SAVE CROPS, SAVE WATER, SAVE EARTH

IOMTEK
INNOVATION OF MATERIAL & TECHNOLOGY

AgriCool: Climate-Resilient Film for Greenhouses

joseph_park@iomtek.com

Climate Crisis in Agriculture

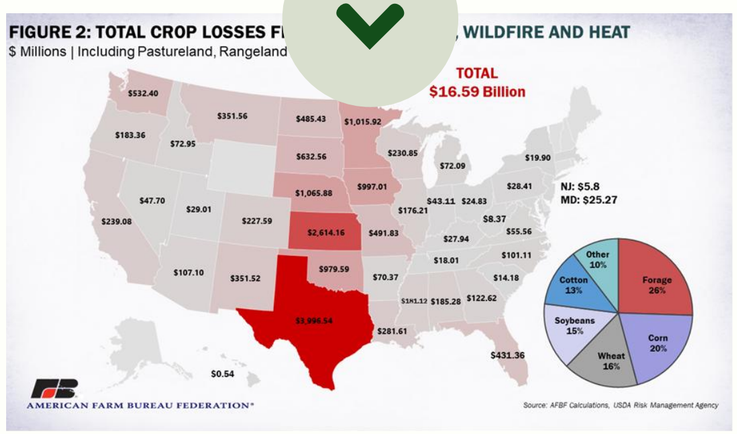
13 CLIMATE ACTION

$17B
Crop Losses
U.S. losses in 2023 alone

43%
Yield Drop
In tropical regions

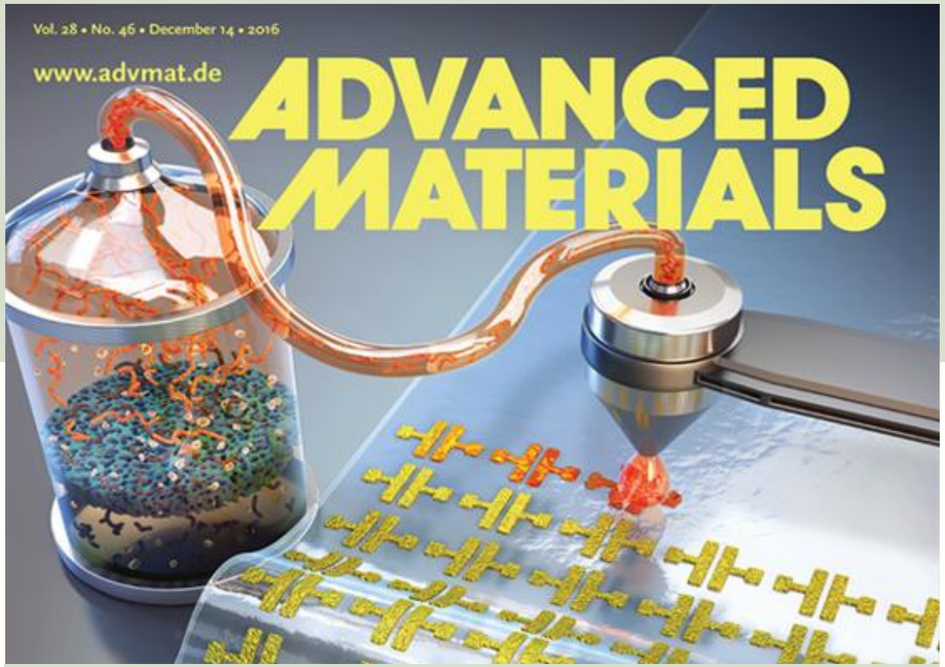
3.5°C
Temperature Rise
Expected by 2050

crop losses from drought in Zimbabwe (2024)



crop losses from drought, wildfire (2023, US)

Urgently Need Innovative Solutions!



Integration of Nano-composite polymer with dual-layer coating

Radiative Cooling Technology

Cooling with zero carbon cost, a leap in sustainable material science!

