



QUANTUM CHARGING: WIRELESS CHARGING SOLUTION FOR E-BIKES

TechNovator



BUSINESS CASES



THE GLOBAL GOALS For Sustainable Development

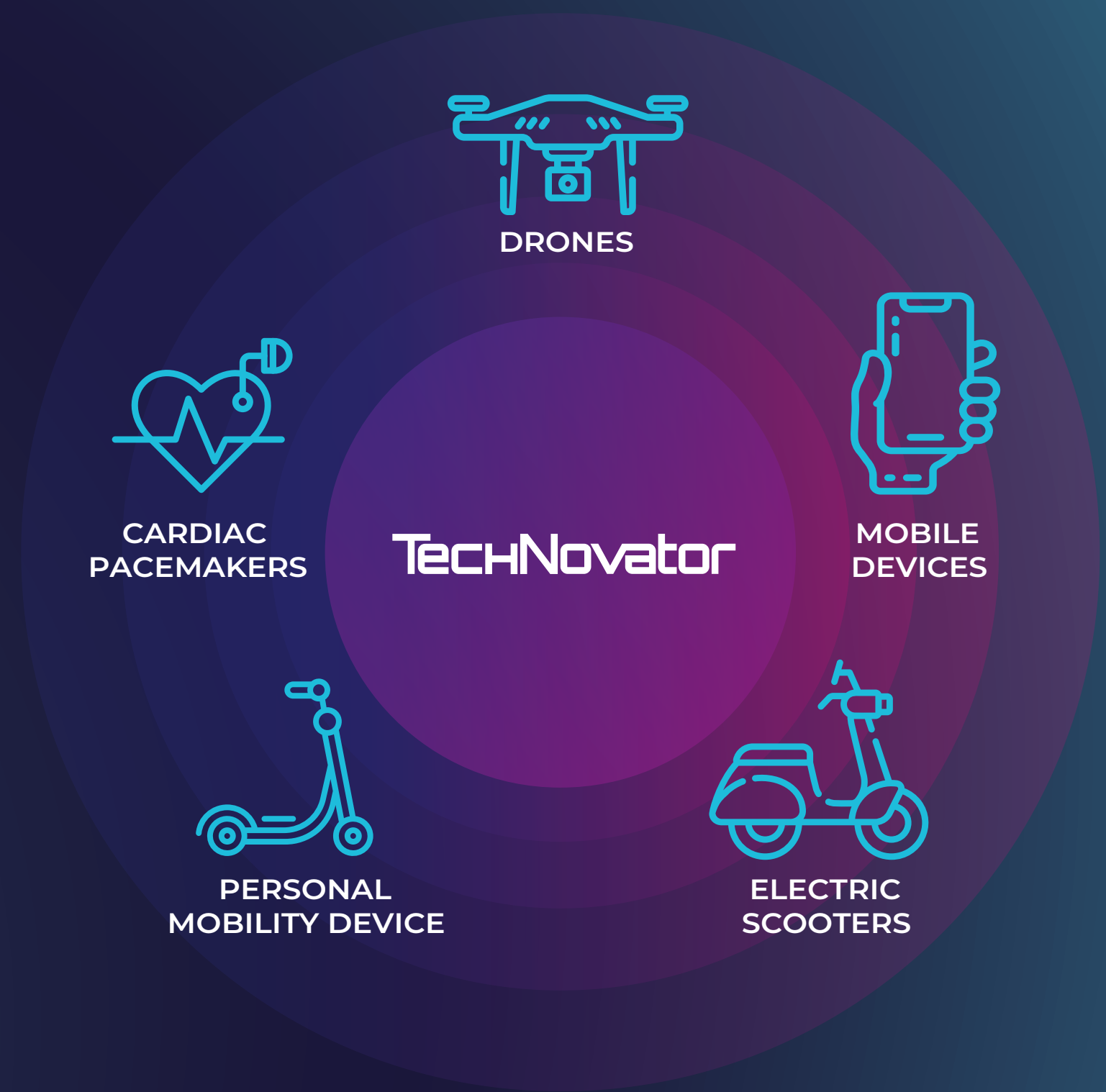
3 GOOD HEALTH AND WELL-BEING

11 SUSTAINABLE CITIES AND COMMUNITIES

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

17 PARTNERSHIPS FOR THE GOALS

4 of 17 Sustainable Development Goals, which are the world best plan to built better future for both people and planet life



