

# KIND DESIGNS



Empowering NATURE with TECHNOLOGY



# RISING SEA LEVELS ARE THREATENING OUR CITIES



Image by Mario Alejandro Ariza, Disposable City

\*Source: The Center for Climate Integrity: [climatecosts2040.org/files/ClimateCosts2040\\_Report-v5.pdf](https://climatecosts2040.org/files/ClimateCosts2040_Report-v5.pdf)

## Florida Case Study:

2030: 0.5 feet

2040: 1-2 feet

2100: 6-10 feet

## Consequence:

US Army Corps of Engineers issued the following mandate to meet MINIMUM seawall requirements by 2040 :



**FL: \$76B**



**US: \$416B\***

# WHO WILL BE IMPACTED?

## Top 10 US Cities Hardest Hit By Rising Sea

CITY	POTENTIAL UNDERWATER HOMES	SHARE OF HOMES UNDERWATER	TOTAL VALUE OF HOMES LOST
MIAMI, FL	481K	24.2%	\$217.3B
NEW YORK, NY	180K	4.6%	\$123.2B
TAMPA, FL	105K	9.9%	\$40.6B
FORT MYERS, FL	53K	16.7%	\$25.4B
BOSTON, MA	53K	4.3%	\$42.7B
UPPER TOWNSHIP, NJ	46K	56.6%	\$29.3B
SALISBURY, MD	45K	21.1%	\$11.7B
VIRGINIA BEACH, VA	43K	8.3%	\$13.5B
BRADENTON, FL	40K	11.6%	\$25.4B
NAPLES, FL	38K	20.9%	\$28.1B