- A patented approach that passively emits significant heat into the sky through longwave infrared radiation without fans or power
- Selective transparency that passes visible light (for photosynthesis) and blocks near-IR (heat-causing wavelengths)
- A platform for sustainable cooling across various sectors such as greenhouses, windows, vehicles, and more

AgriCool: Radiative Cooling for Greenhouses

Imotek's AgriCool Film creates the perfect growing conditions , such as:

Passive Cooling
Prevent IR radiation buildup and cools greenhouses with no electricity

Light Optimization
Provides the ideal growth spectrum for plants using high light transmission, heat-blocking, and pest resistance

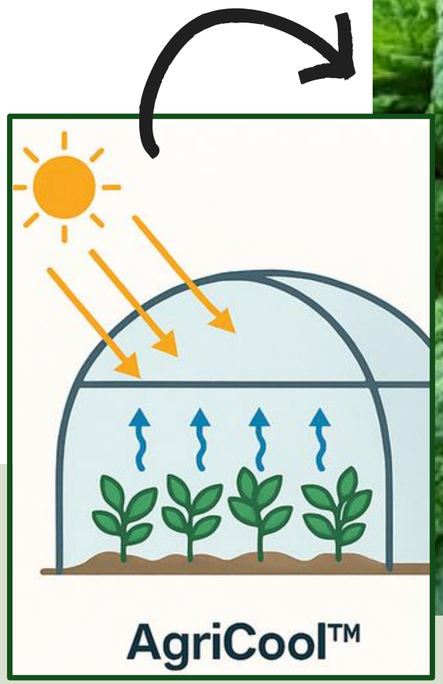
Climate Control
Maintains stable conditions for better yield

Environment Friendly
Sustainable, VOC-free, metal-free nano-polymer tech

Optimal Greenhouse Conditions

- **Temperature Maintenance**
  Below 35°C for healthy crop growth
- **Visible Light Transmission**
  Over 80% for efficient photosynthesis
- **Pest and disease resistance**
- **Proper moisture supply and circulation**
  No water droplet formation on film

Enjoy all kinds of
energy-free benefits



Field-Proven Performance That Outpaces the Market

Enhanced crop quality and sweetness (Trial in Korea, Sep 2024)

Grown with AgriCool™

- Larger fruit size
- Higher sugar content

Competitors

7x yield increase in Malawi trial (2024)

AgriCool™ Film

Beyond AgriCool

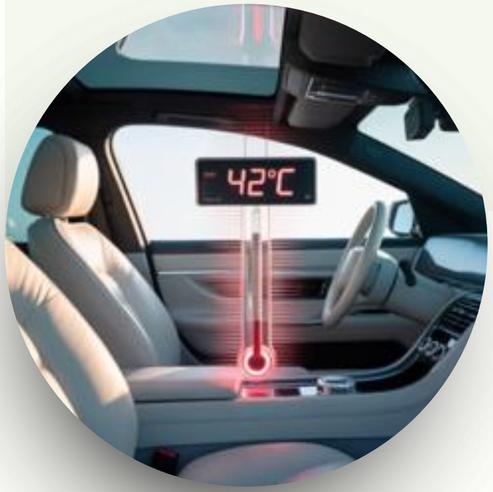
Expanding RadiCool to Buildings and Vehicles

1. SkyCool: Window films (up to 53% cooling savings)

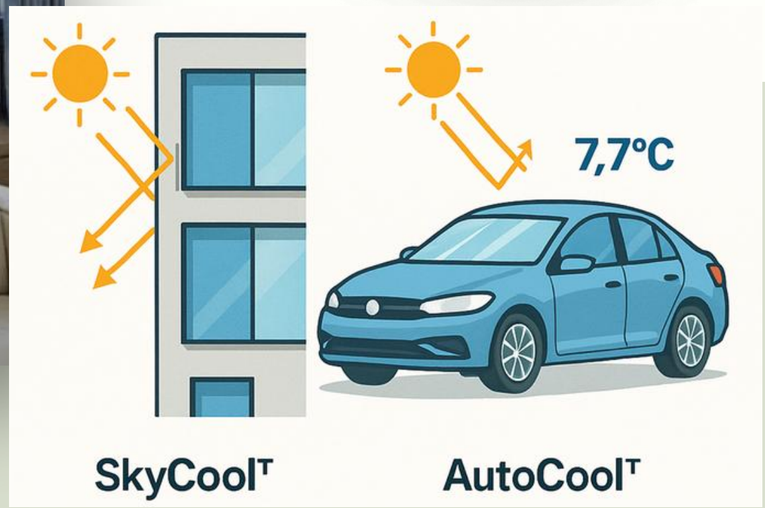
- A cost-effective retrofit for sustainable buildings
- Temperature reduction: –8.4°C indoors
- Global window film market: $3.2B (2024)

