

**Presented To: We All Have A Responsibility**

**Our Mission: Be the means to resilient, cost-effective building solutions that are good for the planet while striving to create socially inclusive business opportunities.**

**NX**

**NX-Cast Innovations**

**Joe Nicholson, CEO & Innovation Specialist [info@nxcast.ca]**

**Our secret sauce is an innovation  
in material science,  
... we believe we have invented  
the perfect material to make  
construction products with.**



**ELCEMITE™**

**- a resilient, new composite formulated to be kind to our planet**



**Using fossil fuels to make construction products  
.... is unsustainable**



**... just making the concrete used in the world for one year causes 4.4 billion tonnes of emissions, consumes 11 billion tonnes of sand and 1.5 billion tonnes of clean water.**



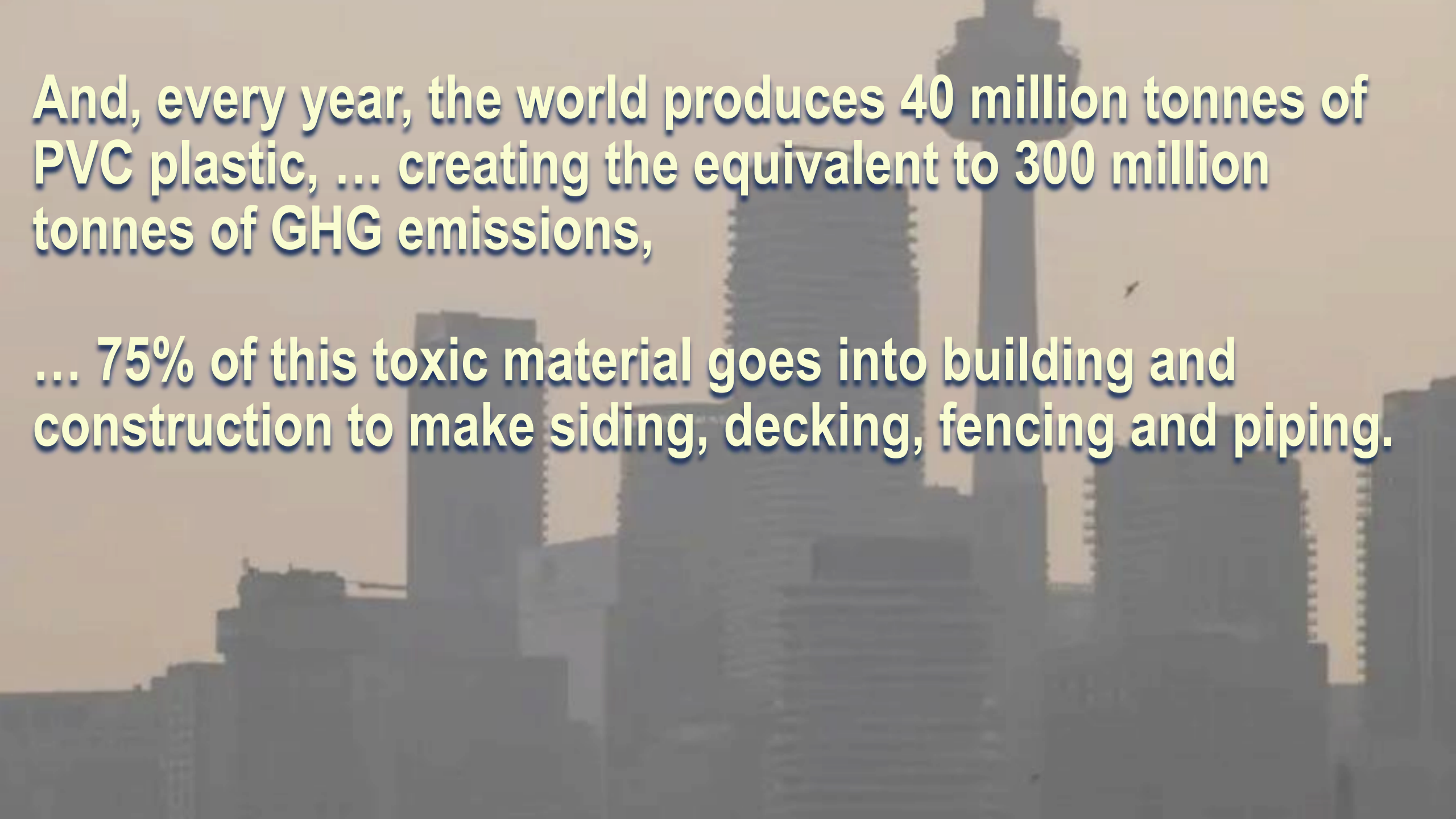
**Every year, close to 27 billion SF (2.5 billion Sq. M) of asphalt roof shingles are used in the world.**

