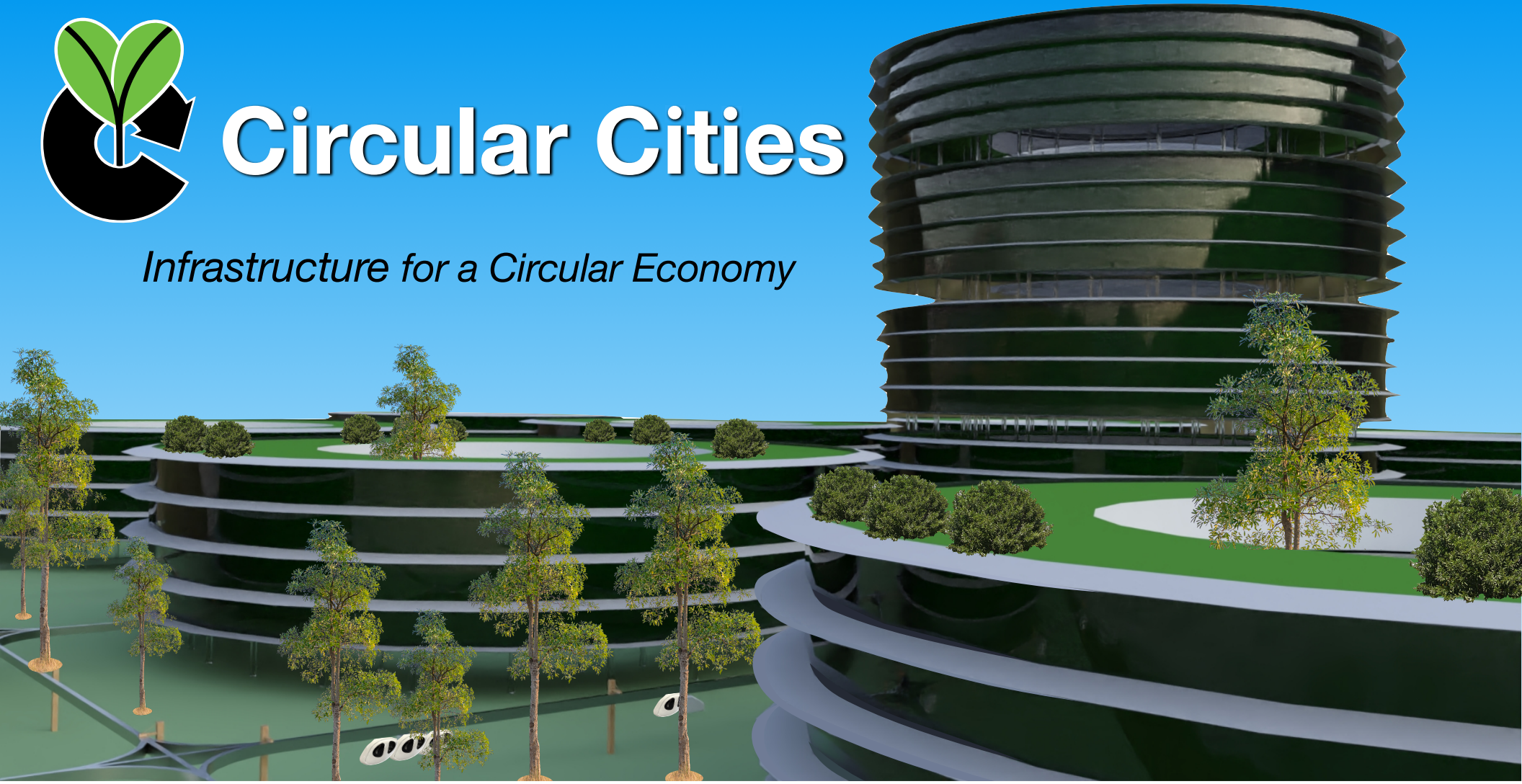
Circular Cities

Infrastructure for a Circular Economy

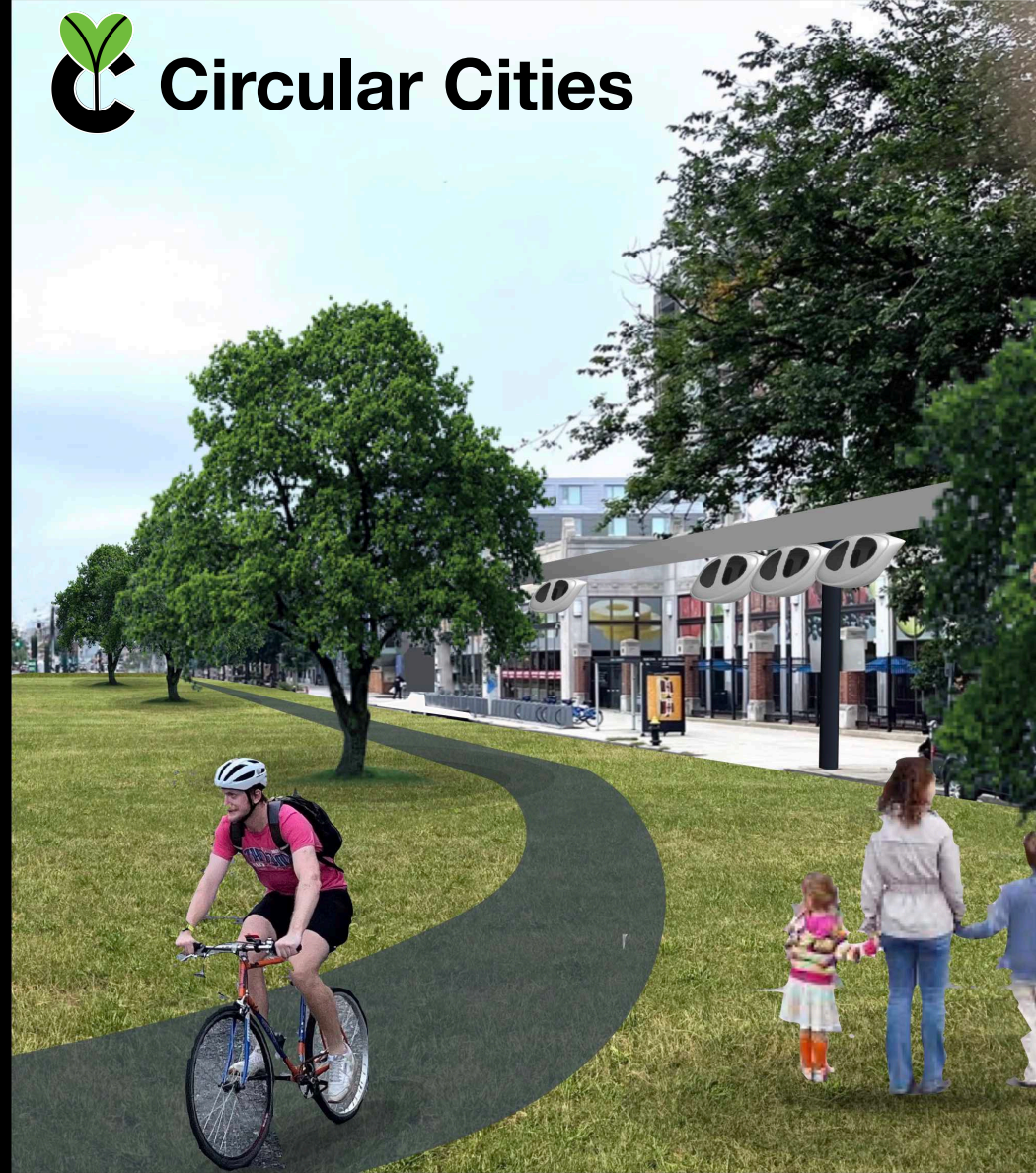


Transit X

Podway Development

Capgemini

Multi-modal mess


Circular Cities

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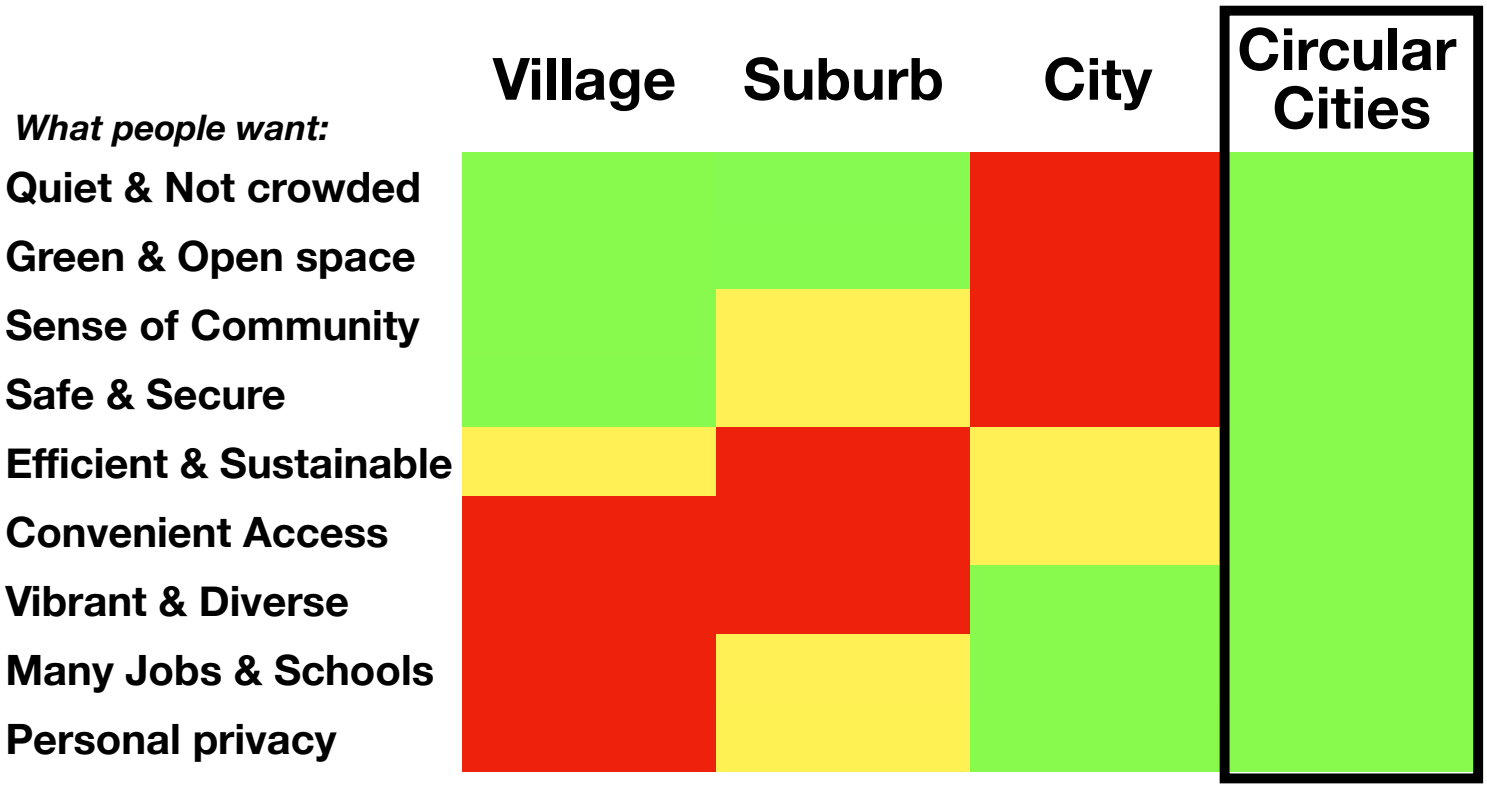
What attracts people to Circular Cities?

A Higher Quality of Life



Circular Cities combine the best features of villages, suburbs & cities

Only negative is its carbon footprint

Why?
Reduce fossil fuels
Carbon footprint
Clean water
Light pollution
Air pollution
More greenspace
Crashes
Limited land
Inequality
Disruption
Crime
Stress
Bike lanes
Disease / Health
High Taxes
NIMBY-ism
More Public Transit
Fewer cars
Earthquakes
Servere storms
Cyber attacks
Data privacy
Access to healthcare
More manufacturing
School busing
Unreliable power
Smart City
Loss of habitat
School security
Airport expansion
More truck drivers
Seaport congestion
Climate Action Plan
Vision Zero
Clean Public toilets
Rodent Infestations

What are your challenges?