Test in Incheon, Korea (2024)

2. AutoCool: Automotive Film

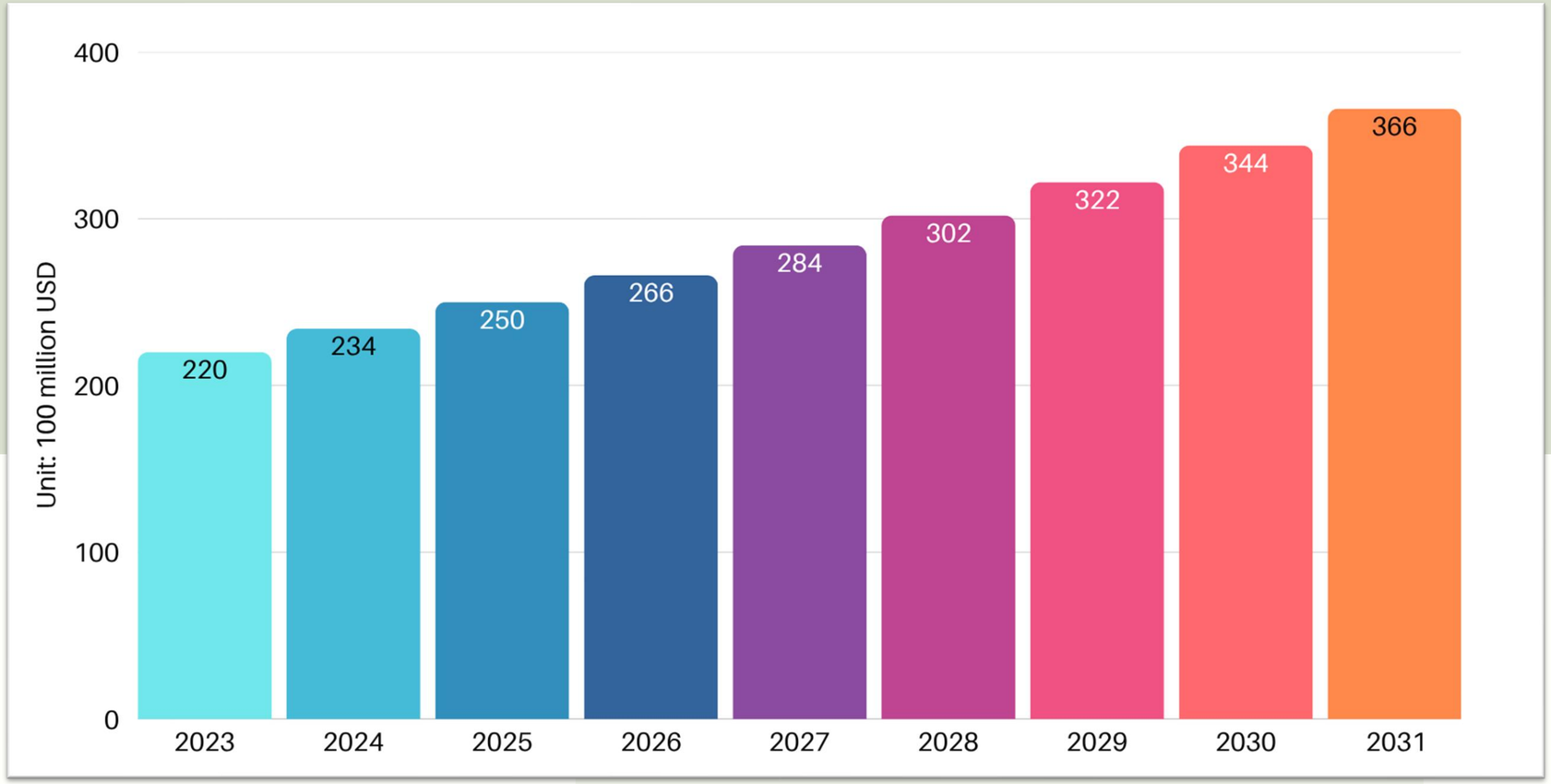


- A no-compromise upgrade aligned with brands like Volvo
- Temperature reduction: –7.7°C cooling effect
- Reduces fuel/energy use for air conditioning
- Global automotive film market is growing fast in EV sector



