# Digital Water Token (DVT) For water resources enhancement

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#### OVERVIEW - 1/2

As repeatedly stressed by the American Water Resource Association (AWRA), since the last few years of the last century, water is a resource to be preserved, optimizing its distribution and rationalizing its consumption.

In the last decade, the national and community legislative bodies have demonstrated awareness of the problem by promoting technical tables and promulgating various regulatory references on the subject (for example the EEC Directives 91/271, 98/83, 2000/60 / EC, and at the national level the DPCM 29.4.99, Legislative Decree 152/99, Legislative Decree 31/2001, etc.).

In particular, in Italy, the Galli law established the Optimal Territorial Areas (ATO), with the mandate to analyze the state of the networks, identifying problems and inefficiencies, and then formulating plans for restructuring, upgrading and adaptation of existing infrastructures, or for the interconnection of the main water schemes. All obviously making use of new technologies.

In the field of ICT methodologies and technologies for remote measurement, remote control and remote management, in recent years we have been witnessing rapid growth under the pressure of the explicit will of Governments to define new integrated strategies for the protection of Critical Infrastructures of Interest. Among these, the water resource and the technological infrastructures connected to it certainly play a role of interest. In other words, the hardware / software systems of the networks can be very useful both for automating some operational interventions and for improving knowledge of the real operational situation of water networks.

#### OVERVIEW - 2/2

The measurement technologies (flow and pressure meters, chemical composition detectors) and actuation are sufficiently settled. Therefore it is possible to conceive at reasonable cost networks in which there is a widespread presence of measurement / actuation stations on the network.

One of the problems that will arise dramatically in the future is that of the difficulty of finding drinking water in sufficient quantities to meet the growing need. In recent decades, due to the continuous increase in water demand, connected to economic development and the raising of the quality of life, there has been an intense search for new sources of power by the managing bodies, but the need has also arisen of water saving in the civil sector, which can be pursued through the adoption by the managers of the aqueduct networks of behaviors and interventions aimed at rationalizing and saving in the phase of adduction and distribution of the water resource, therefore at the search and containment of losses and to an efficient management of aqueduct systems.

Each manager should calculate the economically permissible level of losses and implement a water network management program that allows to reach and maintain optimal efficiency levels according to their own water system, obtaining substantial savings of the resource, with which it is possible to meet the growing needs current and future water, without research and use of supplementary sources and without facing additional costs.

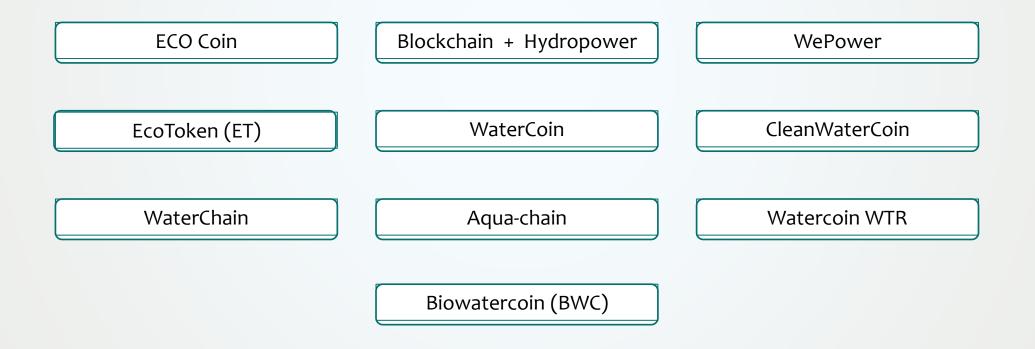
## COMPETITORS AND COOPERATORS - 1/2

The DWT collects several of the topics dealt with individually or in groups from different projects in a single solution that aims to meet the following needs:

- Implementation of a blockchain solution that can be integrated into a token ecosystem with a specific token for water resource enhancement;
- Facilitation of transactions between water managers even at low or in the absence of liquidity thanks to the use of the token;
- Improving the competitiveness of companies thanks to the cost's amortization;
- Creation of an international showcase for DWT members thanks to an existing ecosystem currently operating in more than 20 countries, both European and non-European (see section on dissemination of results for the complete list);
- Creation of a network of companies in a cooperative and competitive perspective in order to be more effective on the market not only locally, but above all national and international;
- Involves local water resource managers through a benefit-sharing mechanism and a gradual diffusion plan;
- No initial cost for the manager for the services rendered;
- Commitment of the manager in the implementation of policies and activities to improve the management of water resources, as well as communication to the end user;
- Phased diffusion of the technology to the distribution network and to connected users, to modulate investments in the water network control and supervision structure.

