the one hand the adaptive customer orientation and on the other hand the adaptive value generation.

The collaborative approach, the functionalist approach, the use of synchronized binary actions, and the installation of business objects made cobots the natural solution for the next stage. Based on their functionality, there are four types of cobots:

Operational Cobots

Operational cobots are designed to sustain specific operational action in business processes. They have the necessary functional knowledge that deals with the know-how of processes, and they use operational objects and entropy inhibitors to sustain their activity. Examples: CRM/CDP cobots, risk management cobots, monitoring cobots, etc.

Knowledge Cobots

Knowledge cobots are designed to sustain management processes of any kind to ensure the accuracy of decisions. They include quality assurance processes to confirm that the proper knowledge is used. Examples: knowledge management cobots, business intelligence cobots, talent management cobots, functionalist design cobots, etc.

Efficiency Cobots

Efficiency cobots are designed to complement and support the efficiency of processes. They are based on introducing adaptability in automated processes and on the use of binary actions to ensure results. Examples: project management cobots, performance management cobots, selling cobots, etc.

Efficacy Cobots

Efficacy cobots are designed to sustain efficacy by providing knowledge to sustain decisions, adaptive automation to make them work, and quality assurance to sustain functionality. They learn from the feedback based on indicators and predictors. Examples: contingency room cobots, strategy building cobots, marketing cobots, etc.

Unicist Extreme Design to Build Cobots

The Unicist Extreme Design (UXD) Methodology was developed to design solutions in adaptive environments. Adaptive systems have open boundaries, which make them complex and therefore they require a conceptual approach to manage their fundamentals. It is a “Back2Back” methodology to solve complex problems.

The UXD-Groups

The UXD-Groups are integrated by two subgroups: one that deals with the design of the solutions and another one that deals with the testing of the solutions.

The activity of these groups is virtual unless the solutions require developing physical objects. In this case, the design group works on-site while the testing group works in an environment of virtual collaboration.

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

Unicist Functionalist Design of Cobots

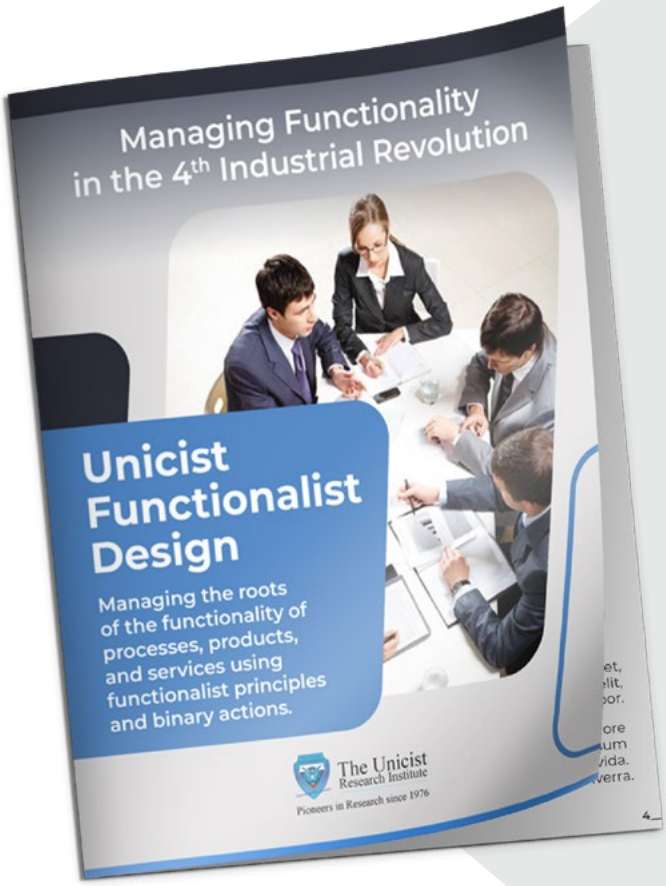
The building of cobots is based on the use of the functionalist principles that integrate the know-how and the know-why of processes using functionalist design. This approach made businesses reasonable, understandable, and predictable.

Functionalist design deals with the functionality of processes and allows managing the functionalist principles of business processes to simplify the solutions and improve the generation of value and diminish costs.

The unicist functionalist design was developed to enhance the functionality of business processes.