Market Size

- **First-Mover Advantage: Radiative cooling category virtually untapped**
- **Energy efficiency, climate change, and regulation drive demand**



TAM: Heat management solution
$20.6B (2022) → $36.6B (2031),
6.6% yearly growth

Market Segment Highlights

Agricultural Film

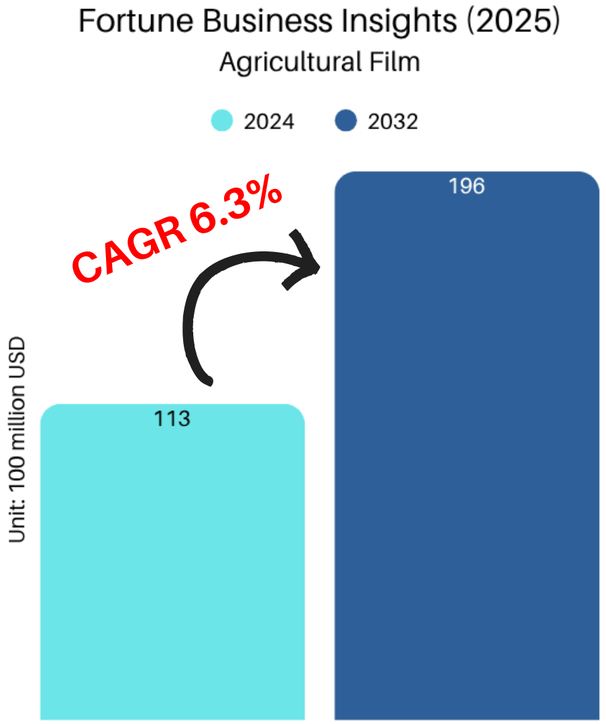
- $11.3B (2024)
  → $19.6B (2032)
- 6.3% yearly growth

