



Unifying Fields and



Restoration Power

Position Paper



Foreword

Unifying Fields



It is generally acknowledged by scientists and the public at large that the world's ecosystems have been significantly degraded and that it is essential that the self-regenerative capacity of the world's ecosystem is restored in ways which are most efficient and have been scientifically validated.

We have researched the root causes of climate change and together with a network of leading scientists we discovered transformational solutions to restore the balance in the global climate. We found ways to replace the organic carbon back into our soils, restore the hydrological cycle and identified the most vital regenerative agroforestry systems. Furthermore we discovered a new class of technologies in many fields which are far

more efficient and affordable than existing technologies and are in close harmony with the nature.

Restoring the world's ecosystems and transforming agriculture requires major funding. It is the intent that revenues originating from the new electricity transmission and energy production technologies, which Unifying Fields and Restoration Power are developing, will provide this funding.

The revenues originating from the above-mentioned energy technologies will also be dedicated towards the funding of scientific research to develop ethical and innovative breakthrough technologies in various other fields of science, like medicine, biology, material science and improving the efficacy of existing PV panels and batteries.

Whereas UFF holds the vision and mission and most of the principle knowledge of the various technologies and methodologies, its subsidiary company Restoration Power executes the mission as a for profit entity with the condition that the majority of profits created through its activities will be dedicated to the mission of UFF.

Kees Hoogendijk

Co-Founder Unifying Fields

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Part 1 – Ecosystem Regeneration



Perspectives on ecosystem regeneration

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An important key to the ecosystem regeneration activities is a deep understanding of the function and the physics of trees¹. Extensive dialogues with important scientists and developers of knowledge of the hydrological cycle^{2,3,4,5} and restorative agriculture^{6,7} have led to this deep understanding.

1.1 Perspective 1: The hydrological cycle

A plan has been developed in collaboration with the science team which developed the Biotic Pump theory. This concerns the optimum restoration of the hydrological cycle through the execution of a number of ecosystem restoration projects aimed at restoring the soil carbon sponge and the biotic pump. The biotic pump is the name for the physics describing the way forests act as transporters of water vapour from the oceans to the landmass. In the recent past about 45% of the forests were cut. Therefore the capacity of the biotic pump is greatly diminished. This reduces the uptake of CO₂ from the atmosphere, significantly reduces the capacity of forests to cool the landmass of the earth and reduces the uptake of organic carbon in the soils.

1.2 Perspective 2: Syntropic Agroforestry

A complimentary way of restoring ecosystems is to transform agriculture from predominantly industrial farming towards food-forestry. Whereas industrial farming is degenerative in nature and occupies 77% of the available agricultural land it produces only 18% of the world's calories and 37% of the world's proteins⁸. In UFF's many years of research we have found that the methodology of Syntropic Agroforestry is probably the most integral way of conducting food-forestry. Syntropic Agroforestry is a natural way of producing food by small hold family farmers for local communities. This change in farming methodology reduces the environmental load on agricultural land and reduces the land required to produce agricultural products by a factor of 4-5⁹.

Indigenous Peoples and Biodiversity

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2.1 Indigenous peoples are the keepers of our biodiversity

In our search for knowledge of ecosystem restoration modalities we came in close contact with the indigenous peoples of our world. They still hold a lot of knowledge associated with their cultural heritage. In some places this ancestral knowledge is still intact. But in other places this cultural heritage is mostly lost because many children of the indigenous tribes, whose land was destroyed or taken, left the family land and went to the cities to find work.

Despite the fact that indigenous peoples make up around 15 percent of the world's extreme poor and just five percent of the global population, **they are the keepers of 80 percent of the world's remaining biodiversity**, according to data cited in Australia's newly released 2021 State of the Environment report^{11,12}.

2.2 Taking care

A very effective way to restore the regenerative capacity of nature is to prevent primal forests from being cut. At the edges, the regenerative potential is at its highest as remaining species can easily migrate. This means that it is most effective to assist the indigenous people in preserving the primal forest.

The founders of UFF have re-established contact with indigenous peoples all over the world. The founder of the Syntropy Farming methodology is now working with the Amazon indigenous tribal leaders to assist them in filling in the gaps of their ancestral knowledge. UFF plans to assist these efforts and revive the know-how to help the indigenous peoples prevent primal forests being cut, as well as restore degraded lands and thrive in harmony with Nature.