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 of collaborative robots (cobots)
- 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
- Design software that includes intelligent functions



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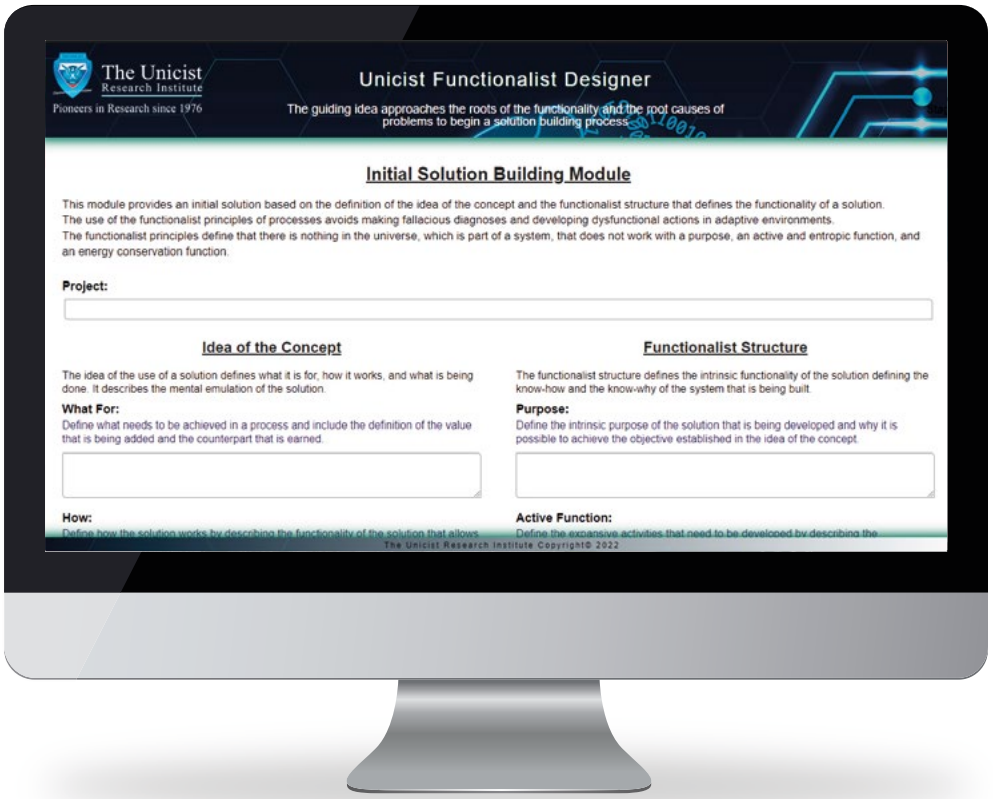
The functionalist design process begins with the existence of a solution that needs to be built and ends with the installation of the solution.

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 custom ers and users.
3. ***A fallacy-shooter*** who is responsible for ensuring the testing processes.

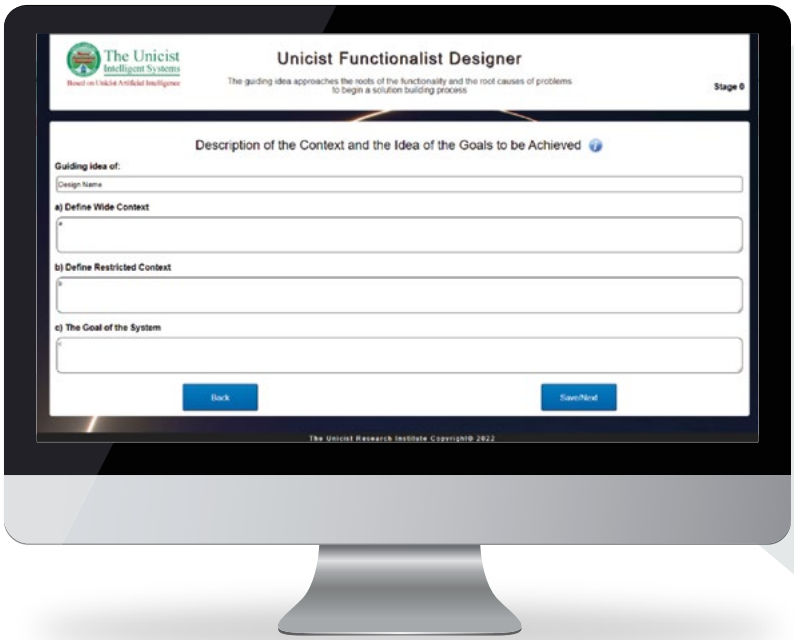
The Functionalist Design Process

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.