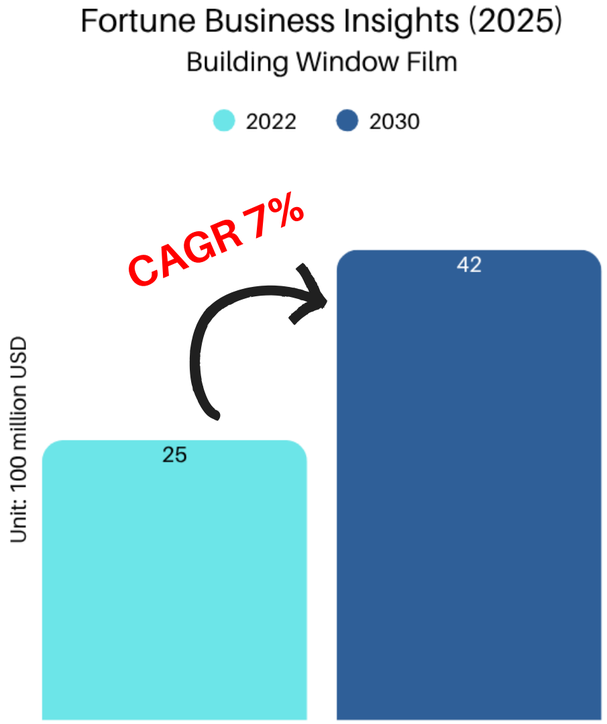
Window Film

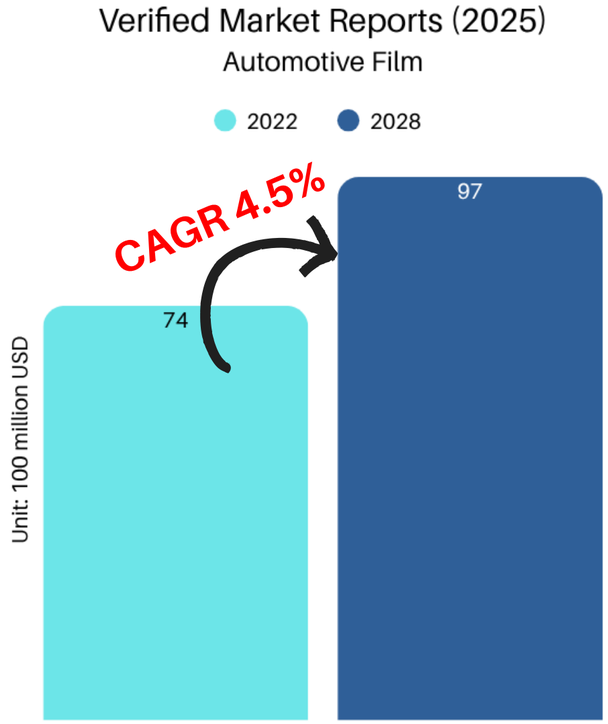
- $2.5B (2022)
  → $4.2B (2030)
- 7% yearly growth

Automotive Film

- $7.4B (2022)
  → $9.7B (2028)
- 4.5% yearly growth







Our Edge over Conventional Films

- **A unique, best-in-class cooling and light optimization**
- **Safer and eco-friendly manufacturing process**
- **No pesticides required due to natural pest resistance**
- **Metal-free = no corrosion, no signal interference**

Feature	**AgriCool Film**	Standard EVA Film	Metalized Film
IR Blocking Rate	**>85%**	~40–60%	~80%
Thermal Emissivity	**>0.99**	<0.20	<0.25
Visible Light Transmission	**~70%**	~60%	~15–30%
Max △T (°C, field test)	**39.5°C**	28°C	35°C
VOC-Free Manufacturing	✅ **Yes**	❌ No	❌ No
Metal-Free	✅ **Yes**	✅ Yes	❌ No
Insect Resistance	✅ **Yes (0% damage)**	❌ No (30% damage)	❌ No

Business Model

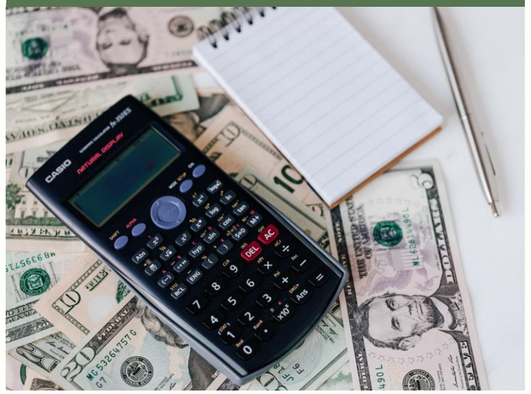
Sales Channels

- B2B:
  Sell directly to greenhouse builders, farms, and film manufacturers
- B2G:
  Work with NGOs and government projects for large-scale installations
- B2C(Emerging Markets):
  “Pay as You Earn” model (farmers pay after harvest by sharing profits)

Sales Types

- Finished Film Sales:
  Provide ready-to-install greenhouse or window films
- Material Sales:
  Sell cooling coating to OEMs (film makers) who apply it to their own products

Unit Cost



- Greenhouse Film:
  $2-$3 per m^2
- Window Film:
  $60-$70 per m^2
- Auto Film:
  $80-$90 per m^2

Traction

Our Journey in Building Climate-Resilient Agriculture, Buildings, & Mobility

Q4 2025: Commercial Launch in Africa, Southeast Asia
Deploy B2B distributor networks

Q3 2025: Partnerships
Engage government stakeholders in 2 countries

Q2 2025: Testing Phase
Run more pilot tests (Uganda, Vietnam, Qatar)

Q3 2024: Pilot Sites
Malawi (greenhouses), Incheon (buildings)

Roadmap

Our Plans to Make a Transformative Global Impact in Agricultural Productivity, Energy Savings, and Sustainability

2025

- Start first export deals for agriculture
- Raise $1.5M “Pre-A” to boost production

2026

- Begin piloting films for buildings & cars
- Raise $5M Series A to scale up production

2027

- Mass production (3–5x growth)
- Launch building & automotive films
- Raise $10M Series B for growth

Team IOMTEK

YJ Park

CEO

SM Jeong

Polymer Eng.

SH Lee

Chem. Eng.

JK Kim

Material Eng.

