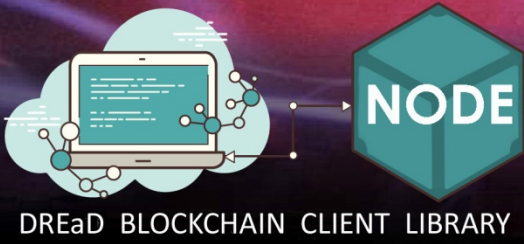


# Disruptive Research Engineering Assisted Design (DREaD)



# Co-Innovation Network (CoIN)

Fostering Collaboration  
Inspiring Innovation

FUNDING THE FUTURE OF HUMANITY



Conservation is a state of harmony  
between men and land.

—Aldo Leopold

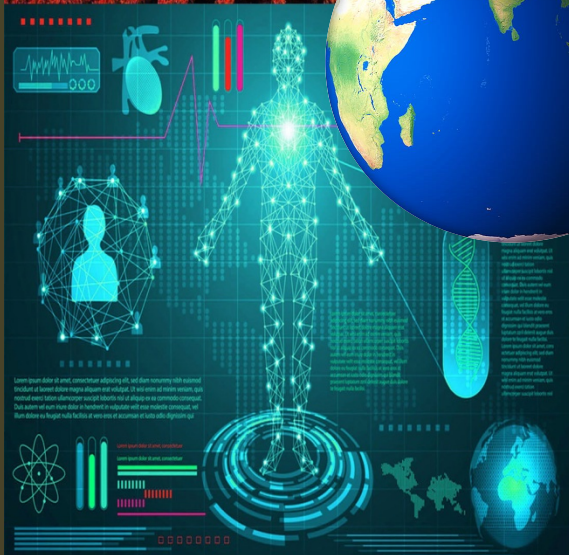


The word "broadcasting," referring to radio transmissions, was originally an agricultural term for the wide scattering of seeds.



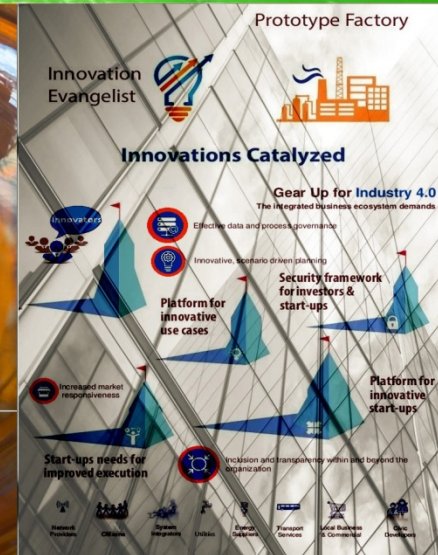
## Collaboration Quality IDEAS Humanity Technology INFLUENCE Solutions

Innovation Labs [www.dread.co.in](http://www.dread.co.in)



A person who never made a  
mistake never tried anything new.

—Albert Einstein, Physicist & Inventor



# Disruptive Research Engineering Assisted Design Co-Innovation Network

Funding the Future  
of Humanity.....

DREaD Co-Innovation Network

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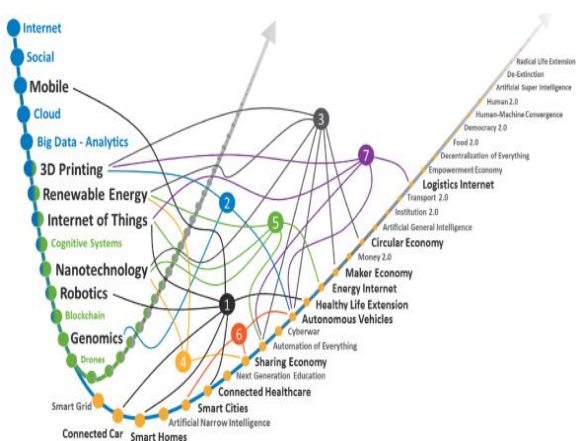
## Getting Started With DREaD

By DREaD Co-Innovation Network

Imagine a world where your monetary assistance can impact the lives of many innovative individuals. At DREaD Co-Innovation Network research team, we provide people and organizations of all backgrounds a chance to reach their potential through our wide range of grants, scholarships, and fellowship options. We invite you to learn more about how you can get involved in our rewarding Scientific Research Grant Foundation today.