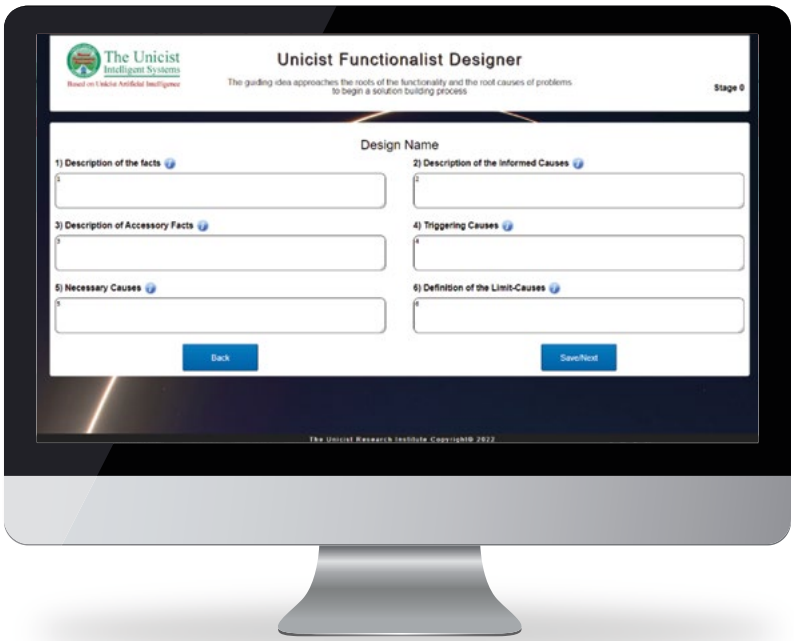


When it is a new category of system it is necessary to research the functionalist principle which takes time and therefore requires developing a solution using palliative solutions.

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:

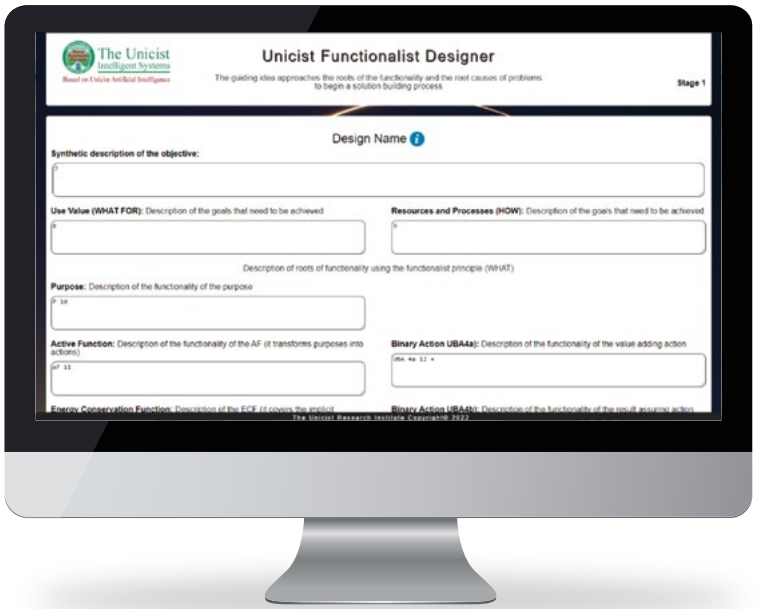
1. The level of dependence on the feedback from the environment, which is defined by the credibility and influence a solution has. The more dependent, the higher the level of complexity.
2. The size of the solution that is being built. The larger the scope of activities included in a solution the higher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