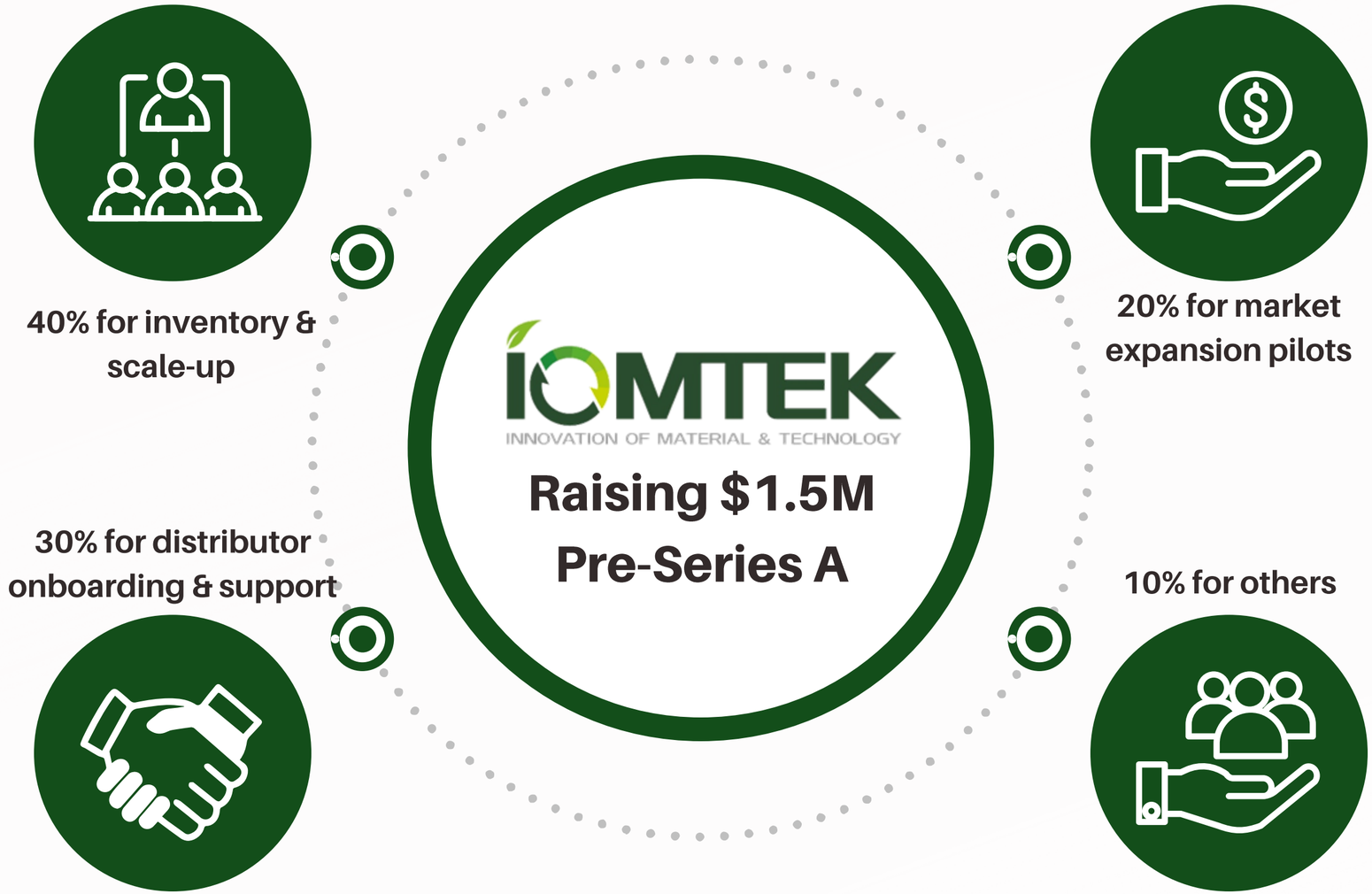
JW Lee

Architect Eng.

- **Government awarded programs totaling more than $1.2M with $1.0M funding**
- **Global work experience, transforming science into scalable climate technology**

Why Invest in IOMTEK?

- Proven science, patent-pending tech, field results
- Strong margin structure with global market pull
- Scalable, ESG-aligned product suite



THANK YOU!

joseph_park@iomtek.com