**Making these shingles consumes 9 million tonnes of fossil fuels, produces over 2 million tonnes of emissions, ... and after a lifespan of 15 years or less, discarded, causing 25 million tonnes of waste and costing over \$3 billion in disposal fees.**

**Steel production is the most energy-consuming and CO2 emitting industrial activity in the world,**

**... responsible for 3.3 billion tonnes of CO2 annually.**





**And, every year, the world produces 40 million tonnes of PVC plastic, ... creating the equivalent to 300 million tonnes of GHG emissions,**

**... 75% of this toxic material goes into building and construction to make siding, decking, fencing and piping.**

# **We Know This Market:**

- Lifelong career as a general contractor specializing in high-end, complex building and construction projects,**
- H-1B1 participant with 5 patents for novel building innovations,**
- Combined 60+ years product and material development,**
- Experienced, practical solutionists,**

**We know “we purchase what benefits us”**



# ELCEMITE – “1,000” Uses

- ✓ More than a green concrete alternative,
- ✓ Resistant to temperature, fire, UV, wind, hail & decay,
- ✓ Nail gun compatible.

Compared to concrete:

- ✓ 55% less weight,
- ✓ Over 60% less emissions,
- ✓ 50% less water used.

Quality-Perfect in Any Shape



# Meets Uptrending Demands:

✓ Cost competitive with other high-quality building products.

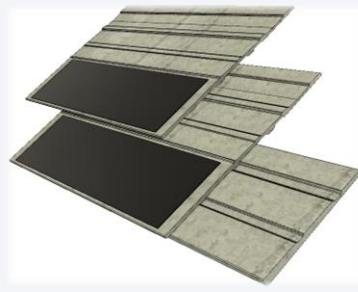


# Great Option For New Markets:

## Roofing Sector



Imagine the opportunity for concrete-like roof material to replace asphalt shingles that can be sprayed on and is resistant to temperature, fire, UV, wind and hail.



California has mandated all new residential buildings to include solar products starting 2023. Imagine combining latest solar technology with the look of traditional roofing.

## Concrete Sector



3D Printing market was \$3M in 2019 and projected to be \$ 1.5B by 2024 (CAGR 245 %)<sup>[15]</sup>. ELCEMITE is a perfect lightweight, reinforced, green material option\*.

- Passive fire protection material market to be over \$9B by 2027, <sup>[16]</sup>
- Seismic reinforcement material market to surpass \$40B by 2025, <sup>[17]</sup>
- Global concrete floor leveling market was \$6.8B in 2020; expected to reach \$9B by 2027 <sup>[18]</sup>