"The indigenous peoples say that Biodiversity is the greatest riches you can possibly imagine. They need protection so they can devote all of their time to regenerating and taking care of the Earth. It's a chain reaction, the more we help them, the more nature's healing power is unleashed."

Robert Yarr, Co-founder UFF

2.3 Teach-the-teacher program

We have found that the will to relearn this regenerative approach on their land is extremely high among the over 5,000 First Nations. Therefore, UFF developed a 'Teach-the-teacher' program which is designed to spread know-how of restorative farming according to the Syntropic Agriculture methodology as fast as possible. This is because the majority of the indigenous people still own the land. This program could bring the children of the indigenous peoples back to their original land and their roots.

By connecting with the indigenous peoples and other small hold farmers in the world UFF intends to revive the cultural heritage of caring for the land, living in harmony with nature and producing healthy food.

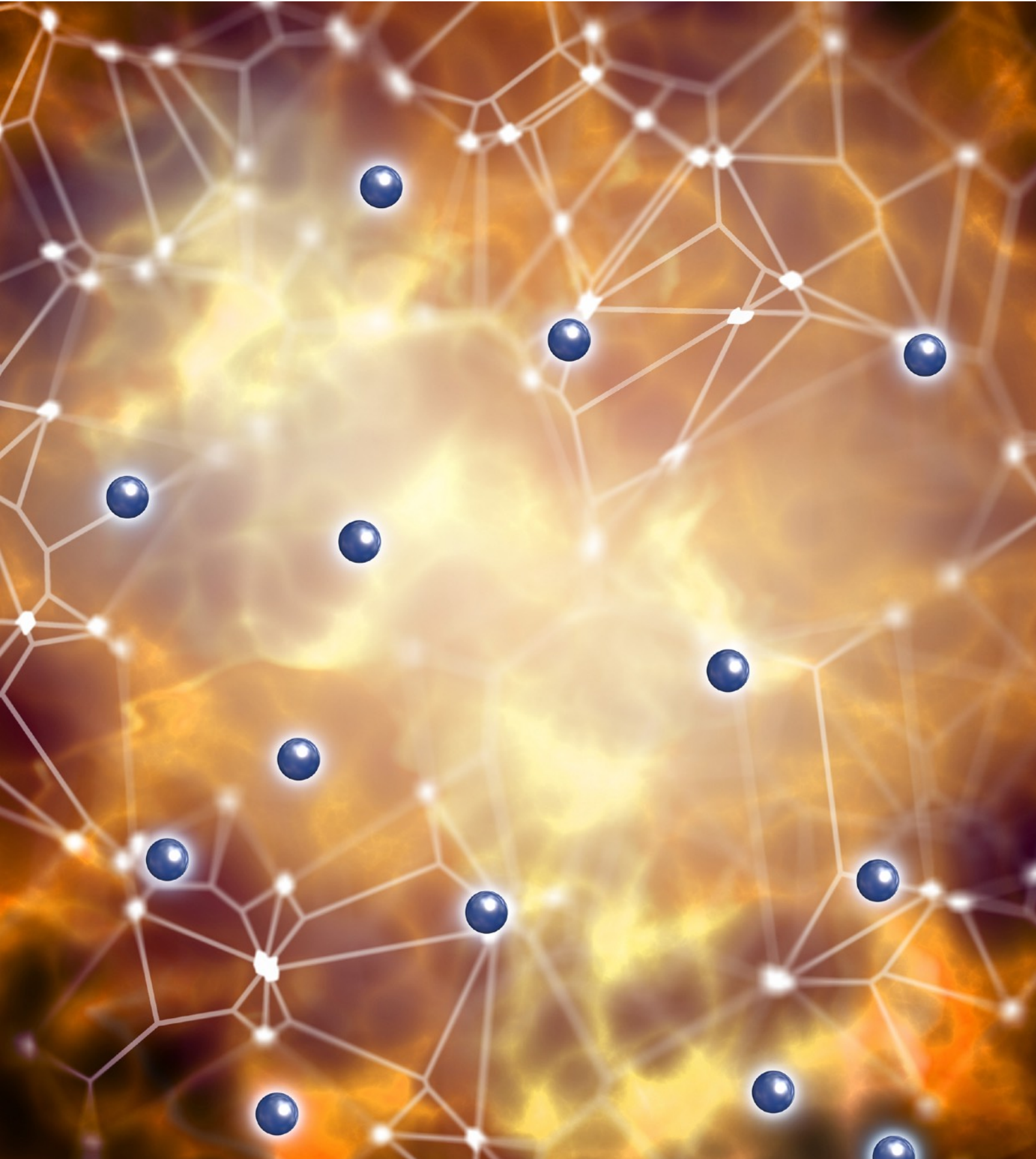
Growing food in harmony with nature

Together with the creators of the Biotic Pump science network and the Syntropic Agriculture methodology, the founders of Unifying Fields created a compilation of all the functions forest and trees perform¹². By spreading this knowledge around the world it is possible to reconnect with nature, create a community spirit, care of the planet and serve the wellbeing of future generations.

Practical Syntropic Agroforestry

In line with UFF's strategy to promote community based Syntropic Agroforestry in the developed world we support the development of a community food-forest at a site in Denmark managed by a passionate biodynamic farmer who is also a member of our team and who works closely with the indigenous peoples. It is here that we are piloting both community and teaching programmes for wider rollout.

Part 2 - New Energy Technologies



Our Research & Development Laboratories

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Restoration Power, a subsidiary company of the Unifying Fields Foundation, develops a new class of energy technologies which is significantly more efficient compared with existing energy technologies. Currently, our research activities are conducted in two laboratories in Italy. The first is at Solitonix (Belluno) and the second at FutureOn (Rome).

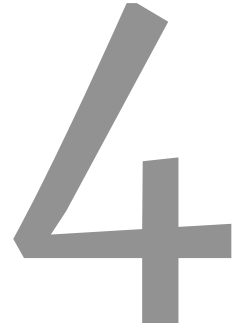
3.1 Solitonix Laboratory

