

# THE NEXT AGRICULTURAL REVOLUTION THROUGH TRANSFORMATIONAL TECHNOLOGY



ECOPHILIC

ECOPHILIC CORPORATION

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# AGRICULTURAL PROBLEMS

- Climate change
- Labor shortages
- Managing supply chain
- Water scarcity
- Pests and diseases
- Consumer demands
- Market volatility
- Managing soil health



The Agriculture industry, and our food supply, are in serious trouble.

The FDA predicts that by 2050, we will need to produce 60% more food.

No other current agriculture technology exists to deal with the effects of climate change.

Limiting factors in Agriculture: Water and fertilizer costs, pest control, invasive species and productive land.

Agriculture runoff is the #1 water pollutant in both the U.S. and globally, creating environmental disasters



# THE RIGHT SOLUTIONS, AT THE RIGHT TIME

We have engineered the **world's first artificially intelligent synthetic root system** capable of understanding and communicating with plants.

Our technology can **minimize pesticide, water, and fertilizer usage by up to 94%**; help plants grow in inhospitable environments; **increase resistance** to natural disasters; **alter nutrient and taste profiles**; and **reduce/eliminate nutrient pollution**.

Our **AI optimization** engine creates a customized protocol that repeatably grows crops with **extreme efficiency** providing only what they need, when they need it, to **significantly reduce cost and increase yield**.

Incorporate our synthetic root fibers into “living” ropes, filtration mats, and netting that can **remove highly polluting elements** like nitrogen, phosphates, heavy metals (such as arsenic), and even certain chemicals.

Can be utilized in hundreds of applications including, **oil spill remediation, wetland restoration, fish farming, lawn care**, and many others.

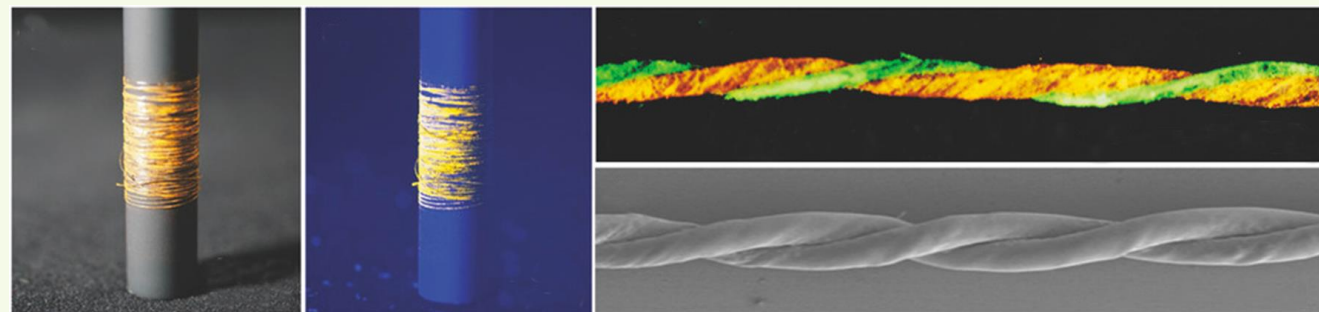
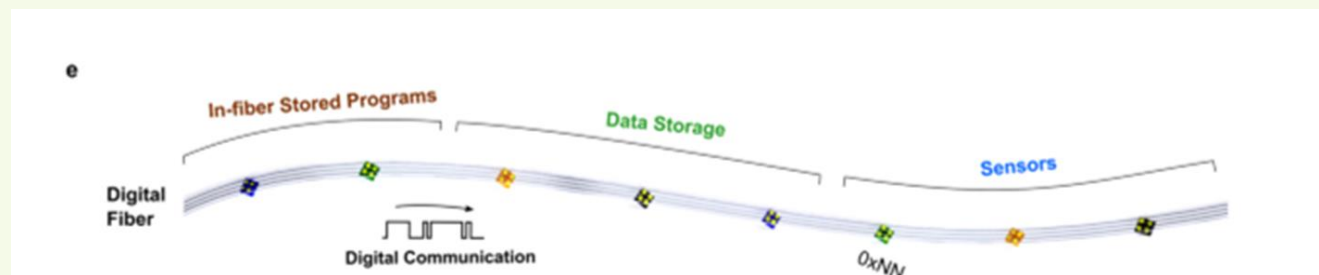
# THE NEXT REVOLUTION IS HERE