We gladly accept research collaboration with commercial industries, research organizations and educational institutes. Through our mutual collaboration we solve the problem regarding Innovations & Entrepreneurial activities in Commercial Industries/ Engineering Colleges/ Universities/ Technical Institutes/ Research Organizations/ Institutions and Individuals. At DREaD, we believe that the best solutions come from the innovative people who are most affected by the problem. We have dedicated our lives to working with these communities – providing whatever support they need in order to unlock their potential. We want all individuals to envision their goals and realize they have the ability to make their dreams a reality.

DREaD offers the chance to connect researchers with novel concepts, students seeking quality teachers, institutions seeking to boost their reputations, and businesses seeking innovation. Furthermore, it ensures the development of valuable content, even if research does not yield commercial products. DREaD offers a robust model for academic-industrial development, for both domestic and international projects.



“DREaD provides wide range of grants, scholarships and fellowship options for people and organizations of all backgrounds.”

## Enhancing The Lives Of Innovators

By DREaD Co-Innovation Network

DREaD Co-Innovation Network is a non-profit research group developing low-cost, scalable, and accessible technologies. DREaD Co-Innovation Network research is also aimed at making complex technologies more accessible and promoting the democratization of technologies. As such, DREaD's primary fields of expertise include the following: Biomedical, Eco-technology, Artificial Intelligence (AI), and Policy.

Biomedical research includes development of novel medical devices, with a focus on extra-corporeal life support, artificial organs, and neural engineering.

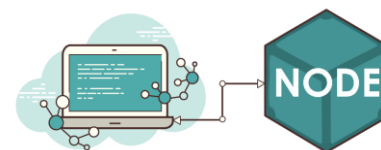
Eco-technology research includes development of low-cost sustainable energy and infrastructure resilience, with a focus on energy generation and integrating biotechnology into infrastructure design.

AI research includes deep learning and autonomous systems, with a focus on human-computer interaction, autonomous agents, and social informatics.

Policy research includes proposing, testing, and evaluating institutional solutions to advance research and organizational goals, with a focus on novel methods of research funding and education. Due to these intermingled areas, any income will be used to fund further research.

DREaD is connected with Blockchain for its Co-Innovation Network. DREaD Blockchain network is a highly robust hosting service for online content and webpages. The DREaD Blockchain Decentralized Library is a low-bandwidth system hosting works by Innovators, Researchers, educators, and content creators, and it will ensure the content is always available by means of automated redundancy.

“DREaD is making complex technologies more accessible and promoting the democratization of technologies.”



DREaD BLOCKCHAIN CLIENT LIBRARY



## DREaD Innovation Labs & 4.0 Startups

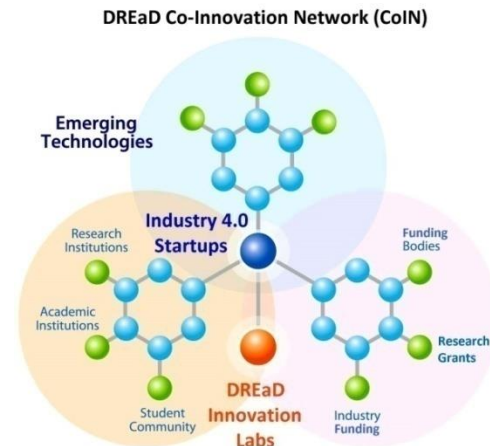
By DREaD Co-Innovation Network

The power of an innovation-ecosystem is becoming ever more important in bringing varied perspectives and expertise to focus on specific innovation challenges. To ensure that DREaD Research & Innovation has a wide innovation landscape, the non-profit company has collaborative partnerships, bringing together several groups of experts across the research, academic, start-up and corporate worlds. This is enabled through the DREaD Co-Innovation Network that participating partners the innovation edge by coordinating the efforts and ideas of these groups across industries of 4.0 startups. DREaD Co-Innovation Network (CoIN) connects multiple innovators groups in a collaborative innovation ecosystem to jointly address specific 4.0 industry challenges. DREaD has a strong research and exploration unit which is also aimed at making complex technologies more accessible and promoting the democratization of technologies. Researchers working in DREaD global network of innovation labs focus on areas such as Engineering, Mathematics, Computer Science, Agriculture, Biotechnology, Biomedical, Eco-technology, Artificial Intelligence (AI), and Policy. DREaD will network affiliated researchers together, allowing them to pool resources to on device fabrication and lab work. This will save costs, improve publication rates, and make it easier to progress onwards with patents on key technologies. DREaD promotes the development of unconventional solutions to challenges in energy, life support, artificial organs, and educational tools. DREaD designs scalable technologies should be deployable in developing countries. DREaD aims to start with proof-of-concept systems and move them towards a commercial product or research tool.