TECHNOLOGY



Charging multiple high-powerful devices simultaneously



Half a meter distance
High efficiency up to 95%
Charging without cables



No magnetic field
No electric field
No heating

TRANSMITTER

Various Shapes
Various Sizes



TX

Compressed energy creating energy holes

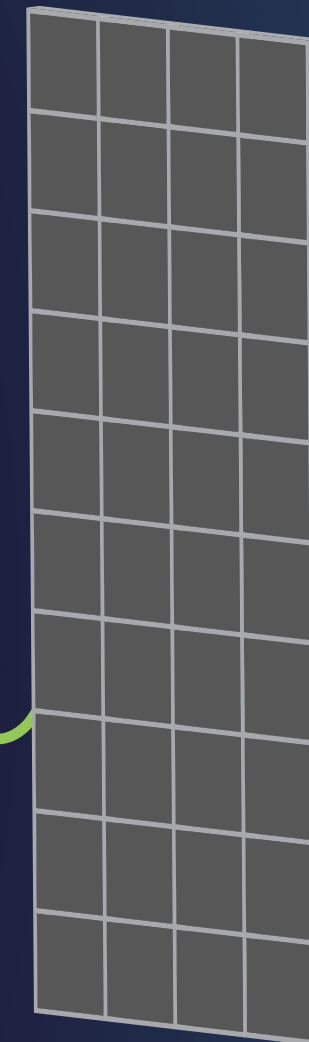
Synchronized mode

Energy Reconstruction

RX

RECEIVER

Various Shapes
Various Sizes



CHALLENGES FOR THE E-BIKE INDUSTRY

Limited Charging Infrastructure:

- Insufficient fast charging options for specific e-bike models.
- Lack of accessible charging stations in different regions.

Inconvenience of Cable Connection:

- Inefficient cable lengths.
- Challenges during cable connection.

Charging Cables Susceptible to Wear and Damage:

- Cable replacement increases costs and generates electronic waste.
- Improperly disposed of damaged cables contribute to electronic waste.
- Harsh weather conditions damage cables, requiring more reliable designs.
- Connector wear affects connection reliability.
- Safety concerns due to visible cable wear.



FEARS OF E-BIKE USERS:

- Running out of battery.
- Limited charging locations impact travel freedom.
- Time wasted searching for charging stations.
- Long rides affect physical well-being.



Wireless charging solution for E-bikes



High efficiency up to 95%



Inhospitable environment: dust, dirt, water, moisture, snow, gas, low/high temperature, ice, etc.



Integration of the transmitter in any surface



Any shapes and sizes of receivers, Slim and flexible Tx and Rx



Charging time: similar as to use cable



Charging distance: up to 0,5 m



Autonomous charging



Safety

Wireless charging solution for e-scooters



- Transmitted power up to 500 W for 1 charging sector
- Sector-based intelligent wireless charging system
- Autonomous charging
- AC grid-to-load-up to 95%
- No electromagnetic fields, no heats
- Safety