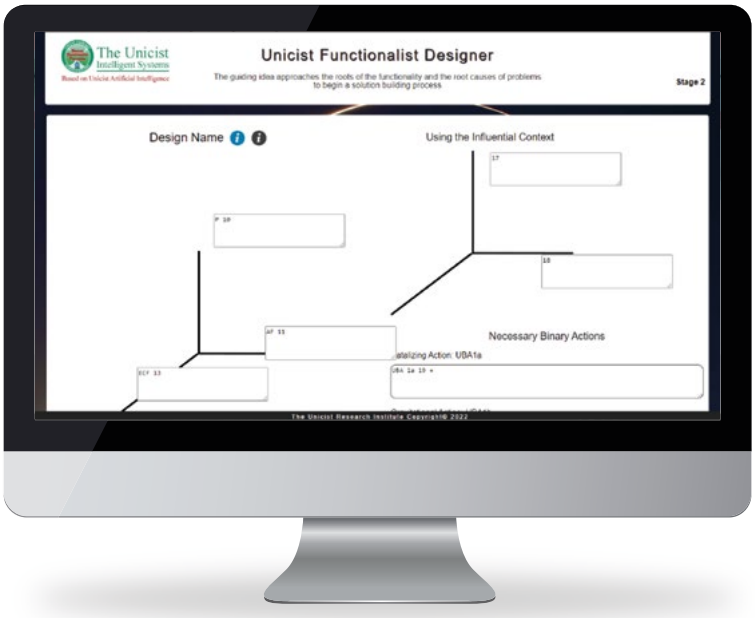
This level of complexity is based on managing the central purpose, active function, and energy conservation function of a solution.



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.

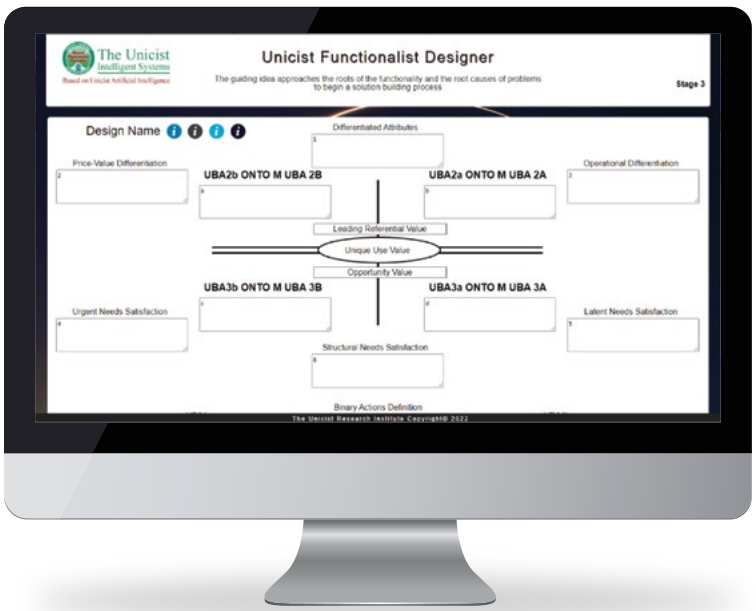
The restricted context expands the possibilities of the solutions by exposing the possibility of approaching a solution based on the features of the existent alternatives plus the satisfaction of latent needs.

It implies developing 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.

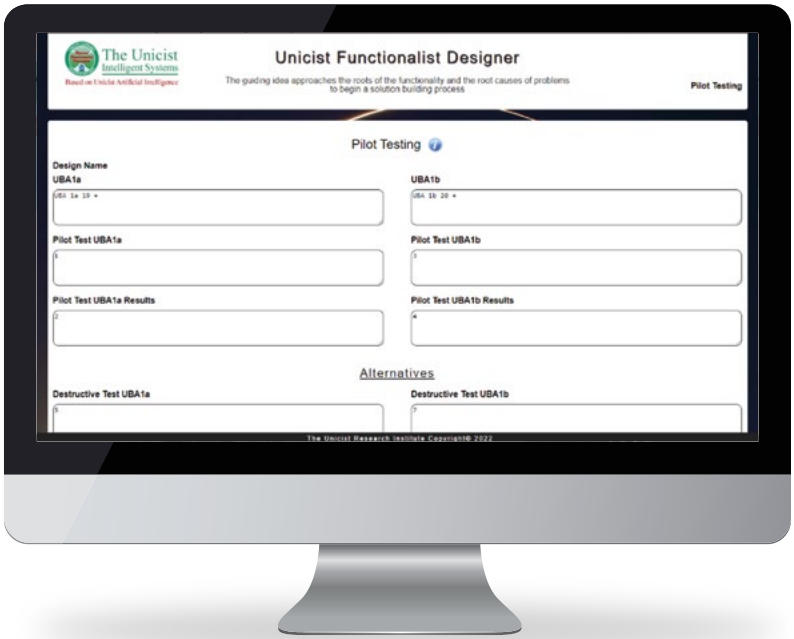
Pilot Testing and Destructive Testing Module

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.