#### COMPETITORS AND COOPERATORS - 2/2

Below we list the different projects which now seem closer to our project, to grasp the characteristics, so that clearly emerge the value of the project that we present through the final summary of this section in which we list the CSF.



## THE OPPORTUNITY: DIGITAL WATER TOKEN – 1/2

In this project as in other project activities, in contexts as diverse as video surveillance, starting from the HCM (Hierarchical Clusterized Multilayer) conceptual model proposed by G. Iovane and others, innovative architectures are created for the supervision of Critical Infrastructures of Interest.

Previous experiences, relating to the water context, push towards a choice of information technologies oriented no longer towards the creation of desktop applications, but created starting from web environments integrating IoT architectures. This allows, in fact, to create highly pervasive infrastructures, able to reach even the single user, for maintenance of the water network or the information system associated with it. In this regard, consider the telemetry service for consumption and the related remote billing (already operational in the electricity and gas sector).

From a technological point of view, the solution is based on two technological macro trends: i) smart sensing and remote control to support management activities, ii) blockchain technologies for citizen participation in the enhancement of the water asset. The initiative is inspired by the wavef - water vef project of prof. Gerardo lovane and aims to bring everything concerning the application field of water resources and their enhancement to the blockchain.

The innovative aspects of the Digiwater approach considerably involve both the design of the sensor system on the network and the modeling of the network itself in order to improve the provision of value-added services (variable distribution, remote billing, etc.), as well as knowledge of the network and of its possible malfunctions, losses or problems.

## THE OPPORTUNITY: DIGITAL WATER TOKEN – 2/2

From an environmental impact point of view, the project provides a useful contribution to reducing pressures on the environment and improving the quality of life.

The token that DWT proposes as a new digital token with a high and beneficial environmental impact and improvement of the quality of life.

In fact, more than 4 billion people already live in conditions of water scarcity for at least one month a year. 500 million people consume double the water that rain is able to replenish, leading to irreversible degradation of the aquifers. An apparently unstoppable growing phenomenon that requires awareness and a profound and radical change on the part of everyone.

From a strictly environmental point of view, water losses, in addition to causing economic damage deriving from the waste of water, can cause more serious and dangerous consequences. In fact, they can be the cause of infiltrations, landslides, floods or land subsidence.

The promotion of "green or blue" initiatives such as this project, in addition to favoring the real economy, allows the enhancement of a resource that is so important for life, which is water.

#### THE CONCEPTUAL SOLUTION

Introducing Digital Water Token, we realize a platform with the aim to enhance water resources and valorisation dedicated to blockchain Community and not only since anyone will have the opportunity to participate, like as single person, industry, company. Everybody, regardless of their financial possibilities, should have a place in the world and enjoy its benefits.

DWT uses the blockchain technology to valorise water resources, both as a management body and as a consumer. We imagine a world where people can participate on digital water token purchases with no need for lawyers or authorities to be registered but at the same keeping a universally recognized right on the purchase. We put at your attention a new scenario where water management can be owned by everybody and not just restricted groups.

We propose a scenario where ordinary people, indeed, everyone can have in its own portfolio a digital token directly connected to the conservation, enhancement and use without waste of water resources assets with a small initial investment and in proportion with the capabilities of each person. In this way, DWT allows everyone to take a profit from the token appreciation together with asset income.

The use of potable water, its quality and its preservation combined with token generation, properly managed by a mining modulation system, obtains the optimal use of water resource.

## SUMMARY – 1/2

Distinctive elements:

• the first fully transparent water production in blockchain with a particular attention on the management and valorization of water resources.

• in our team in the context of energy industry, there are specific skills and abilities of working and at the same time the legal, economic, managerial, finance, and IT skills which are required for a good development of the project.

Here we list some details in brief:

- 1. Token: Digital Water Token (DWT)
- 2. Company name: DigiWater
- 3. Initial reserve: 50 billion DWTs, with specific allocation as described below
- 4. Minimal size from 100 Eur (if purchase is made by bank transfer) or 50 Eur (if purchase is made by other cryptos)
- 5. Ethereum based smart contract which stores all transactions
- 6. Buy and sell on most exchanges
- 7. Pay for renting or buying properties in Atmosphere Arc ecosystem solutions associated with DWTs
- 8. Get a share of profits automatically as new DWTs comes
- 9. Plus, profit on token appreciation!
- 10. Token issuance backed by real and certified credits.

## SUMMARY - 2/2

The tokens will be generated thanks to the activities carried out by the project and the activities on water management in relation to the production, distribution and management . Initially a small portion of tokens will be distributed to the companies of the trial group in exchange for direct production to be distributed to potential investors who will purchase discounted tokens.

You will be able to trace the life cycle of the water thanks to the Blockchain transactions

This will allow the Digital Water Token project to take further advantage in visibility and enhancement of produced water in a generalized offering that concerns different fields and not just sustainable and optimal production such as: personal care, food, care of environment, etc.