First quantum charging solution for electric Cargo-bikes



Charging without cables and battery replacement



Efficiency up to 95 %



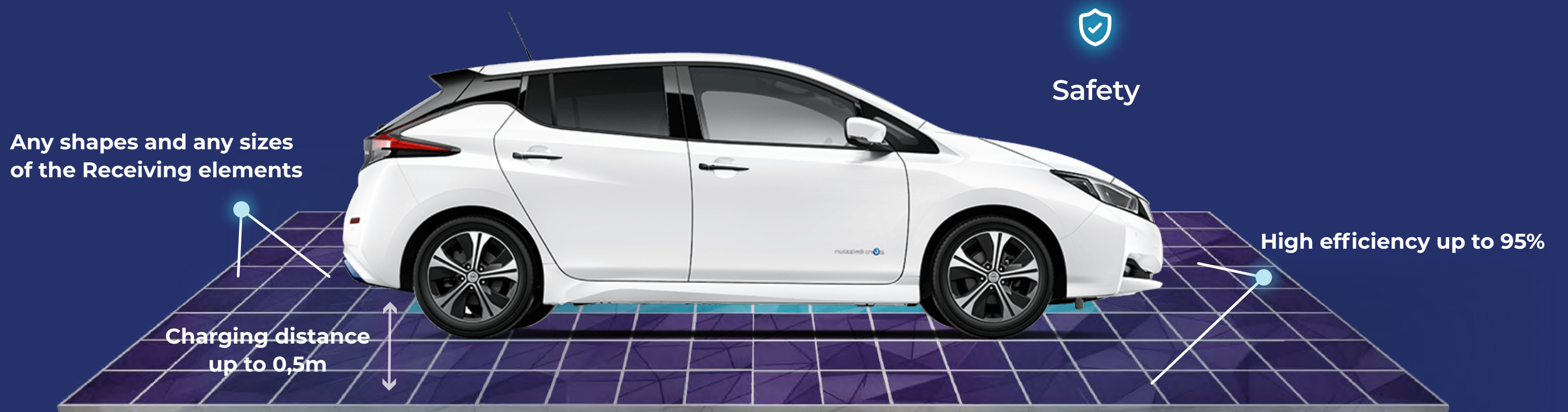
Charging in movement and possibility to build wireless charging roads for E- bikes



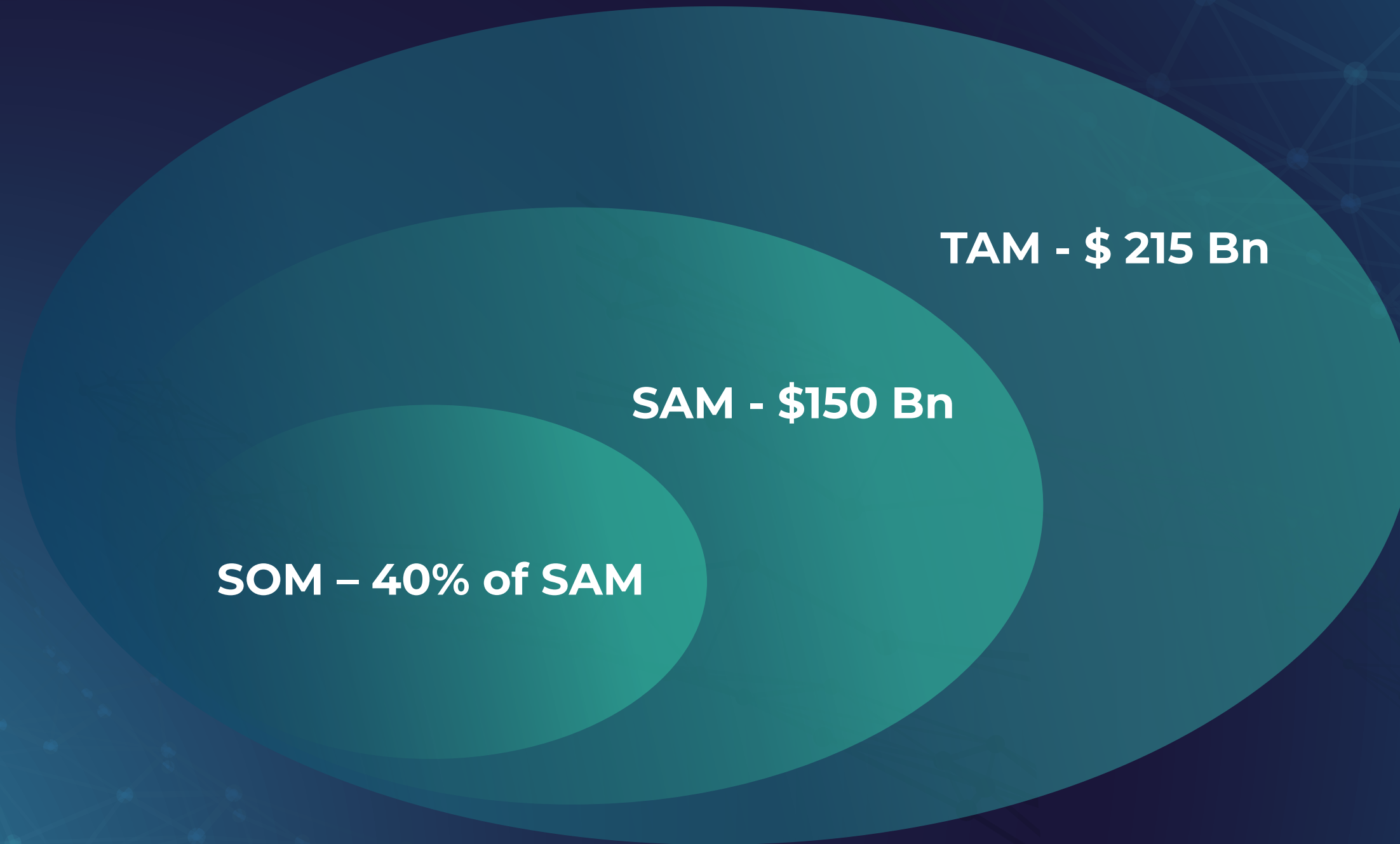
Charging in various environmental conditions (dust, cold or hot weather, rain, snow, etc.)