1. Create jobs & attract industry
2. Low-cost renewable energy
3. Clean water and sanitation
4. More affordable housing
5. Higher resiliency
6. Access to quality food

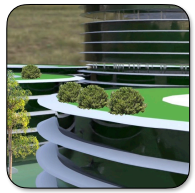
Why?
Congestion
Crashes
Cost & Funding
Project duration
Over budget & time
Flooding resiliency
Fire resiliency
Storm resiliency
Affordable housing
Re-election
EV Charging
Homelessness
Not enough parking
Electrification
Reduce water use
Curb space
Reduce plastic use
Crime
Vacant offices
Low tax revenue
Noise
Bridge repairs
Access to food
Jobs
Extreme Heat
Evacuations
Public toilets
Accessibility
Renewable Energy
Training / Education
Car theft
Border security
Migrant flows
Bicycle-friendtaly
No Roadkill
Public water stations

Circular Cities

Activeways & Parks

Transportation

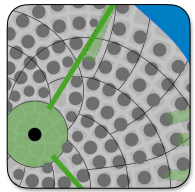
Agriculture


Buildings

Waste Management

Renewable Energy

DC Grid


New/Greenfield

Privacy & Security

Water

High-speed Data

Healthcare

Postal Service

Administration

Disaster Response

Public Safety

Education

Sanitation

Problems

ENERGY
Shortages
No transmission
Unreliable

GOVERNANCE
Corruption
Fraudulent identities
Poor law enforcement

LAND & LOCATION
No top-soil. Deforestation.
Difficult terrain
Far from city or port

INFRASTRUCTURE
Poor internet access
High cost of roadways
No access to highways
No health care or schools
High cost of housing

FINANCIALS
Lack of sophistication
Poor credit ratings
Costly, low-quality banking

POLLUTION
Polluted air
Polluted soil
No water

CLIMATE
Heat waves
Droughts
Flooding

PEOPLE
Low education
Unskilled workers
Hard to attract workers

Solution Partners

Podway Development
Mint Energy
Mint Green Bank
change:WATER
Bambhu
Ecophilic
COR
Waterfield Farms
nowN
TransitX

Our partners solve these problems.

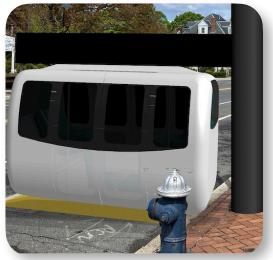
Our Unique Value:

Infrastructure as a Product

- **Low cost** so it is profitable from usage fees and private funded
- **Short timeframe** because manufactured infrastructure is quick to build
- **High capacity** so that it accommodates growth
- **Incremental** and built as needed. Can be relocated if needed.
- **Flexible** so it works in any terrain, climate or architectural style.
- **Resilient** makes it long lasting and adaptable to climate change

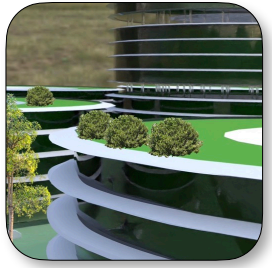
Comprehensive • Durable • Sustainable

Circular Cities



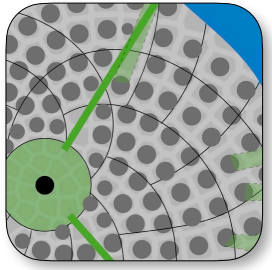
Transportation

Podways provide convenient, low-cost, and high-capacity transport for people and goods. Local and over long-distances.



Structures

Provide flexible, efficient multi-use buildings to lower costs, increase resiliency, and improve the quality of life for both residents and businesses.



New City

New city layouts provide resiliency without the typical constraints imposed by topology, conventional transportation and sanitation systems.

Agriculture

Increase yield more than 3X with year-round production using 90% less water and no fertilizers. Resilient to extreme heat.

Renewable Energy

Distributed solar and wind energy generation without land use or transmission losses. Co-located on podways, buildings, and farmlands.

Distributed Grid

Safe, distributed energy storage and physically protected cables. Instant auto-balancing with managed loads. DC distribution and transmission.

Circular Cities

Healthcare

Pods enable in-home health care and efficient equipment utilization. Medical pods provide testing, diagnostics, and secure communication with provider.

Privacy & Security

Significantly reduce cyber and real-world crimes. Protects privacy while providing necessary accountability to enforce laws.