The token can be exchanged between producers, local production realities and in exchange for products and services in a perspective similar to a letter of credit or an innovative barter reviving the local economy.

Subsequently, Digital Water Token project will be able to promote for the international network by acquiring resources for local associates by promoting the local production network in exchange for their water resources.

Products purchased from Digital Water Token project will be advertised increasing competitiveness in an international context.



## ECONOMICAL FOCAL POINT

- The activities based on blockchain, the issuance of coin or digital token, guaranteed by a collateral, the model to finance the start up are growing exponentially and to date they have not yet realized the real potential and reached full maturity. In fact, in a short time, the blockchain will have all the commodities and utilities for their development.
- The focal point of this project is the creation of an advanced solution for the management and enhancement of water resources thanks to the smart control of water networks, waste and improving the service to users thanks to the solutions of the smart cities and blockchain context.

#### MINING OF DWT - 1/2

- In the case of DWT we can say that it is closely related to the set of activities that make it possible to reduce waste and enhance the water resource. The substantial difference between DWT and the more usual cryptocoins is that in this case DWT rests on a valuechain (value chain based on the achievement of tasks, in the completion of activities, in the development of jobs in the real and non-cyber world).
- Specifically, while in cryptocoins the mining carried out by the operator is limited to making computational power and electricity available without creating any effective support or collateral value to the cryptocoin that is generated, in the case of DWT the issuance of tokens is linked precisely to the ability to enhance the water resource both as a management body and as a consumer. This up to the point of being able to generate a specific collateral of which DWT becomes its digitalization and is closely linked to the conservation, enhancement and use without waste of water resources.

## MINING OF DWT - 2/2

The different operational macro-tasks and therefore the different ways to generate DWT available to users are shown below, beyond the optimization of consumption in line with the guidelines of the manager:

- MT1. Affiliation, collection and area inclusion in DigiWater;
- MT2. Study, conception, design and implementation of methodologies, models, methods and technologies for the protection, preservation and enhancement of local resources / operators and creation of the supply network;
- MT3. Management of the network offering services in the area;
- MT4. Promotion and implementation of actions and interventions aimed at the production and enhancement of tokens offered in safeguarding water resources;
- MT5. Promotion and implementation of economic initiatives and interventions aimed at the enhancement of DWT at the Institutions;
- MT6. Promotion and implementation of interventions aimed at the processing, transformation and use of territorial resources linked to DWT;
- MT7. Organization of promotional, cultural, social and marketing initiatives related to DWT and the areas affected by DWT;
- MT8. Organization of promotional, cultural, social and marketing initiatives related to DWT;
- MT9. Quarterly reports (monthly notes).

## DWT TOKENS DISTRIBUTION RULES AND TRANSPARENCY - 1/5

Here we describe the fundamental rules of DWT Tokens distribution.

- 1. DWTs can be emitted only if there is a proof of stack, with the exception of pre-sale since they serve to cover the startup and they will be covered by the first round of activities linked to the project technological and conceptual infrastructure;
- 2. 2. DWTs can be transferred by their owners to whoever they want.
- 3. DWT is not implementing any fee for blockchain transfers, but senders/buyers will have to pay the standard ETH transaction fee as they would do for any other token transfer based on the ETH blockchain. This fee is not related to and controlled by DWTs;
- 4. DEHs stored on the board of directors' accounts are locked: i. Each account contains a different number of tokens, as detailed at the moment of subscription; ii. Each account is unlocked after one year from the publication of the smart contract on the blockchain; this rule is enforced by the smart contract; iii. Each account can release alpha tokens according to the following mathematical rule:

alpha = Token\_Sold\_To\_Public/ (0,75) B \* Director\_Assigned\_Tokens, with B=50.000.000 iv. Board of directors' accounts are communicated immediately at the moment of subscription

#### DWT TOKENS DISTRIBUTION RULES AND TRANSPARENCY - 2/5

- 5. DWT price is fixed at the pre-sale time 0,5 Eur = 1 DWT
- 6. DWT price will change on future emissions;
- 7. Minimum purchase by FIAT currencies is set at 100 Eur;
- 8. Conversion rate, applied to calculate the amount of DWTs issued, is the one existing at the time DWT receives the paid amount.
- 9. Minimum purchase by ETH, BTC is set 50 Eur: i. Sending ETH or BTC to the company account will cause the system to check the cross ETH/EUR or BTC/EUR price and release an equivalent amount of DWT; ii. ETH/EUR price is checked every 1 minute, before the exchange phase while later you can follow the market tick; iii. If the amount of ETH sent to the company account is less than the amount needed to buy 1 DWTs, the transaction is declined and the amount, deducted of the ETH fees, returned to the user; iv. As usual the only fee users will incur to buy and transfer DWT is that implemented by ETH itself, which is not related to and collected by Digital Water Token.
- 10. Pre-sale terminates when DWTs on the company account are sold out or after six months from the starting date the pre-sale or as indicated on the web portal of the project;