Annex

The Basics of the Functionalist Principles

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.

This structure works through unicist binary actions (UBA) that produce the functionality of any entity or process, whatever its kind.

Example: The Functionalist Principle and Binary Actions 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.

The Use of Binary Actions

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 the development of the binary actions and business objects that are needed to empower business functions.

The Functionalist Principle and Binary Actions of Strategy Building

The purpose of strategy building is the achievement of goals in environments where the results depend on the feedback of actions.

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

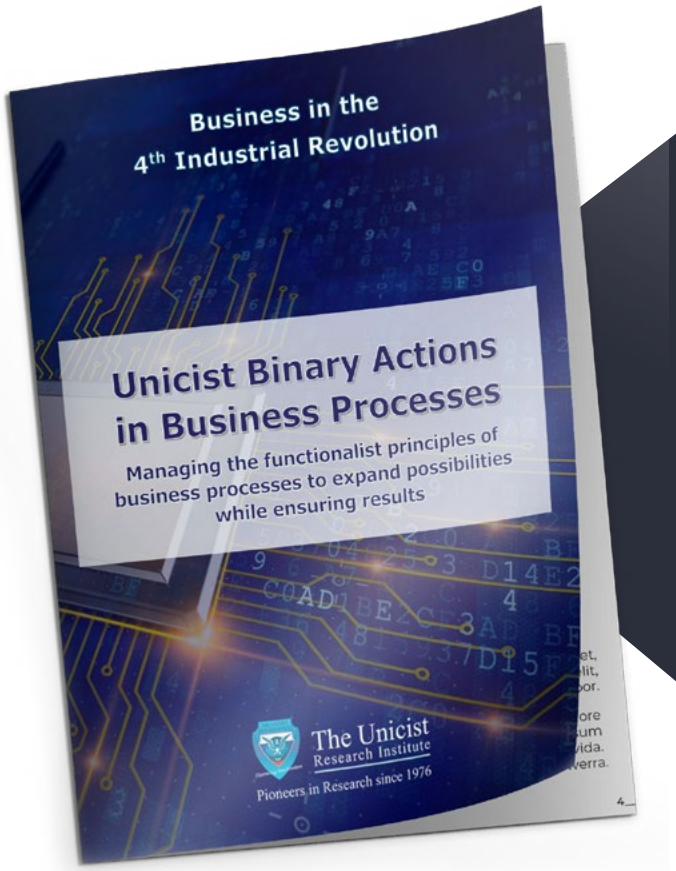
Examples of Evident Binary Actions

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

The Use of Binary Actions

We suggest that you experience the use of binary actions after having read the brief that describes their functionalities.

The use of binary actions allows preparing the context and to develop the actions that generate results.



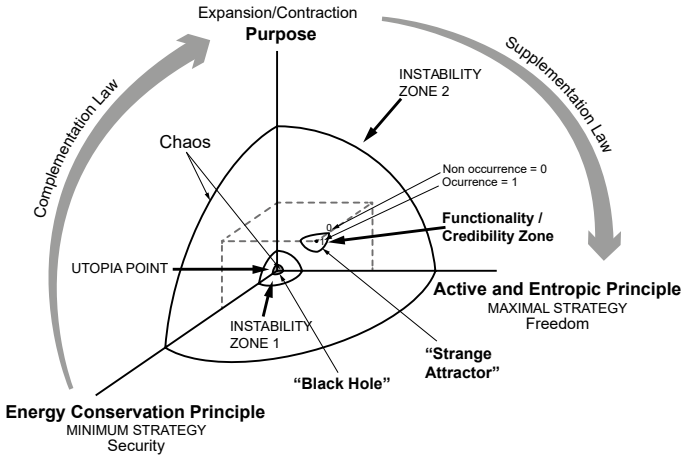
10 Minutes Read

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	
0					1 Indicator
					2
.25					3 Indicator
					4
.50					5 Indicator
					6
.75					7 Indicator
					8
1.					9 Indicator

Concept of the system that transforms qualitative and quantitative indicators into mathematical algorithms.