# Timely Market-fit:

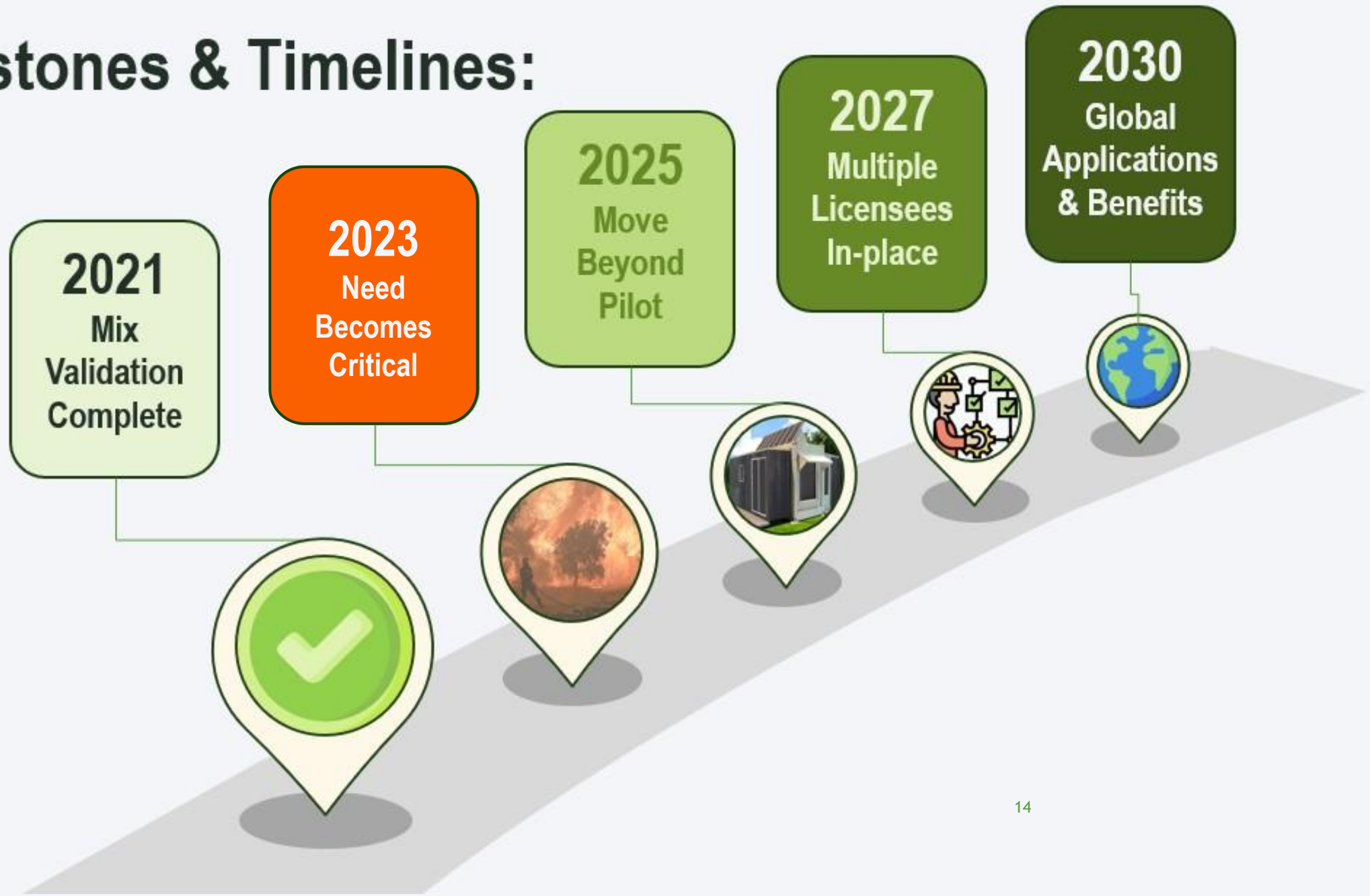
- ☑ Climate goals, code bodies, specifiers, insurance providers and property owners are all seeking better, ... and more sustainable solutions.