The Laboratory in Belluno, Italy, is where Mr. Fabrizio Righes, owner of the company Solitonix, works. Mr. Righes discovered ways of creating soliton¹³ waves which, compared with a traditional electromagnetic wave, propagate through matter with much less energy loss. These waves can also create coherence in matter (Quantum Electro Dynamic Coherence). The result is a significant reduction of the electrical resistance in all kinds of materials, including transmission lines. This is why this soliton wave was named the Hyper-Conductivity-Wave (HCW) and the applications of this wave, the HCW technology. The HCW has the characteristic of a fractal (self-reinforcing) electro-scalar longitudinal wave, which is also called a soliton wave¹³. RPC has been supporting these research activities since 2021.

3.2 FutureOn Laboratory

The second laboratory is in Rome, Italy, where LENRs and “Cold Nuclear Fusion” are the subject of the research. The team in Rome is currently working on the EU Clean HME Project¹⁴ (Hydrogen Metal Energy). This project was initially funded by the EU and is being executed by the company FutureOn jointly with several other EU partners. In 2022 Restoration Power also started funding FutureOn.

Fundamental R&D Program



4.1 Historic Scientific Breakthroughs

During the last two years significant and historic breakthroughs have occurred in the two R&D laboratories in Italy.

Room Temperature Superconductivity

The application of the HCW technology causes Room Temperature Superconductivity (RTS) in materials under specific physical circumstances. This is a significant historic scientific breakthrough, ever since the discovery of the phenomenon of superconductivity (at -273 degrees Celsius) by the Dutch scientist Heike Kamerlingh Onnes¹⁵ in 1911. A peer reviewed article proving RTS was published in the Journal of Physics Communications in August of 2022¹⁶.

Low Energy Nuclear Reactions

The application of the HCW in an LENR reactor resulted in a successful demonstration of LENRs (Low Energy Nuclear Reactions). This validation of the occurrence of LENRs was also a significant and historic breakthrough in the field of Cold Fusion (LENR), ever since the scientists Stanley Pons and Martin Fleischmann failed (in 1989) to validate an earlier claim that they created Cold Fusion reactions¹⁷. The test results achieved by the application of the HCW were presented to the ICCF¹⁸ (the International Conference of Cold Fusion) in August of 2022.

4.2 R&D Highlights

4.2.1 Energy transmission

Reduction of Losses and Increase Capacity of Power Transmission Lines

Apart from the earlier breakthrough with respect to RTS experiments and the electrolytic LENR reactor, many test aimed at reducing energy losses in electricity transmission lines were successfully conducted at low power.