#### DWT TOKENS DISTRIBUTION RULES AND TRANSPARENCY - 3/5

- 11. Project share quota are divided and shares proportionally with DWTs owners in the form of DWTs. DWTs are shared automatically to DWTs owners on the exact date and time of DWTs distribution which will be announced from time to time on the website; i. Project share quota are calculated taking into account the income generated by DWT Project; ii. Project share quota might be distributed or not distributed, according to DWT appreciation.
- 12. DWTs which are not acquired into pre-sale phase will be destroyed.
- 13. DWTs held by users can be controlled only by their respective owners. Nobody at DWT project can lock, destroy, transfer, recover password, secret keys, or interfere in any way with users' DWTs;
- 14. During the normal activity after pre-sale phase, DWTs which are not sold will not be destroyed, while they can be used in any time by the DWT project; DWT will produce a proportional reduction of next emission or the reacquisition of DWTs;
- 15. DWTs are not company shares: consequently, do not guarantee to users vote for decisions.

#### DWT TOKENS DISTRIBUTION RULES AND TRANSPARENCY - 4/5

In the different emissions the DWTs are divided according to the following algorithm:

Q1. Consumers/Investors/Donators: 75% Q2. Founders: 9% Q3. External Advisors: 9% Q4. Company Assets: 2%

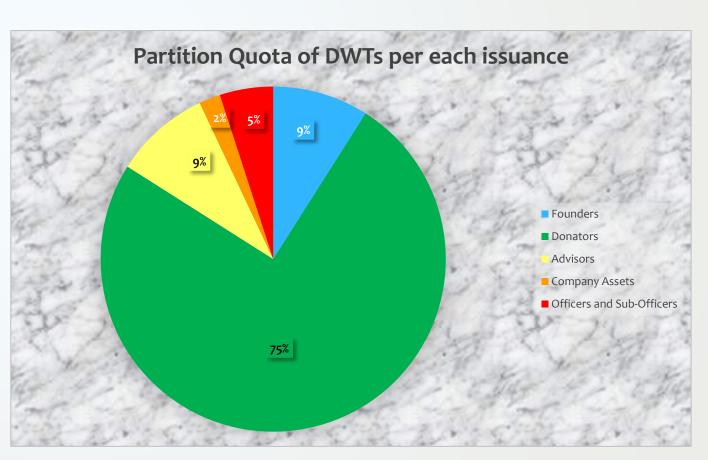
Q5. Company Officers: 5%

Q4 is a portion that has the role of performing a compensation function in the event of anomalous market fluctuations or to provide liquidity to the project at particular times of utility.

Q5 is divided into three parts with the following percentages between Governance, Management and Operations:

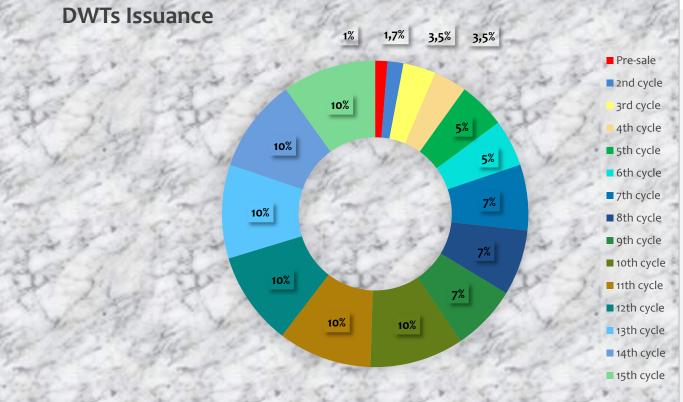
- Governance: 40% of Officers Share;
- Management: 30% of Officers Share;
- Operations: 20% of Officers Share;
- Support Staff: 10% of Quota Officers,

where for Support we mean all the non-managerial staff who performs support, accompaniment and collaboration to the planned and cataloged activities. If this quota is not allocated, it will be divided among the Officers according to the above quota.



## DWT TOKENS DISTRIBUTION RULES AND TRANSPARENCY - 5/5

The total available tokens will be 50.000.000 (50 B) for a value of activities of at least 50 B Eur at date and 50-250 B Eur as prospect.



A fraction of at least 1% (i.e. 500 M DWT) will be released at the pre-sale phases. The remaining will be stored in the company and released in subsequent periodic issuances. The present plan considers to allocate the remaining 99% in the following 12 years, with a pseudo-linear saturation growth as reported above.

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