## USA

**Miami** No. 1 in US

**Florida** 5 cities out of top 10



## GLOBAL

**507** Cities at risk by **2050**

### TOP 5:

1. Bangkok
2. Amsterdam
3. Ho Chi Minh
4. New Orleans
5. Manila



# CONVENTIONAL SEAWALLS ARE FAILING

## No innovation in decades



### At present, contractors make their own panels:

- Molds
- Labor Intensive
- Slow Production



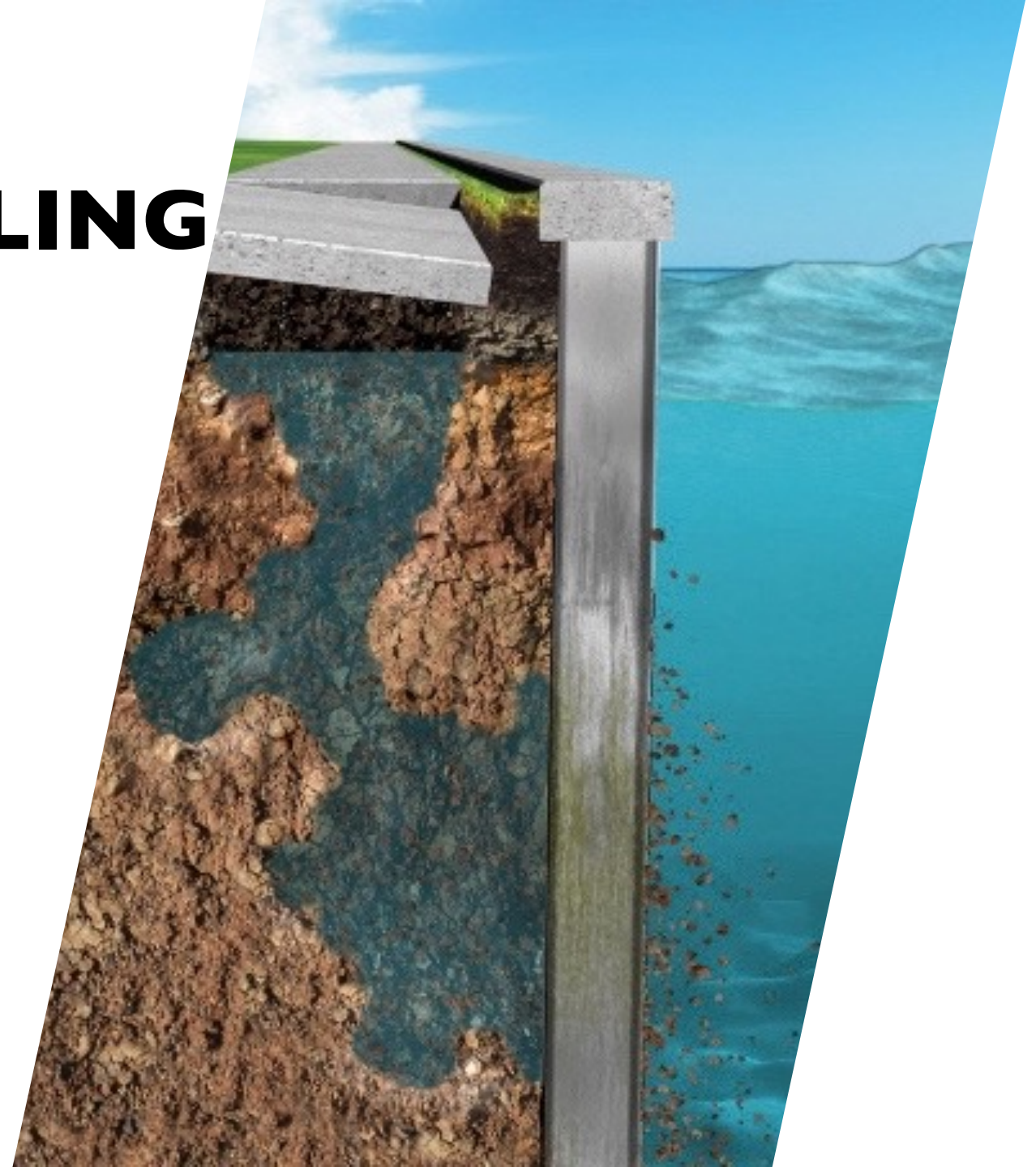
### Environmental Impact:

- Habitats destroyed
- Water toxicity increased



### Requires environmental mitigation

- Consumes up to 90% permitting time
- Adds 20% to cost of project





# WE'RE PRINTING NEXT GEN SEAWALLS

## Design Features Enabled by 3DPrinting

Identical Strength

Freedom of Design

Identical installation

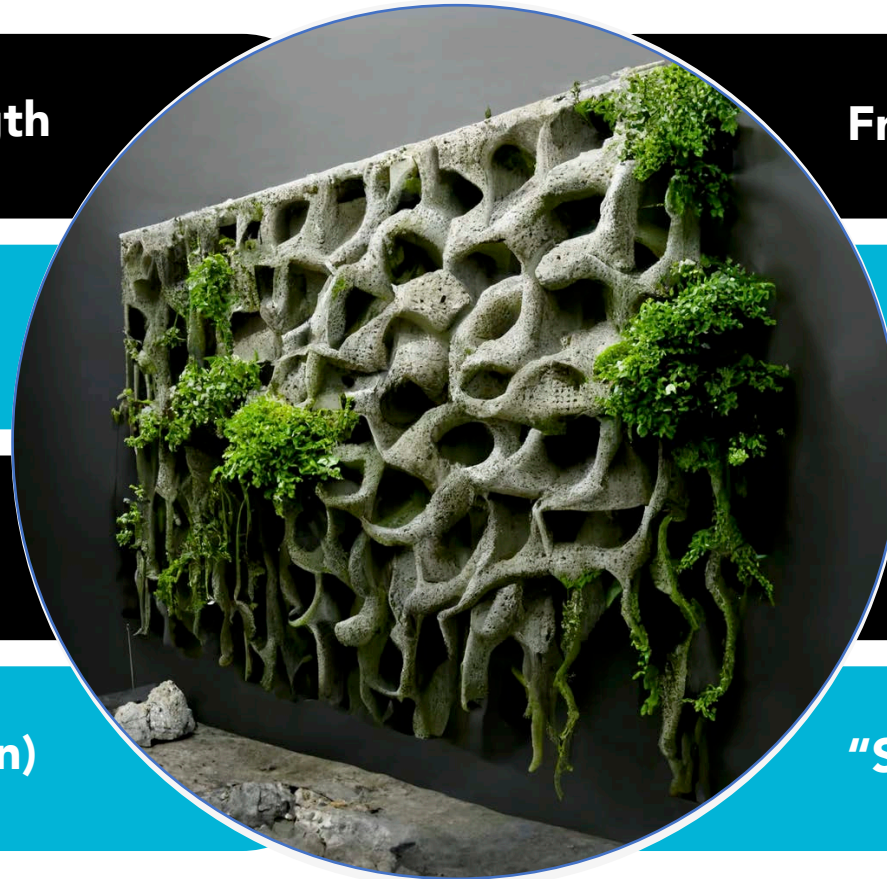
Multiple sea  
life habitats

Identical materials  
(non-toxic concrete)

Impossible to achieve  
with molds

Modular (extension)

"Self-Mitigating"



**FOR THE SAME PRICE AS CONVENTIONAL PANELS**



# HOW IT IMPACTS THE ENVIRONMENT:

## I. Functions as an Artificial Reef



### Hosts Biodiversity:

- Seawall becomes habitat for organisms
- Caves provide shelter from predators



### Water Quality:

- Materials do not leach
- Sealife consumes water toxins, improving quality of water







# HOW IT IMPACTS THE ENVIRONMENT:

## 2. Sequesters CO<sub>2</sub> + Data Collection



### Biocalcification:

- Marine organisms deposit skeletons into seawall
- Skeletons assimilate carbon
- 1 panel = 1 tree (40lb co<sub>2</sub>/yr)



### Data Collection & Analytics

- Sensor tracks 15 parameters (Ph, algae, toxins etc.)
- Live data
- Seawalls communicate



# IT'S NOT JUST BETTER FOR THE PLANET

## BUSINESS MODEL



- **Phase 1: Sell Panels to Contractors**
  - Sell panels to contractors, they install & permit
  - Same price as making their own
    - Save construction time
    - Free environmental benefits
  - Post ecological study
    - Panels certified as "self-mitigating"
    - Save permitting time + overall cost
- **Phase 2: Platform**
  - Empower contractors in all 507 at-risk cities globally
  - Finance printers, provide materials and designs
  - Licensing fee



# HOW ARE WE PROTECTED?

## 1. Current patent – Kind Designs

- Design & Habitat Function (patent pending)

## 2. Current patent – with partner



- Construction methodology (patent pending)
- Robotics

## 3. WHATS NEXT? Future patents

- Materials
- No Rebar – 5X longevity





# THE ROAD AHEAD

**JAN '23**

Robots arrive, warehouse activated in Miami



**FEB '23**

Private installations begin in Miami and Necker Island



**MAR '23**

Mass production begins.  
\$2.5M in existing LOIs





# TEAM



**Anya Freeman**

**Founder/CEO**

Attorney and former federal prosecutor with experience in environmental policy..



**James Layfield**

**Founder/CSO**

Serial tech entrepreneur, with previous companies in AI, fintech and property tech sector.



**Daniel Caven**

**Sr Design and 3DP Officer**

Architect and robotics professor, lead major 3DP house projects globally.



**Adrian Fenty**

**Govt Liason**

Mayor of DC 2007-2011  
Special technology advisor to state and local govt..



**David Penkov**

**Head of Operations**

Previously Employee No. 7 at The Boring Company, expert in concrete/production flow



**Patrick Shearer**

**Sr. Env. Engineer**

Green infrastructure designer, civil engineer and living seawall authority.



An aerial photograph of a rocky coastline. The water is a vibrant turquoise color, with white foam from breaking waves creating intricate patterns. The rocks are dark and jagged, protruding from the water. The overall scene is dynamic and natural.

# THANK YOU!

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