- **Fourth Agricultural Revolution – EcoPhilic, 2024**
  - Develops synthetic root system to have two-way communication with plants
  - Paradigm shift in water, fertilizer, pesticide and growth factors
  - Innovation in pollution remediation
- **Third Agricultural Revolution -1950-1960's**
  - Advancements in pesticides and synthetic fertilizers
  - Modern irrigation systems
  - Genetically engineered crops and hybrid crops
- **Second Agricultural Revolution -1500-1850**
  - Replace low to high yield crops
  - First chemical fertilizers
  - Advancement of tools and machinery
- **First Agricultural Revolution – 12,000 BC**
  - Transition from hunting & gathering to farming
  - Domestication of plants

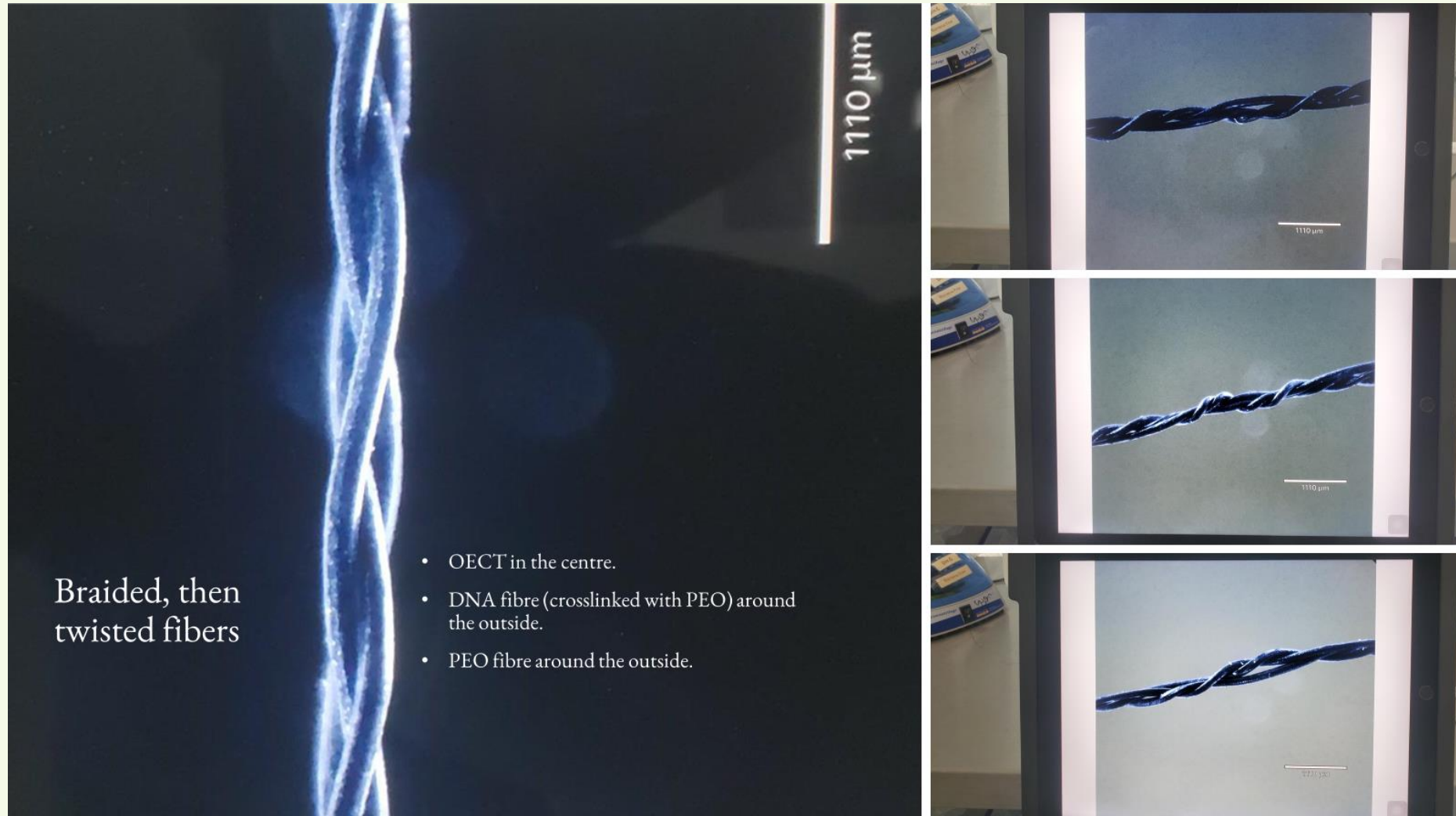


## INNOVATION TO REVOLUTIONIZE AGRICULTURE AND BEYOND

*Our cell-free DNA technology unlocks the code to actively communicate with plants.*



# A LIVING CELL-FREE “FIBER OPTIC” CABLE



## MAJOR USES IN AGROTECHNOLOGY

1. Significantly Reducing/Eliminating the need for pesticides
2. Minimizing the use of fertilizers by up to 94%
3. Minimizing water usage by up to 97%
4. Making plants resilient to drought and/or natural disasters
5. Accelerating plant growth and altering nutrient and taste profiles



# ECOPHILIC TECHNOLOGY APPLICATION

Cost Savings with Health and Environmental Benefits



Traditional Farm  
400 acre farm

Fertilizers - \$187/acre\*

Pesticides - \$140/acre\*

Herbicides - \$45\*

**\$148,000<sup>+</sup>**



EcoPhilic Farm Technology  
400 acre farm

Synthetic root systems and  
microneedle patches

\$50/acre

**\$20,000**

\*Purdue University, College of Agriculture, 2023

Iowa State University Extension Office, 2024

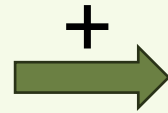
+ Does not include the cost of application (labor and fuel)

# MARKETS

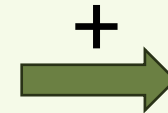
## Target Market Timeline



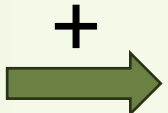
Lawn & Home Gardening (U.S.)  
\$7+B



Agriculture Wastewater Filtration  
\$3+B



Agriculture Applications  
\$50+B



Aquaculture  
\$500+M

# BUSINESS MODEL



## Projected revenue

Year 1

Field testing and  
manufacturing.  
Optimize MVP

\$3.1 M

Year 2

Home garden and  
lawn systems  
Aquaculture filtration  
net

LOI's from Home  
Depot and IKEA

\$64 M

Year 3

Commercial agriculture  
systems  