High-speed Data

Fiber-optic cables are protected inside the podway. Micro-antennas (5G) can be placed on top of podway. Infrastructure is secured.

Public Safety & Emergency

Podway Cities eliminate vehicular-related incidents. Enable new methods to improve police, fire, and emergency response.

Water & Sanitation

Over 90% reduction in water use. Dry toilets eliminate need for sewers and centralized water treatment. Fresh and filtered water is delivered via podways.

Disaster Response

Fast emergency response and high-capacity evacuation during natural disasters. Podways continue to operate in floods and high winds.

Circular Cities

Waste Management

Clean, silent, and on-demand waste management collection at dock or door. Innovative recycle and reuse systems are possible using podway.

Education

Fast, safe and flexible trips to school without buses. Educational content is available while traveling in a pod. Pods get children to and from school safely.

Postal Service

Fast, reliable delivery for letters, packages, and on-demand delivery. Secure delivery to dropbox at posts or stops. Low cost and zero emissions.

Activeways

Healthy, active lifestyles encouraged by paths along podways for people, bicyclists, and other non-motorized vehicles.

Parks & Waterways

Green spaces can be engineered to mitigate urban flooding and provide waterways for recreation and natural beauty.

Administration & Governing

Innovative tools for decision making and problem solving can help facilitate cooperative and rational choices that benefit society.

Buildings

Affordable housing and multi-use buildings

- Convenience access to podway network
- Avoid building garages and parking lots
- Energy efficient
- 90% less water use
- Can build on lower-cost land
- No need to own a personal car
- Higher density
- More green space
- Community farming and gardens

Agriculture

Advanced technologies to increase revenue and decrease impact

- Increases yield by 2-10 times
- Generates renewable energy without land use
- 90% less water, fertilizer, and pesticides
- Resilient to droughts, floods, extreme temps
- Higher income and stable long-term income
- Faster to market with less waste
- For most climates and crops
- No downtime during installation
- Year-round production
- Private funding available for conversion
- Integration of solar farm and indoor farm
- Co-located with industries and cities