## Tech Readiness Level

By DREaD Co-Innovation Network

DREaD focuses on taking proof of concept technologies, finding a partner able to development them, and refinement of the system. DREaD will summarize its own current and future projects, as well as its anticipated logistical needs. Through DREaD Co-Innovation Network (DREaD CoIN), Innovators could work with the industry 4.0 start-ups from across the globe to deliver innovative technological potentials with geographically well-distributed, experts in Singapore, Malaysia, South Korea, USA, New Zealand, Europe/Germany, Austria, and India. DREaD develops what are called lower TRL (Tech Readiness Level) research prototypes and proof of concept and the most promising will be used for intellectual property. Incubation collaborators will find students or startups willing to commercialize each intellectual property. Even if a startup fails, DREaD still retain an intellectual property that can be licensed or otherwise used. In this way, DREaD can ensure asset generation and protection for investors, and capital generation for startups. Research performed by DREaD will be pro-actively promoted online. DREaD's internally developed Blockchain online framework will make it easier for students to be matched with appropriate mentors.



DREaD Innovation Lab & 4.0 Startups



Device fabrication, lab work to prototype

**“DREaD develops what are called lower TRL (Tech Readiness Level) research prototypes and proof of concept will be used for IPR.”**

## **DREaD Active Research Zone**

*By DREaD Co-Innovation Network*

**International Phase of Collaboration:** DREaD will collaborate with labs in Korea and the US to assist with development of artificial organs, neuro-stimulation technologies, and cryonics. Publications and patents from these endeavors will be used to attract attention and interest.

**Life Support Research:** A third of global deaths are due to cardiopulmonary devices, and existing extracorporeal life support has a ~50% patient mortality rate. To meet this challenge, DREaD has active collaborations in Korea and Germany for a novel extracorporeal life support system. The device is an artificial lung replacement system, able to be combined with a total artificial heart or vascular pump.

**Neural Engineering:** Based in on research performed in Korea, DREaD is developing a novel neuro-modulation system. This is a low-cost headset able to perform both non-invasive electroencephalography (EEG) recording and transcranial focused ultrasound (TFUS) neuro-stimulation. This headset is built from the open source OpenBCI hardware and software, and it is able to perform brain-computer interface (BCI), computer-brain interface (CBI), and brain-to-brain (BBI) interface.

**Decentralized Applications:** DREaD has developed a Blockchain framework for decentralized applications. DREaD Blockchain is an incredibly robust protocol for content hosting, with applications in data storage and internet of things (IoT). DREaD currently offers an introductory level; preset Helio Solar Node (HSN) able to be run on Solar or battery power, as well as an educational introductory class.

**Renewable Energy:** Atmospheric carbon dioxide can be converted into combustible hydrocarbons, using a low-cost, easily scalable process. DREaD is involved in optimizing the process for a low-cost, robust unit for rural farmers and backup power supplies. Unlike photovoltaic or wind turbine dependent systems, Methanol and Ethanol can be more versatile energy storage methods than Lithium-Ion Battery banks.

DREaD would build a prototype or proof of concept for each area of expertise, prior to commercial development. The devices will be built in conjunction with an outside partner if DREaD does not have sufficient local resources. In the case of Blockchain, DREaD already has internally completed projects. In this way, DREaD represents an international framework for innovative, mutually beneficial collaborations. The entire process will be thoroughly documented. Suitable candidates will be found to commercialize each system.