Metaverse platform  
Home water filtration  
Wetland remediation  
plants

\$695 M

Year 4

Industrial water filtration  
Aquaculture and wetland  
filtration mats  
Smart Dust™  
Liquid roots & seed  
coatings

*Grant acquisition to further research & development*

# COMPETITION

| Features                                                                         | EcoPhilic | Desert Control | Inari | Phytech | Biome Makers | Responsive Drip Irrigation |
|----------------------------------------------------------------------------------|-----------|----------------|-------|---------|--------------|----------------------------|
| Two-way communication w plants                                                   | ●         | X              | X     | X       | X            | X                          |
| AI monitored and controlled                                                      | ●         | ●              | ●     | ●       | ●            | X                          |
| Able to turn genes on and off                                                    | ●         | X              | X     | X       | X            | X                          |
| Significantly reduces water, fertilizer and/or pesticide use                     | ●         | ◐              | ◐     | ◐       | ●            | ●                          |
| Can be used on any plants, trees, flowers                                        | ●         | X              | X     | X       | ●            | ●                          |
| Applications beyond agriculture (environmental contamination, aquaculture, etc.) | ●         | X              | X     | X       | X            | X                          |

# KEY MANAGEMENT



**Josh Van Zak, CEO.** Mr. Van Zak is a MIT graduate with a postgraduate fellowship at Harvard Medical School. He received the Quest AI Award for Artificial Intelligence research, and led his own research at Yale University and the University of Cambridge. His projects have been featured in DEZEEN Magazine, Netflix's Abstract, the Wall Street Journal, the National Design Awards, the San Francisco Museum of Modern Art, Cooper Hewitt Museum, Centre Pompidou, and Smithsonian Museum. He is also an advisor to the Tangible Media Group at MIT, the Diagnostics Accelerator at Harvard, and the Engineering Innovation Group at MIT.