Tests to increase the power are ongoing in order to make an application which could be used by power grid operators to reduce energy losses and increase the capacity of the currently available power transmission lines. Also initial tests were conducted to realise the wireless transfer of electricity at a small scale.

4.2.2 Energy generation

Increasing the Coefficient of Performance (COP) of LENR reactions

Hundreds of experiments have been executed in different operating conditions, which allowed us to identify several key factors triggering the LENR reactions.

The materials preparation stage is with no doubt one of these key factors. Our materials activation protocol is currently well defined and reliable. Moreover, new advanced materials, already produced jointly with the EU partners, along with innovative and extremely promising ways of stimulating the active material, that have already been designed, will be tested in the next coming months to improve the reaction yields and to increase their duration over time.

Catalysers producing high and ultra-high-density states of Hydrogen or Deuterium on the surface of metal targets have been developed. During the experiments, the possibility was confirmed of producing nuclear-type processes by stimulating with high energy laser pulses a suitable target in which the formation of Hydrogen Rydberg matter clusters had been previously induced. High density Deuterium states should allow to increase D-D or D-T fusion reactions by orders of magnitude.

Producing electricity directly from LENR reactions

A prototype of a new advanced and promising plasma reactor has been recently completed and will be soon fully tested in our Rome lab. The expectation is that this reactor will produce directly electricity from nuclear reactions.

Another innovative plasma reactor has been developed at our Rome lab during 2022 and the initial tests are scheduled starting from February 2023. This reactor is conceptually different from the previous one and was designed jointly with professor Vassallo, according to his innovative and revolutionary theoretical models. The objective, again, is to produce directly electrical energy from nuclear fusion reactions.

If our early tests will confirm the expectations, the development of the plasma technology will become a priority.

4.3. Future Research

Continuation of fundamental research

RPC has supported the research activities in the field of energy transmission in the Belluno laboratory for about 18 months, since 2021. Currently an agreement is in place for the further funding of these research activities by RPC in 2023.

In 2022 Restoration Power also started funding the research activities of FutureOn in the field of energy generation. An agreement is in place for the continuation of this funding for the next 30 months. Also Restoration Power will acquire an interest of 15% in FutureOn in 2023.

RPC has been provided with the exclusive rights for commercialisation of the technologies developed in these laboratories.

Expansion of the initial collaborative scientific network

The publications concerning the validations of RTS and Cold Fusion (LENRs) have attracted quite a number of inventors and scientists who have indicated the willingness to work with FutureOn and RPC to further develop their technologies in the field of generating energy (heat and/or electricity) through specific LENR reactors.

It has been agreed with these potential partners that RPC would be granted the exclusive commercialisation rights if it is able to fund these R&D activities.

Additional applications of the HCW technology

Extensive dialogue with the scientists in the RPC/FutureOn/Solitonix networks has indicated that the HCW Technology could also be applied to create significant increases in the efficiency of a number of energy technologies which are already widely used in our society. This will be the subject of the next chapter.

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Additional Applications of the HCW technology

5.1 Additional Applications

We have learned from the experiments in the laboratories in Belluno and Rome that the application of the soliton wave induces coherent states of charged atomic particles in materials, which in turn increases the electrical charge density. This increases the probability of LENRs and increases the electrical conductivity in materials. A number of energy technologies which are already widely used in our society would most probably benefit tremendously from this innovation, specifically in the area of PV panels and the charging and storage of electricity in batteries.

PV Panels

Research into PV panels has indicated that the PV effect is directly related to the (super)conductivity of materials¹⁹. In this case there is very little heat loss (no resistance) and it was found that almost the full spectrum of sunlight can be absorbed due to the very low energy gap (E_g) in a superconductive material.

Energy Storage

Based on the knowledge that superconductivity creates a much increased electrical charge density it is likely that the application of the Soliton Wave would increase the capacity to store electricity in batteries. In the literature this application is called a super capacitor or super battery. This would be of significance in the global energy transition by storing increased amounts of locally produced electricity from wind farms or solar farms. This would reduce the load on the existing electricity grids and reduce the cost of locally produced electricity.