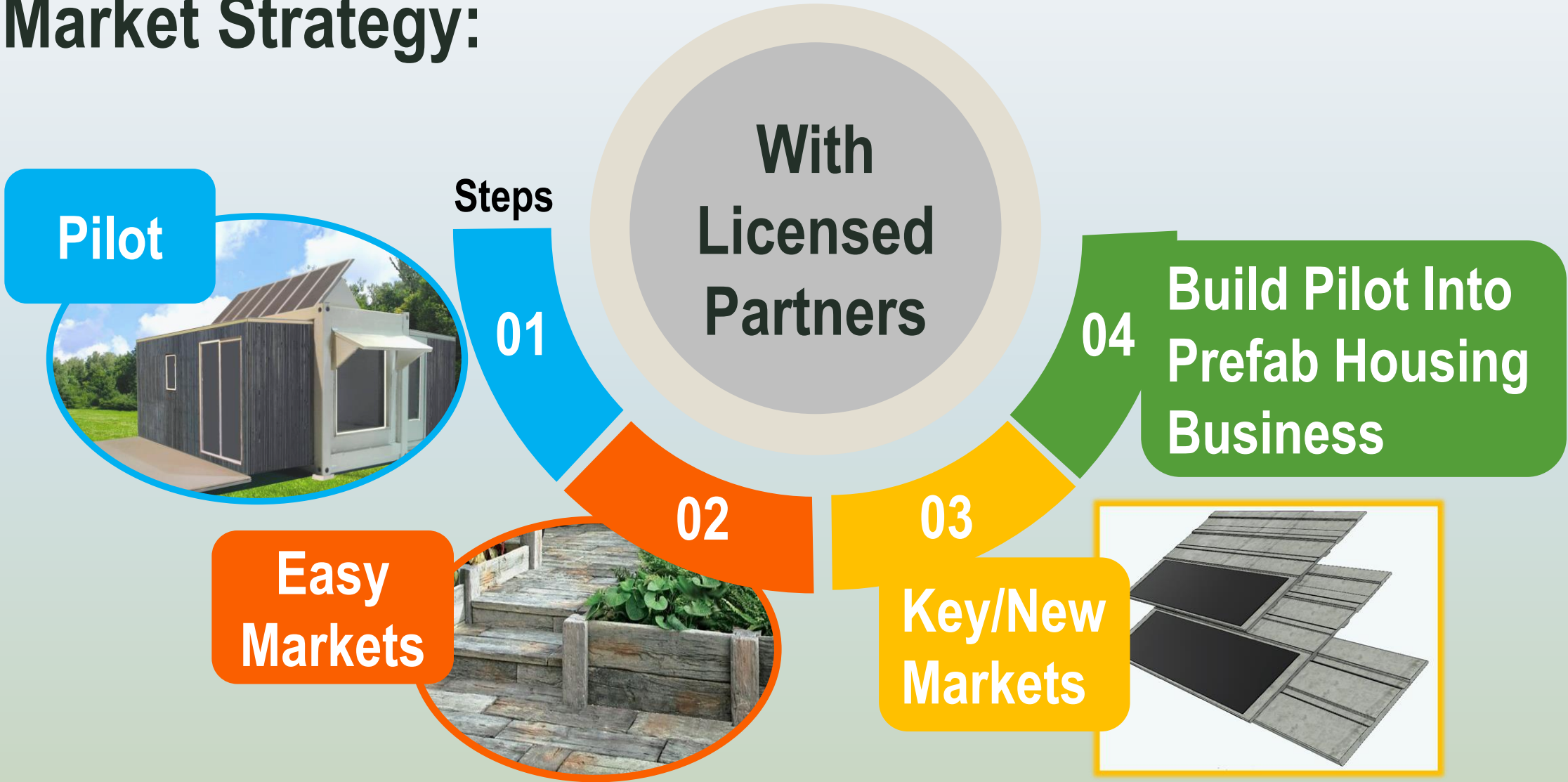
# Competitive Landscape:

| Material Application | Product To Replace  | Comparable Product  | Immediate Benefit         | Cost                        |               |             |
|----------------------|---------------------|---------------------|---------------------------|-----------------------------|---------------|-------------|
|                      |                     |                     |                           | Installed                   | Environmental | Lifecycle   |
| Roofing              | Asphalt Shingles    | Cedar or Metal Roof | Easier Installation       | Equal to Cedar/Metal        | Much Reduced  | Much Better |
| Siding               | Vinyl (PVC) Siding  | James Hardie        | Fire & Decay Resistant    | Similar to James Hardie     | Much Reduced  | Much Better |
| Decking              | Vinyl (PVC) Decking | Trex and Azek       | Inert To Temp Change      | Similar to Trex/Azek        | Much Reduced  | Much Better |
| Fencing              | Vinyl & Concrete    | SimTek Faux Stone   | Durable Alternative       | Similar to SimTek           | Much Reduced  | Much Better |
| Landscape            | Concrete Products   | Multiple Products   | Reinforced & Light-weight | Similar b/c of Thin Casting | Much Reduced  | Same        |
| Barrier Wall         | Concrete Panel      | Multiple Products   | Reinforced & Light-weight | 27% more b/c new design     | Much Reduced  | Same        |

# Milestones & Timelines:



# Market Strategy:



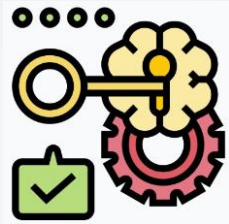
# Pilot - Proprietary Small Home Using ELCEMITE:

- ✓ Complete living unit,
- ✓ Resilient, eco-friendly and sustainable,
- ✓ Shippable anywhere with easy site setup,
- ✓ Cost-effective.





# We Are The Complete Solution:



**Key Material  
Invention**



**Novel  
Applications**



**Special  
Expertise**

## NX-Cast is our licensing entity:

- We provide specific usage rights, casting molds, specialized equipment and, ... on an ongoing basis, pre-blended mix.

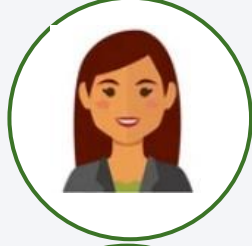
# NX-Cast Team:



**Joe Nicholson Sr.**  
CTO & Innovation Specialist



**Nigel Miller**  
Director of Business Development



**Sarah Nicholson**  
General Operations Director



**Joe Nicholson Jr.**  
Technical Director

## Experienced Know-how:

- Product & Material Development
  - ☑ “Pull” Focused Inventors,
  - ☑ CAD & 3D Modeling,
  - ☑ Prototype & MVP Building,
  - ☑ Patents & Trademarks,
  - ☑ Tooling & Machine Building,
  - ☑ Testing & Product Approvals,
  - ☑ Product Installation & Training.
- Launch & Early Commercialization
  - ☑ Construction Markets,
  - ☑ Project Management,
  - ☑ Contracts & Negotiations,
  - ☑ Licensing & IP Management,
  - ☑ Building Product Distribution,
  - ☑ Manufacturing, Packaging & Logistics,
  - ☑ Marketing, Sales & Service.

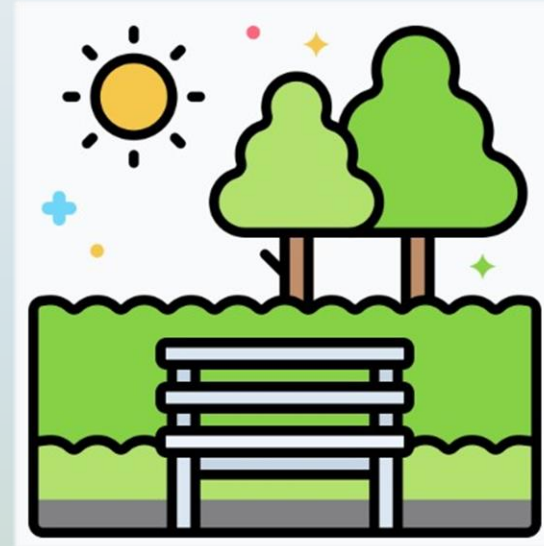
## Seeking strategic impact partners:

- To access to grant programs that support carbon reduction and green living initiatives,
- To pilot our proprietary small-space housing concept.