**Ernest D. Papadoyianis, COO.** Mr. Papadoyianis has more than 30 years of successful business experience in a diversity of industries, including over 20 years in the Agriculture industry. He has personally founded over twenty businesses including the first public company in the U.S. Aquaculture industry, and has held executive and Board positions in public and private companies, as well as numerous industry groups and associations. He has been an international speaker on business development, technology, and sustainability, including engagements at the United Nations FAO in Rome, Italy, and the International Atomic Energy Agency in Vienna, Austria. His businesses and technologies have been featured on Discovery Channel, National Geographic Explorer, The Wall Street Journal, South Florida Business Journal, The Miami Herald, Sun Sentinel, Florida Trend magazine, as well as numerous industry specific journals.



**Mark Darco, CFO.** Mr. Darco is an Investment banker and an SME Finance expert with 17 years extensive experience in investment management, international trade, credit management, financial risk management, and corporate finance. He is currently the President of Asian-African Chamber of Commerce & Industry - AACCI, a transnational chamber (Ghana chapter). He is also a Senator in the World Business Angels Investment Forum. He was recently featured in Passion Vista Magazine and has received several global awards in governance and leadership, including the African Icons Award, 2021, Outstanding Young African Leadership Award 2021 and Sheikh Sager Bin Mohamed Al Qassimi's Private Office prestigious award 2020.

# OUR TEAM

*Joining Messrs. Van Zak and Papadoyianis on the Board of Directors are:*

**Christopher Fry, Director.** Mr. Fry is currently the Chief Language Officer at Haddington Dynamics, where he creates intuitive ways to design, program, and assemble robots that perform useful functions. The main way of doing this is through simple, logical languages and user interface design. Previously, Mr. Fry has developed programming languages and tools at companies such as BBN, Symbolics, and IBM. He started Macintosh Common Lisp at Coral Software, for which, Apple bought the company. He was founder and Chief Scientist at Clear Methods, developing one language to encompass the functionality of web programming.

**Henry Lieberman, Director.** Dr. Lieberman was a research scientist from 1972-87 at the Computer Science & Artificial Intelligence Laboratory at MIT. His early contributions to computer science includes work on the programming language Logo, as well as the first attempt at using bitmap and color graphics in programming languages. Some of his contributions include prototype object systems, the concept of delegation, and the first real-time garbage collection algorithms in programming languages. His recent work at the MIT Media Lab has centered around the field of commonsense reasoning for user interaction as well as programming by examples.

**Roger Cunningham, Director.** Mr. Cunningham is a high-energy leader, that has achieved consistent success, proven strategy, and planning and execution skills. He has a keen understanding of consumer goods trade, retail and Omni-channel consumer goods operations, resource trade, corporate governance, international finance, vendor sourcing, imports/exports and multinational operations. As Managing Partner of his consulting firm, his teams have delivered strategy and advisement to over 160 consumer goods clients, including 15 years at Under Armour, the People's Republic of China, Macy's, the Kingdom of Saudi Arabia, the nation of India, REI Sporting Goods, Williams-Sonoma, Ross Stores, CB Richard Ellis, Louis Vuitton, Kmart etc.

**Stephen Gantz, Director.** Mr. Gantz is a charismatic impact investor accomplished in executing creative business strategy and executive team formation in a wide range of global industries. He is exceptionally skilled at concept focus and workflow efficiency strategy with an impressive record of capital management and aggressive margin development. Decisive, focused, and results-driven, he builds product excitement and long-term network bridges through global cross-market relationships. He is committed to bringing products and concepts to market with well planned, multi layered strategic approaches that create positive social impact in communities around the world.

**Layne Fortenberry, Director.** Mr. Fortenberry is a visionary entrepreneur accomplished in marketing and processing agricultural commodities in the global marketplace. He is exceptionally well-versed in all aspects of agricultural commodity transactions with a family background in rice production, sales, and value-added revenue generation. Innovative, strategic, and results-driven, with an extraordinary talent for creating team cohesion and focus, he creates partnership alliances across a broad range of channels, creating value through innovative business models. In 2014, Mr. Fortenberry founded Grainster, LLC, a technology platform that revolutionizes the agricultural marketplace by directly connecting farmers and end users directly in the marketplace for the first time.