Sanitation

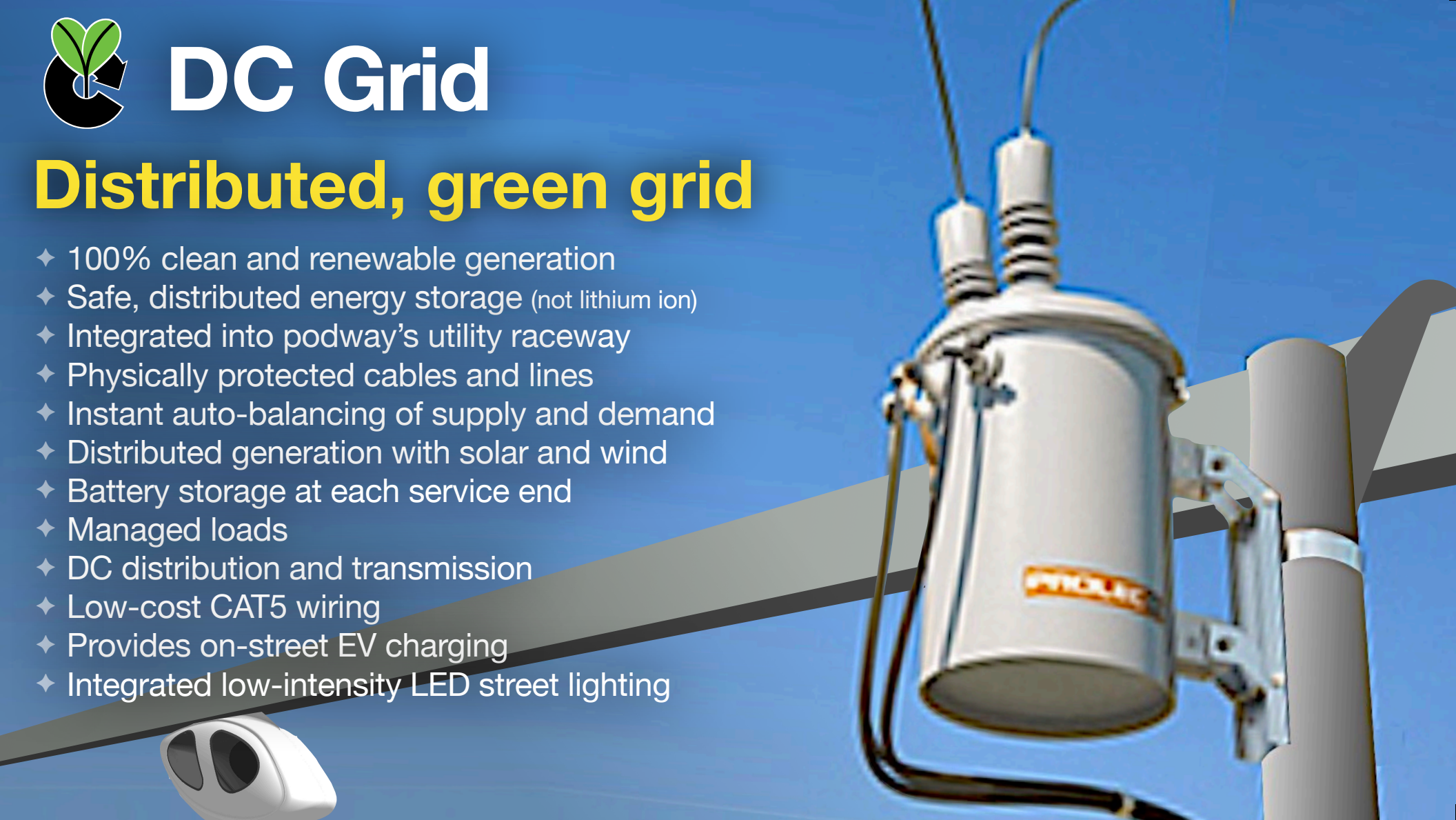
Uses 90% less water

- Water distribution: filtered, potable, non-potable
- 95% reduction in water use
- Waterless and odorless toilets
- No need for sewer infrastructure
- No need for underground water supply
- No need for centralized water treatment plants
- On-site grey water recycling
- Low-cost water filtration
- Fresh water direct from air
- Rain water collection
- Resilient to flooding
- On-demand public toilets - clean, private, and safe
- Protects from terrorism and contamination
- Works on hilly terrain

DC Grid

Distributed, green grid

- 100% clean and renewable generation
- Safe, distributed energy storage (not lithium ion)
- Integrated into podway's utility raceway
- Physically protected cables and lines
- Instant auto-balancing of supply and demand
- Distributed generation with solar and wind
- Battery storage at each service end
- Managed loads
- DC distribution and transmission
- Low-cost CAT5 wiring
- Provides on-street EV charging
- Integrated low-intensity LED street lighting



Rescue and response

Faster emergency response

- Proportional and fast response
- Autonomous mobile fire suppression
- Swarm response via podway
- Thermal cameras for detection
- Use of foam suppression bomb
- Use of drones
- Ladder-less emergency egress

Healthcare

Accessible health care

- Fast ambulance response
- Fast travel between hospitals or buildings
- More efficient equipment utilization
- Home visits via pod
- Medic pod for testing and diagnostics
- Instant checkups during commute
- Secure communications inside private pod
- Less disease and injury with podways

Post
Letter, package, and courier delivery
Fast, reliable delivery
Secure delivery to each post or stop
Low cost and low rates
Packages, letters, food deliveries
Zero emissions

Trusted Identities

Privacy with accountability

- Secure payments without cards or phone
- Significantly reduce cyber and real-world crimes
- Protects individual privacy and data
- Key technologies:
- Certifiable Real Person Identity
- Certifiable digital signatures
- Secure physical keys without phone
- Multiple varying levels of certification

nowN™

Link
5G
Fiber and 5G everywhere
Fiber-optic backbone
Reliable and protected from storms
Ideal placement for 5G antennas
Invisible infrastructure

Waste Management

Clean and sustainable waste management

- Collection at dock or near door
- Any pickup frequency or on-demand
- Silent operations — no loud trucks
- Zero emissions
- Single-stream recycling options
- Support for multiple streams
- Rodent-proof
- Manual or fully automated collection

Public Safety

Eliminate vehicular-related incidents

School

Safe & convenient access to school

United
Nations
Sustainable
Development
Goals