

# Intro

soarchain lightpaper



soarchain

Decentralized Mobility Network



<b>Intro</b>	1
<b>Challenge</b>	3
<b>Solution</b>	4
<b>Features</b>	6
<b>Technology</b>	7
<b>Motus</b>	9
<b>Application Ecosystem</b>	10
<b>Our vision</b>	11
<b>Team</b>	12
<b>Contact us</b>	13



## Connectivity of vehicles is the solution for smart mobility, but it has a limitation:

No reliable and effective communication layer for vehicles

### With a connected network of vehicles:

- 1 Hundreds of thousands of injuries and deaths from traffic accidents can be prevented.
- 2 Immense amounts of direct and indirect carbon emissions can be reduced.
- 3 The business potential of novel revenue streams in the mobility space and a vast application ecosystem utilizing vehicle-generated data can be unlocked.

Inside the fragmented ecosystem of car manufacturers and many companies trying to implement their standards, it is impossible to create a unified, transparent, and scalable network for all mobility members. The current approaches lack end users' needs and potential contributions.



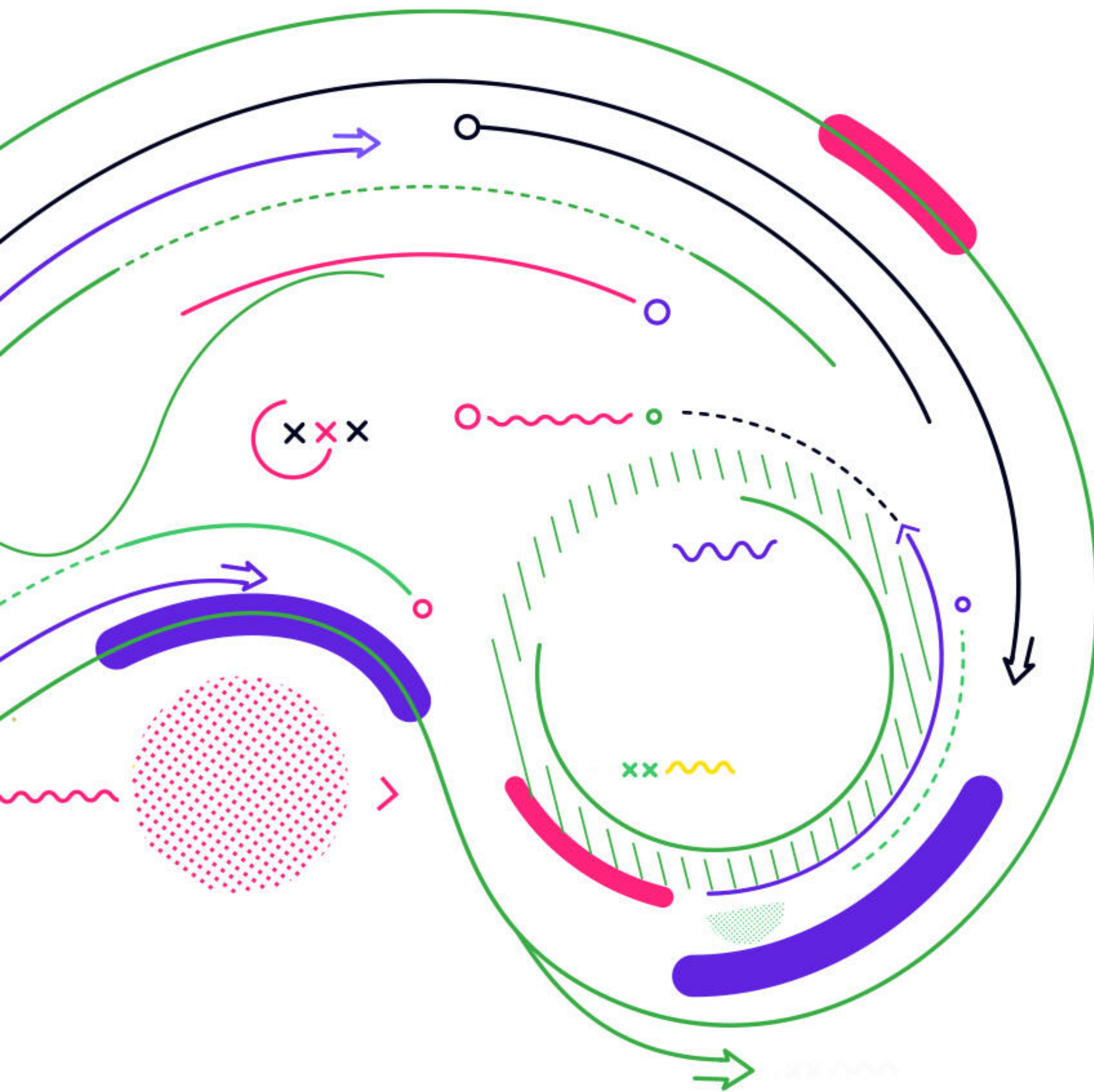


# Soarchain

a cellular vehicle-to-everything (c-V2X) based mobility network where cars, pedestrians, two-wheelers, and infrastructures are connected on a decentralized crypto-economic platform.