# CAPITAL RAISE

## \$5,500,000

### IN SAFE



## PRE- SEED ✓

- Laboratory development of MVP versions of artificial roots, microneedle patches, bioelectronic tattoos, and spectroscopic installation devices.
- Laboratory testing of communication and gene activation in plants
- Secured National Science Foundation Grant for \$1.3M

## SEED

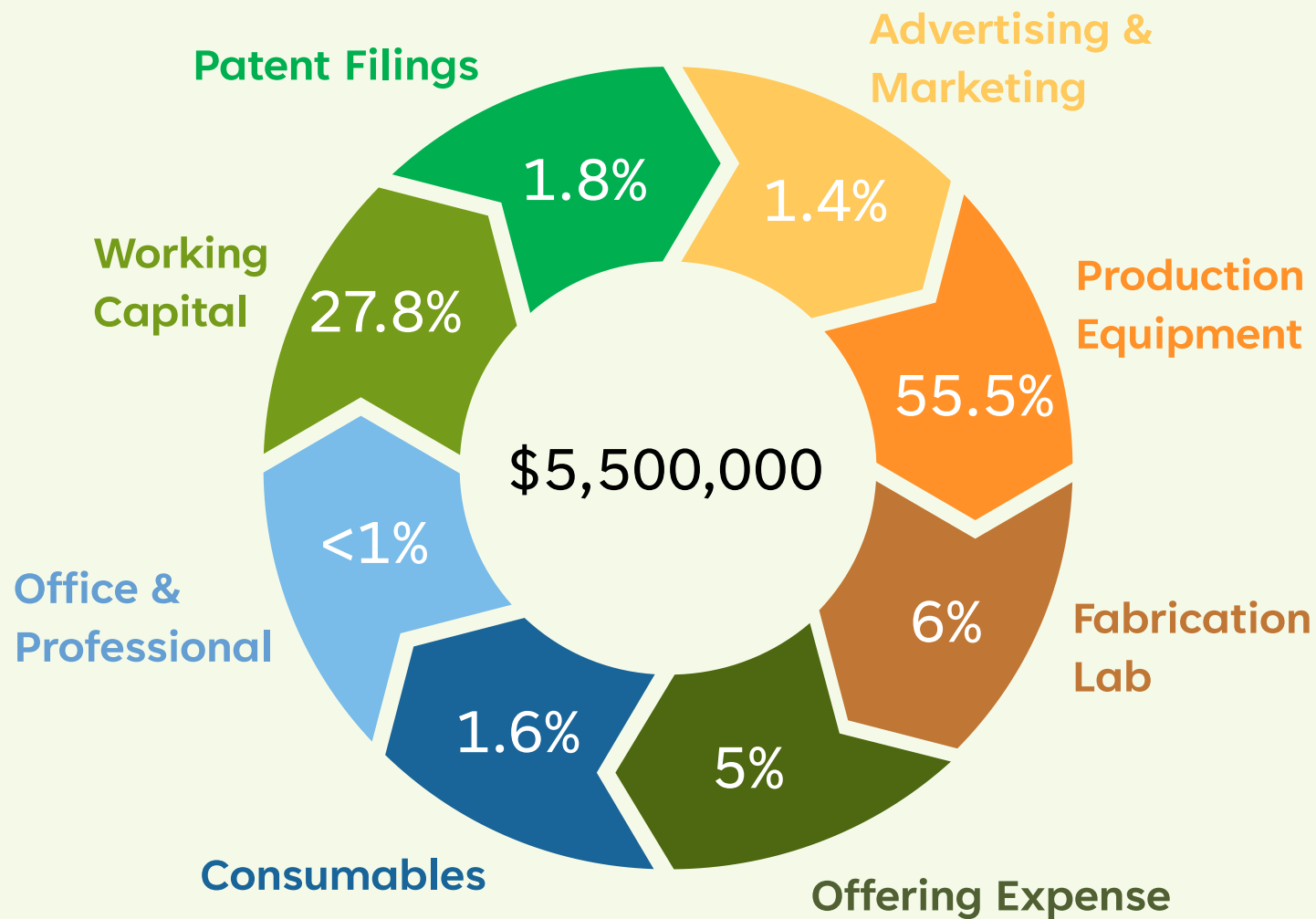
- **Production line development** - living filtration mats and small scale production of synthetic root, water filtration mats, aquaculture netting
- **Field testing** - Small-scale production and field testing of artificial roots, microneedle patches, bioelectronic tattoos, and spectroscopic installation devices.
- **Legal and filings of seven patents**
- **Initiate brand development and marketing**
- **Begin initial sales** - into the home farm and lawn, vertical farming, and nutrient filtration markets
- **Expansion** - commercial production of synthetic root system and accompanying devices.