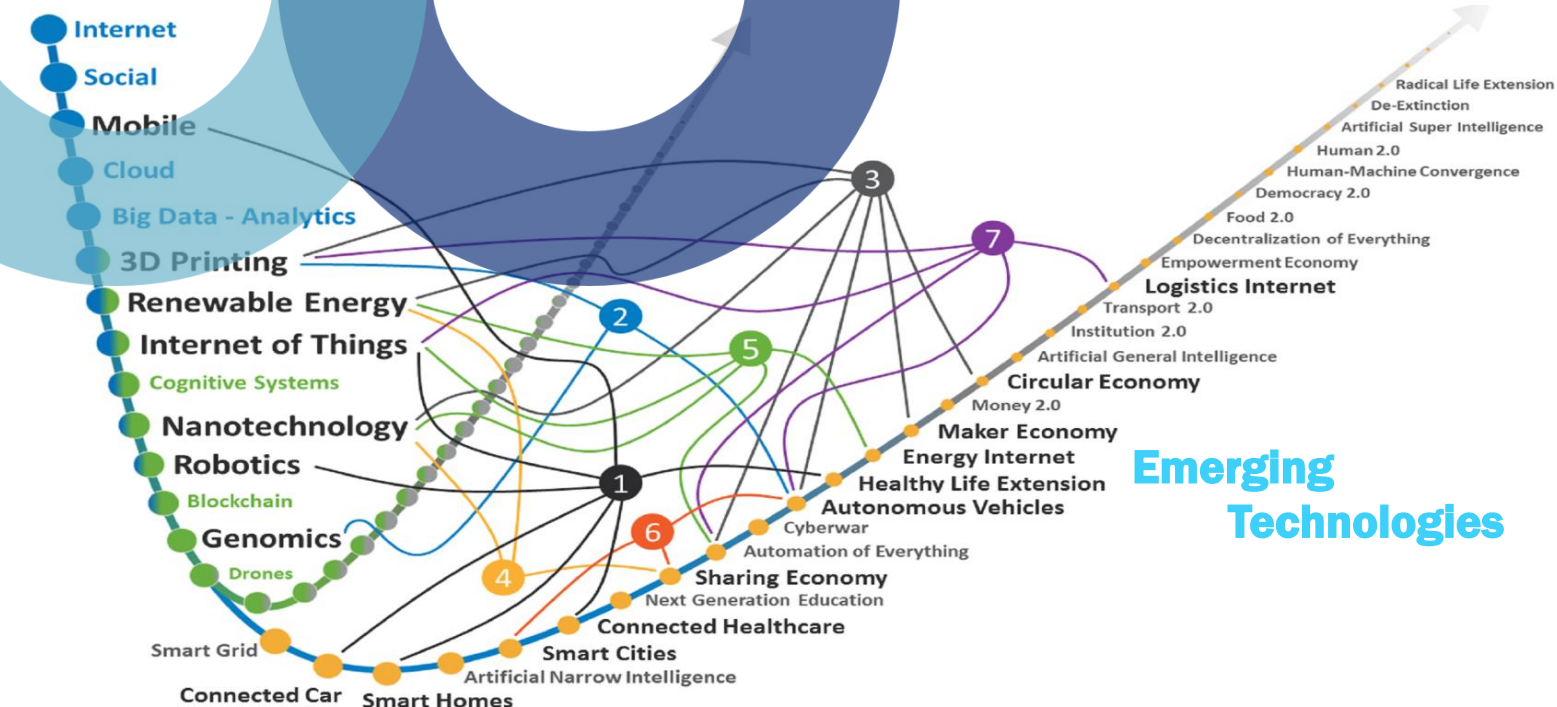


**Disruptive Research Engineering Assisted Design**

DREaD Co-Innovation Network

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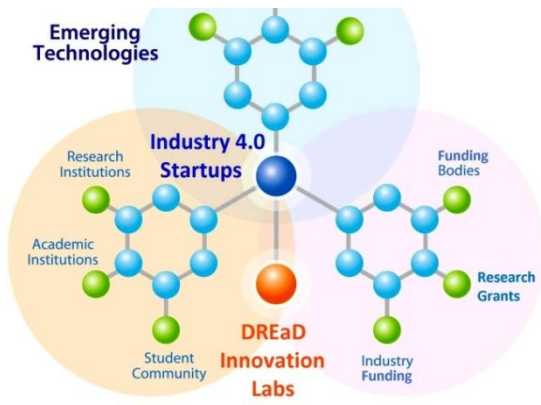


## Emerging Technologies

# What is DREaD CoIN?



Funding the Future of Humanity...



## DREaD Innovation Labs

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## DREaD Co-Innovation Network