- **Traffic safety**
- **Vast Application Ecosystem**
- **People-powered & People-owned**
- **Utilizing vehicle data**
- **Secure and private**
- **Proof-of-availability**





# We have the required technology **C-V2X**

A unified connectivity platform designed to offer vehicles low-latency vehicle-to-vehicle, vehicle-to-roadside infrastructure, and vehicle-to-pedestrian communication.

Combining secure wide area and short-range connectivity in one module, C-V2X is a versatile and cost-effective solution to improve road safety.





## Privacy

With Soarchain, your identity is safe. You are free to choose what to share and what not to.



## Security

With tamper-proof hardware, your data and identity is safe.



## Scalability

With tamper-proof hardware, your data and identity is safe.



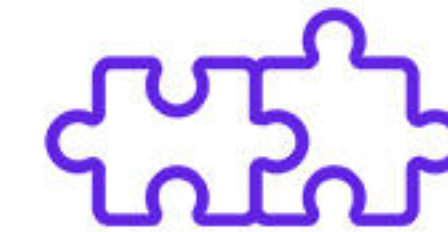
## User Experience

Users anonymously and privately contribute to the vehicle network while maximizing their benefits by utilizing the applications that run on the network and get rewarded.



## Developer Experience

With our open-source hardware and software, everybody can contribute to the development of the network.



## Plug and play

With a plug-and-play design, the system is ready to use from day one and compatible with your existing vehicle.



# Soarchain

**is a connectivity layer  
that facilitates real-time  
interactions and  
transactions between  
vehicles.**

We offer a trustless, permissionless, decentralized, and distributed way to enable connectivity between vehicles.

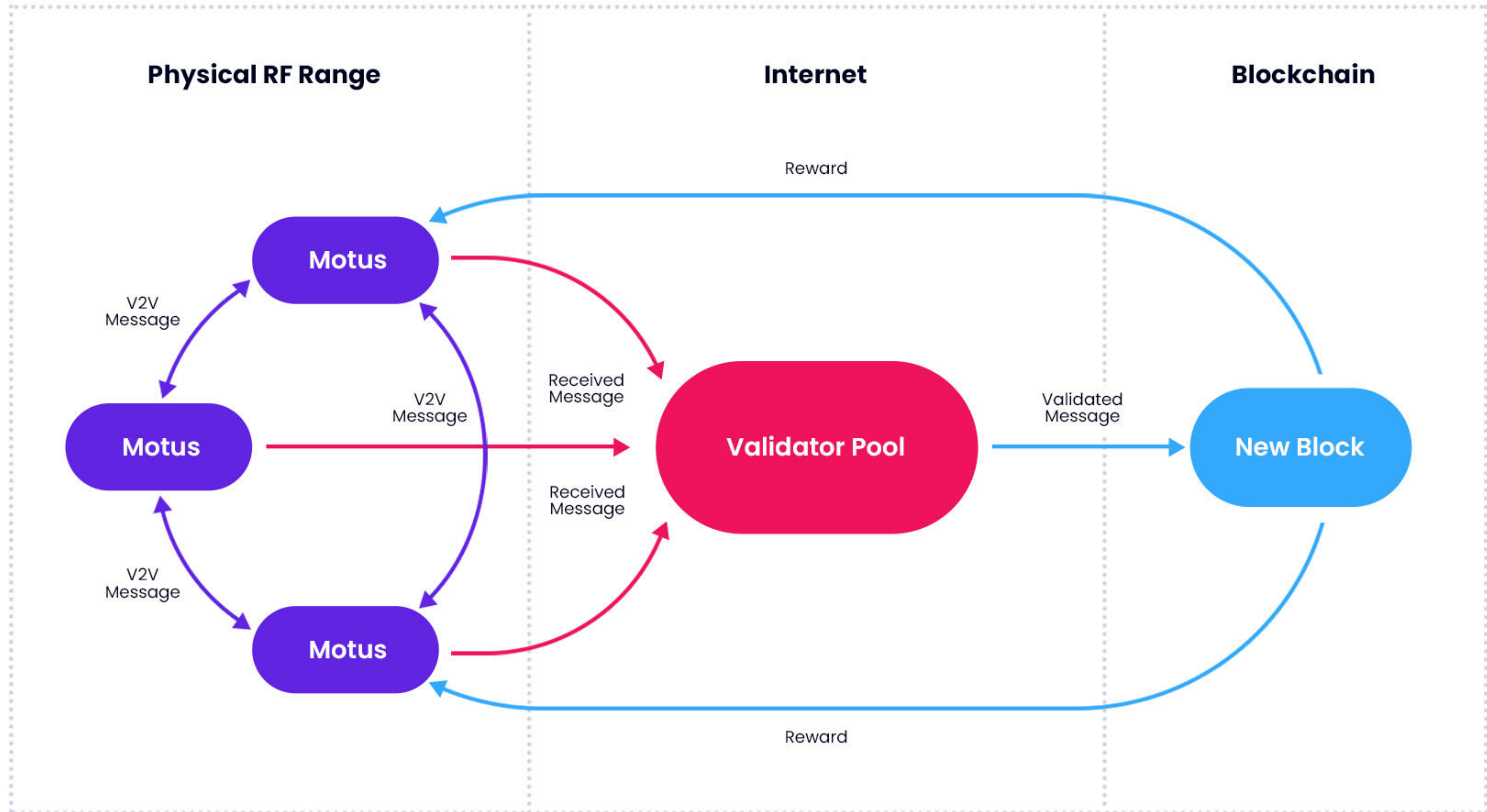
Participant vehicles of the network are incentivized to cryptographically prove their availability to the other participants through the network.