## SERIES A -2026/27

- Expansion of offices, sales and applications across multiple continents
- Strategic Acquisitions – of suppliers and synergistic technologies
- Development of more deeply integrated human-plant-computer interaction devices.
- Open wholly-owned subsidiary companies to focus on oil spill, pollution, and aquaculture operations
- Planned IPO after 2027



## USE OF FUNDS



# FINANCIAL INFORMATION

- A projected year 3 ROI of 357%
- A projected year 3 IRR of 174%
- 46.5 Cash-on-Cash return

| 5 Year Consolidated Pro-forma |                   |                      |                       |                         |                          |
|-------------------------------|-------------------|----------------------|-----------------------|-------------------------|--------------------------|
|                               | 2025              | 2026                 | 2027                  | 2028                    | 2029                     |
| Total Net Revenue             | \$ 3,142,612      | \$ 63,869,544        | \$ 694,702,633        | \$ 5,317,302,874        | \$ 20,658,768,000        |
| Total Direct Costs            | \$ 1,271,526      | \$ 8,843,657         | \$ 87,988,077         | \$ 762,555,926          | \$ 2,833,801,194         |
| Total Gross Profit            | \$ 1,871,086      | \$ 55,025,887        | \$ 606,714,556        | \$ 4,554,746,947        | \$ 17,824,966,806        |
| Total G & A Expenses          | \$ 900,210        | \$ 3,144,330         | \$ 22,853,996         | \$ 186,105,601          | \$ 723,056,880           |
| <b>EBITDA</b>                 | <b>\$ 970,876</b> | <b>\$ 51,881,557</b> | <b>\$ 583,860,560</b> | <b>\$ 4,368,641,347</b> | <b>\$ 17,101,909,926</b> |
| <b>Corporate Taxes</b>        | <b>\$ 203,884</b> | <b>\$ 10,895,127</b> | <b>\$ 122,610,718</b> | <b>\$ 917,414,683</b>   | <b>\$ 3,591,401,084</b>  |
| <b>Net Profit</b>             | <b>\$ 766,992</b> | <b>\$ 40,986,430</b> | <b>\$ 461,249,842</b> | <b>\$ 3,451,226,664</b> | <b>\$ 13,510,508,842</b> |
| <b>Investors</b>              | <b>\$ 38,350</b>  | <b>\$ 2,049,322</b>  | <b>\$ 23,062,492</b>  | <b>\$ 172,561,333</b>   | <b>\$ 675,525,442</b>    |

| Projected Investor's Return on Investment |        |              |               |                |                |
|-------------------------------------------|--------|--------------|---------------|----------------|----------------|
|                                           | 2025   | 2026         | 2027          | 2028           | 2029           |
| \$                                        | 38,350 | \$ 2,049,322 | \$ 23,062,492 | \$ 172,561,333 | \$ 675,525,442 |
|                                           |        | \$ 2,087,671 | \$ 25,150,163 | \$ 197,711,496 | \$ 873,236,938 |
|                                           |        | -63%         | 357%          | 3495%          | 15777%         |

| 3 year Projected Investor's Exit Return |               |              |      |
|-----------------------------------------|---------------|--------------|------|
|                                         |               | Cash-on-Cash |      |
| Exit Multiple                           | New Investors | Return       | IRR  |
| 5.0                                     | 140,462,624   | 25.5         | 140% |
| 7.0                                     | 186,587,608   | 33.9         | 155% |
| 10.0                                    | 255,775,084   | 46.5         | 174% |



## CONTACT

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## FORWARD-LOOKING STATEMENT AND DISCLOSURE

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