The Electrical Vehicle (EV)

The super battery would also increase the efficiency and reduce the environmental footprint of the Electrical Vehicle (EV) because less batteries are required and the

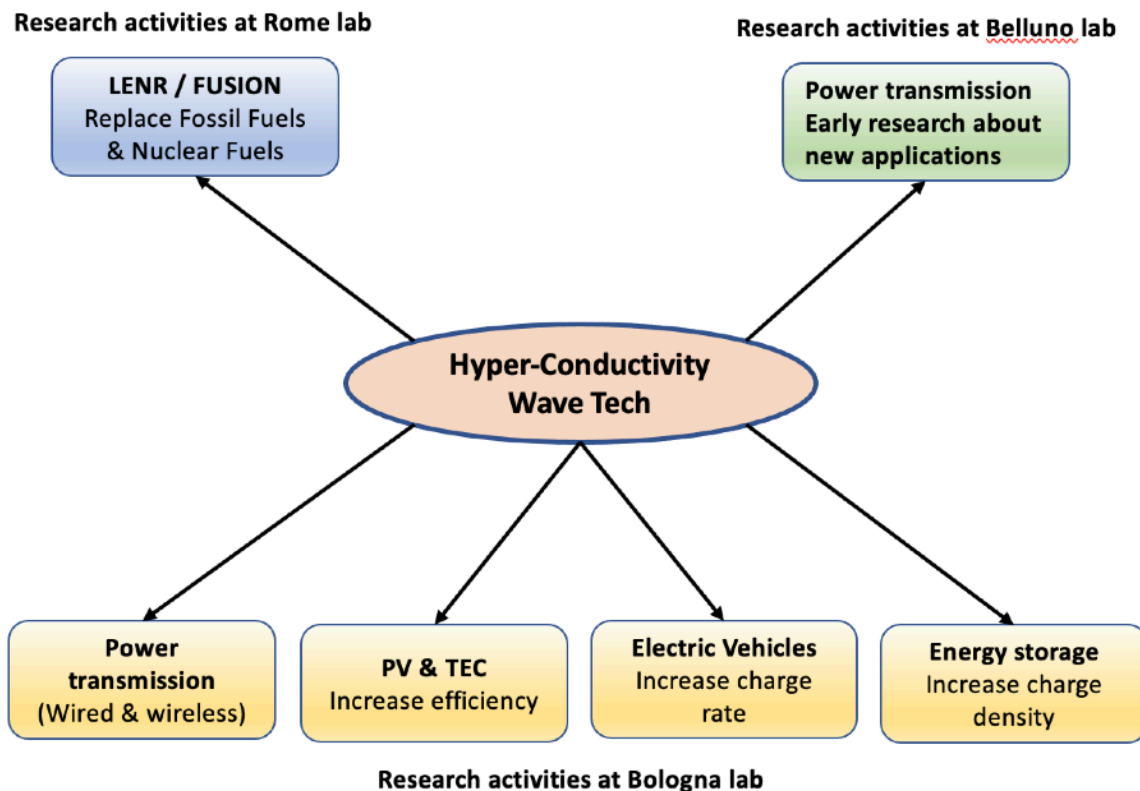
weight of the batteries in the EV would be reduced. This would increase the mileage of the EV and reduce the frequency of charging events.

It may also be possible that the application of the wave would increase the speed of charging the EV. This would make the EV a much better market proposition and would vastly increase the speed of market penetration of the EV.

5.2 Research Structure

In view of the above considerations the partners of RPC agree that it would be beneficial if an additional laboratory is established in Bologna, where one of the co-founders lives and where there is easy access to electrical engineers at the University Bologna, the oldest University in Europe.

The graphic shows how the research into the various applications of the HCW technology would be structured.



5.3 Unexplored Potential

The article that was published in the Journal of Physics Communications by members of our science team indicates that the HCW technology can be applied to create superconductivity through light solitons and super resistivity through so called dark solitons.

This opens up a whole spectrum of other technological applications in the fields of quantum computing, soliton wave guided information dissemination, wireless power transmission, etc. This just shows the enormous potential which is created by the manifestation of the HCW Technology.I;

Part 3 - Funding



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Funding Strategies

Significant manpower and funding is required to realise UFF's ambition to assist the indigenous peoples in their quest, introduce new ecosystem restoration methodologies and revive the knowledge of living in harmony with nature where this is lost.