Participants prove their availability by broadcasting standardized V2X messages through a Cellular V2X air interface.

The broadcast messages are received and verified by other network participants. Each participant in the network is expected to both broadcast and receive messages.

Broadcasting honest and correct messages & Receiving and verifying these messages are rewarded through the network's incentive mechanism.









## Proof-of-availability

is sustained through plug-and-play hardware, a set of open-source connectivity modules with V2V, V2N, V2P, and V2X capabilities, designed to fit the different vehicle and user configurations.

## Features of the hardware:

Direct vehicle-to-vehicle wireless communication through state-of-the-art Cellular-V2X physical layer(PC5) for disseminating signed and encrypted Cooperative Awareness Message, which is the starting point of proof-of-availability.

Cellular communication (5G-NR/4G-LTE) for constant connectivity to the main network. This enables message-generating vehicles to send created proofs to the main network and message processing vehicles to send verified proofs to the main network.

Storage and processing power for executing proof-of-availability-related processes and storing logs from different sources. Wi-Fi and Bluetooth for user/driver connectivity for configuration and management of the device.



## Soarchain

will unlock a new application ecosystem that will lead forward mobility on many fronts and enable dAPPs for mobility.

The vehicle-generated data can unlock novel revenue streams in the mobility space if stored and shared right.



- **Safety & Emergency**
- **Artificial Intelligence**
- **Smart City**
- **Entertainment**
- **Insurance**
- **Manufacturers**
- **Advertisement**
- **Logistics**
- **Charging & Energy**
- **Maintenance**
- **Fleet Management**
- **Mobility Services**



# We envision **safer** and **smarter** mobility for everyone.

**L** A network where app developers, original equipment manufacturers, and end users can work collaboratively to create smart and connected cities and build the future of mobility.





## Soarchain

is an open-source project where any developer can contribute from anywhere in the world.

**Kerem Özkan**

Co-founder & CEO

**Deniz Kalaslıoğlu**

Co-founder & CTO

**Eksha Agrawal**

Project Manager

**Amrit Kumar Pati**

Product Manager

**Erhan Ernek**

Product Owner

**Atakan Akyıldız**

Product Owner

**İlkay Özfiliz**

Software Team Lead

**Amir Khoshbakht**

Lead Full Stack Engineer

**Can Dost Yavuz**

Blockchain Developer  
& Software Engineer

**Nazlıcan Göksu**

Software Engineer

**Siva Krishna Yendamuri**

Software Engineer

**Alper Oğan**

Hardware Design Lead

**Şafak Hazer**

Hardware Design Engineer

**Ali Rıza Sever**

Hardware Design Engineer

**Musa Sakızcı**

Embedded Software  
& Firmware Team Lead

**Muhammed Emin Alan**

Embedded Software Engineer

**Fahrettin Yılmaz**

Sales Manager

**Ayaz Mohammed**

Test Engineer





## Address

8605 Santa Monica Boulevard  
West Hollywood, CA  
USA



## Email

[info@soarrobotics.com](mailto:info@soarrobotics.com)