Substitute		
Wide Context		
Restricted Context		
Function		

Main Markets

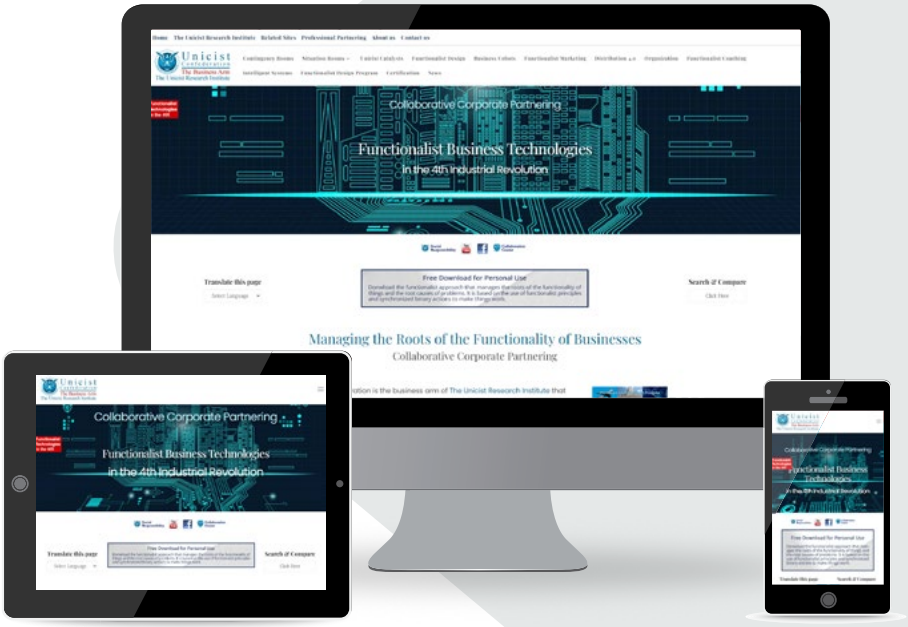
• Automobile • Food • Mass consumption • Financial • Insurance • Sports and social institutions • Information Technology (IT) • High-Tech • Knowledge Businesses • Communications • Perishable goods • Mass media • Direct sales • Industrial commodities • Agribusiness • Healthcare • Pharmaceutical • Oil 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.

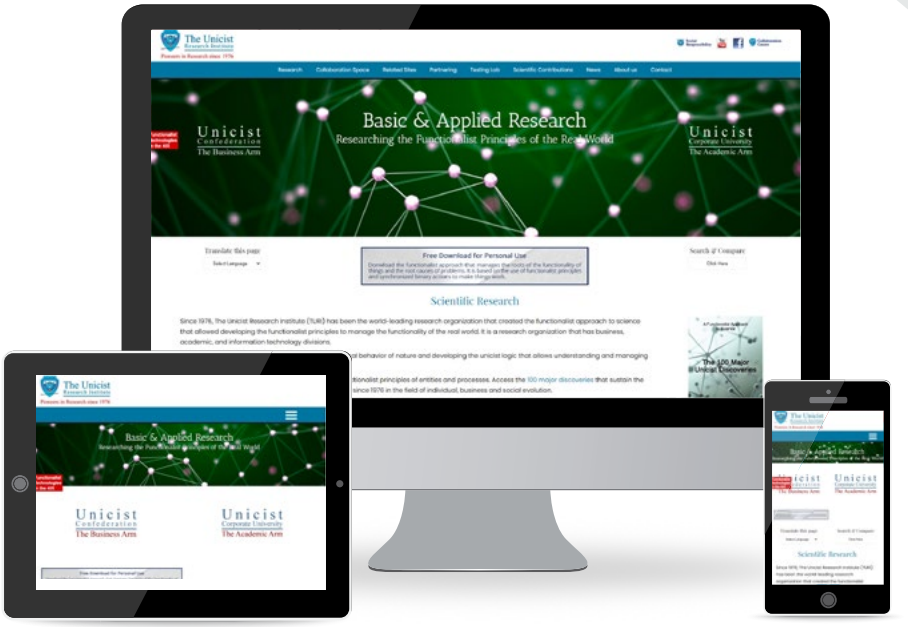
Learn about the Business Arm

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***



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