6.1 New energy technology as lever

The development and implementation of new energy technology will bring the moment forward at which time much larger funding is available. Also companies which implement the new technologies will be required to share a part of the profits to serve the mission of UFF. Thus the funding of the development of the new energy technologies acts as a very significant leverage for realising the large scale ecosystem restoration projects.

Funding of our R&D program

Unifying Fields and its associated scientist network has conducted fundamental research into wave phenomena which substantially increase the electrical conductivity of materials and allowed to induce LENR reactions in a pulsed electrolytic cell, at the Belluno laboratory. This has led to the notion that this wave technology can be used to reduce energy losses in the power transmission lines and also led to the insight that this wave technology can also be applied to increase the probability of Cold Fusion or LENRs (Low Energy Nuclear Reactions).

These findings were documented in publications and are considered historic scientific breakthroughs in the field of Room Temperature Superconductivity (RTS) and LENRs. These research activities have been made possible also by loans provided to the Unifying Fields Foundation and its subsidiary Restoration Power, by private funders. Further funding of these fundamental research activities have been secured for the year 2023.

Separately LENRs have been the subject of research in the Rome laboratory, which was made possible by funds provided by the EU for a period of four years. In 2022 the additional funding was secured for these research activities in 2023, 2024 and part of 2025 to accelerate these activities.

The research activities concerning the wave technology has reached a stage where additional applications can be developed which could have a major positive impact on the ongoing energy transition in the world. These applied research activities which will take place in a third laboratory in Bologna, which will be dedicated to developing the energy transmission technologies jointly with the Belluno laboratory, to increase the efficiency of solar panels and to increase the electrical charge density of existing batteries. The funding mechanism for this applied research is the Earth-Bond Loan.

6.2 The Earth-Bond Loan

The name Earth-Bond Loan signifies that this is a new value proposition based on the principle laws of nature. It is a signpost on the road towards time and space in which humanity lives in closer harmony with Nature. Similar to the new energy technologies that it provides the funding for. This creates a new bond between Man and the Earth.

The Earth-Bond Loan will be used to fund the development of new energy technologies, the commercialisation of which provides the funding of large scale ecosystem restoration projects according to the principle of the biotic pump. The Earth-Bond Loan has a duration of 7 to 10 years and carries an interest which is agreed between the parties.

6.3 The Earth-Bond Gift

The 'Earth-Bond Gift' is embodied through a certificate which is sent to the receiver by Unifying Fields. A donation to Unifying Fields by a donor activates the issuance of the certificate to the receiver.

The 'Earth Bond Gift' certificate is a present sent to family, friends, or employees of organisations, which funds the program developed by the founders of UFF aimed at supporting indigenous peoples in their quest to share their knowledge of caring for the natural world and living in harmony with Nature.

Furthermore the 'Earth Bond Gift' enables the effective dissemination of knowledge regarding Syntropic Agroforestry. This will be done by a 'teach the teacher' program which facilitates the creation of local community based Syntropic Agroforestry projects in communities all over the world.

The constructive interference between the knowledge of the indigenous peoples and the practice of Syntropic Agriculture will inspire many children of indigenous peoples, who travelled to the cities to get work, to return to the natural environment and their inherent longing of caring for the land of their parents and in honor to their ancestors. The unification of indigenous leaders and their children is a significant event waiting to happen and is a magnificent event in the history of mankind.

The 'Earth Bond Gift' facilitates this program which is meant to inspire the young generations all over world and provide hope for a future in which humanity lives in harmony with Nature.

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Foundation

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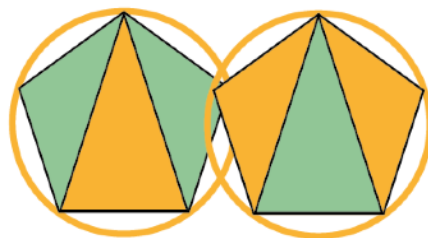
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The Unifying Fields Foundation addresses the challenges of our times - climate change, deforestation, unsustainable practices in general - by defining comprehensive approaches based on multidisciplinary understanding of all the processes that affect the geosphere, the biosphere, and the global society of humans.

UFF has a subsidiary company Restoration Power, which works with inventors all over the world, to validate their inventions and uses conscious capital to develop and implement these technologies in our society in collaboration with aligned partners.



Unifying Fields and Restoration Power