FIRST QUANTUM CHARGING SOLUTION FOR THE ELECTRIC VEHICLES

- Charging in movement
- Integration of the Transmitting element in any surface
- Charging in any environmental conditions (dust, cold or hot weather, rain, snow, etc.)
- Possibility to build wireless charging roads for EVs



POTENTIAL MARKET



WIRELESS CHARGING SOLUTION FOR DRONE

- High efficiency: up to 95%
- Inhospitable environment: dust, dirt, water, moisture, snow, gas, low/high temperature, ice
- Integration of the transmitter in any surface
- Charging time: 1C (1 hour)
- High power: up to 1500W
- Charging distance: 0,5 m
- Any shapes and sizes of receivers



Safety



◆ Autonomous charging

◆ Integration of the transmitter in any surface

QUANTUM WIRELESS CHARGING TECHNOLOGY

QUANTUM CHARGING TECHNOLOGY VS QI AND MAGNATIC RESONANCE WIRELESSLY CHARGING:



No Magnetic or Electric Fields



Dual Certification (CE/FCC)



High Efficiency



Lower Energy Loss



Reduced Heat Generation



Extremely Safe



Adaptive Charging to different battery types and sizes



Future-Proof

ADVANTAGES FOR THE E-BIKE MANUFACTURERS AND RENT/ SHARE SERVICES

E-BIKE MANUFACTURERS: INCREASING SALES AND INCOME WITH QUANTUM WIRELESS CHARGING SOLUTION FOR E-BIKES

- To propose to current end users more valuable solution with charging station.
- To attract new individual and business users.
- To increase sales.



MILESTONES & ACHIEVEMENTS



Safety Test Report CE ✓



R&D Scientific Grant ✓



Signed several MOUs ✓



"Core" working prototype ✓

March 2015

June 2019

November 2019

March 2020

Mid 2022

Q3 2023

Q4 2023

Mid 2025

Q1 2026

Formation ▶ Invention ▶ Testing ▶ R&D Grant ▶ Prototype/MVP ▶ Strategic Investor attracted ▶ Pilot Project ▶ Product Launch & Commercialization ▶ Continuous Improvement, New product case

Our Team

Science Advisors



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Mathematics, Physics



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Physics & Technology



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ITUMAGNET

MIT Enterprise Forum
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**ENTREPRENEURS
ARE
GREAT**
BRITAIN & NORTHERN IRELAND

**SCALE-UP
CHAMPIONS**

THANK YOU!

Let's charge freely and create together
a new standard of wireless charging solution

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