# NX-Cast Innovations

Mitchell, Ontario, Canada

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# Appendix

- ① Problem Size
- ② Attributes & Benefits
- ③ ELCEMITE Advantages
- ④ Cost Comparison
- ⑤ Intellectual Property
- ⑥ Social Inclusion
- ⑦ References

## Appendix #1

### Construction Is A Big Problem:

- Causes 40% of world's climate pollution,<sup>[1]</sup>
- Creates 2 billion tons of waste annually,<sup>[2]</sup>
- Uses vast amounts of non-renewable resources,
- Ongoing repair and costly replacement.

### Made Worse by World's Housing Crisis:

- By 2030, 3 billion more people will need housing,<sup>[3]</sup>
- Equates to building 96,000 housing units every day.



## Appendix #2

# ELCEMITE - An Innovation In Material Science

### Attributes:

Made With Over 60% Post-Consumer Waste and Industry By-Products

Cures at Ambient Temperature Reducing Energy Needs

Uses Ingredients of Value & Performance

Can Be Thin Cast To Reduce Weight & Material Usage

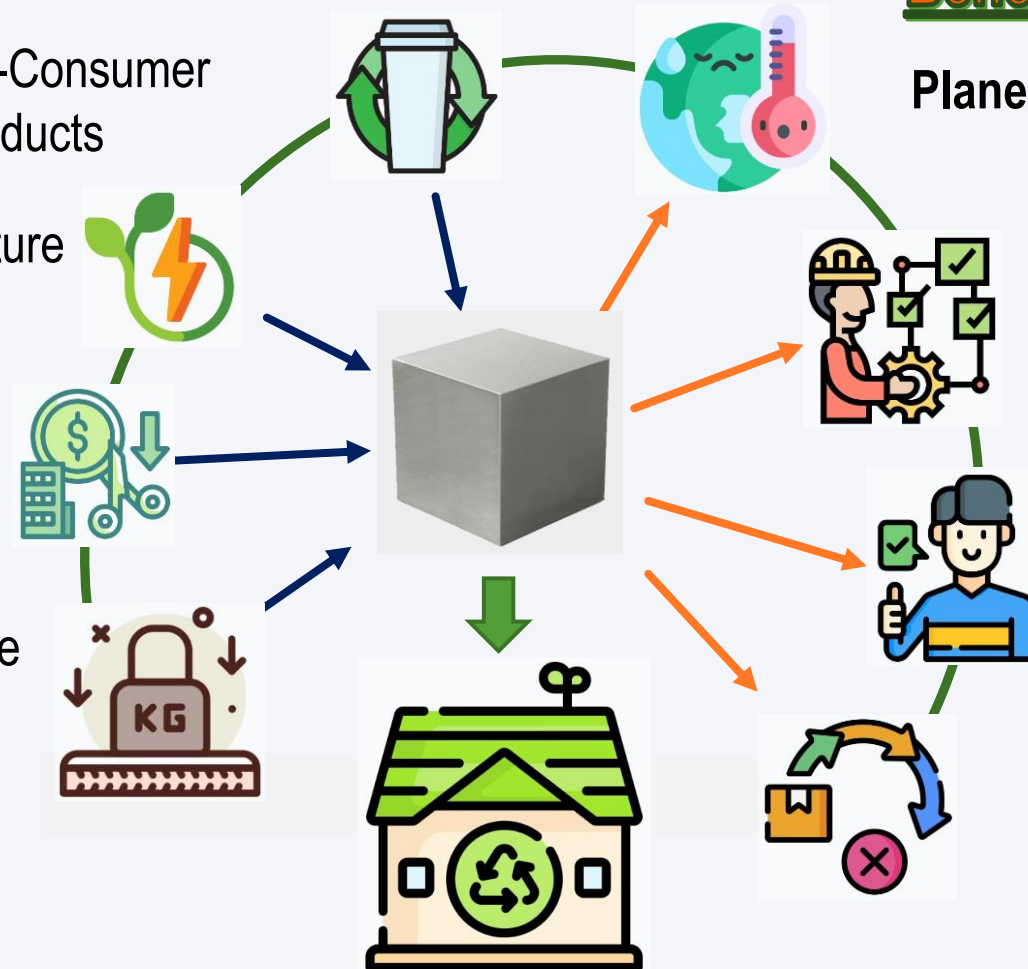
### Benefits:

**Planet** – Reduces Emissions, Waste and Water Usage

**Manufacturer** - Less Risk Option To Uptrending Markets

**Consumer** - Delivers Aesthetics, Cost and Performance

**End Of Life** - Ground Up To Make Useful Light-Weight Aggregate



## Appendix #3

### ELCEMITE™ Advantages

Created using the latest technology, state-of-the-art admixtures and a unique formulation of commercially available ingredients, this proprietary formulation of fine powders selected for; grain size, particle weight and chemical reactivity, and reinforced with fibers produces a unique ductile composite that is light-weight, durable, and environmentally responsible.

Some of **ELCEMITE** advantages are:



- ▶ Half the weight of conventional concrete but with a similar compressive strength to 20 Mpa (3,000psi) conventional concrete,
- ▶ Minimizes the use of Ordinary Portland Cement (OPC), which reduces CO<sub>2</sub> emissions and conserves the valuable resource of clean water required to hydrate OPC bond,
- ▶ Use of supplementary cementing materials (SCMs) makes **ELCEMITE** stronger while reducing greenhouse gas emissions created in the manufacturing of OPC,
- ▶ Uses a high volume of post-consumer waste and industry by-products thereby reducing waste in landfills and increasing LEED qualifications points,
- ▶ Contributes to sustainable construction by reducing resources needed to handle and transport heavy materials,
- ▶ Resistant to impact, fire, temperature, UV and freeze/thaw,
- ▶ Can be cast thin to reduce weight and material usage,
- ▶ Fully reinforced with fibers to enhance performance,
- ▶ Ductile; high flexural strength,
- ▶ Withstands wind uplift pressures; won't shatter,
- ▶ Uses lightweight particles to increase density and minimize porosity,
- ▶ Self-cures at room temperature conserving energy required to cure conventional concrete,
- ▶ Quick setting time with minimal shrinkage,
- ▶ No expansion/contraction issues with cured product,
- ▶ Accommodates fastening with a nail gun without fracturing for quick installation,
- ▶ Sprayable for fire and seismic resistance applications,
- ▶ Self-compacting making it suitable for applications in lightweight floor leveling,
- ▶ **ELCEMITE** mix is pre-blended, eliminating mixing errors,
- ▶ Colored using non-fade oxide pigments,
- ▶ Available in several weight and strength versions.



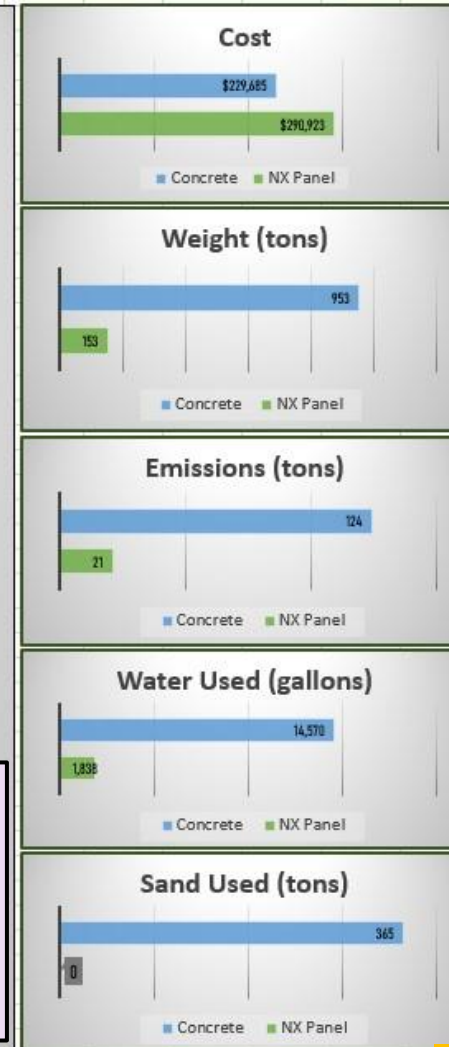
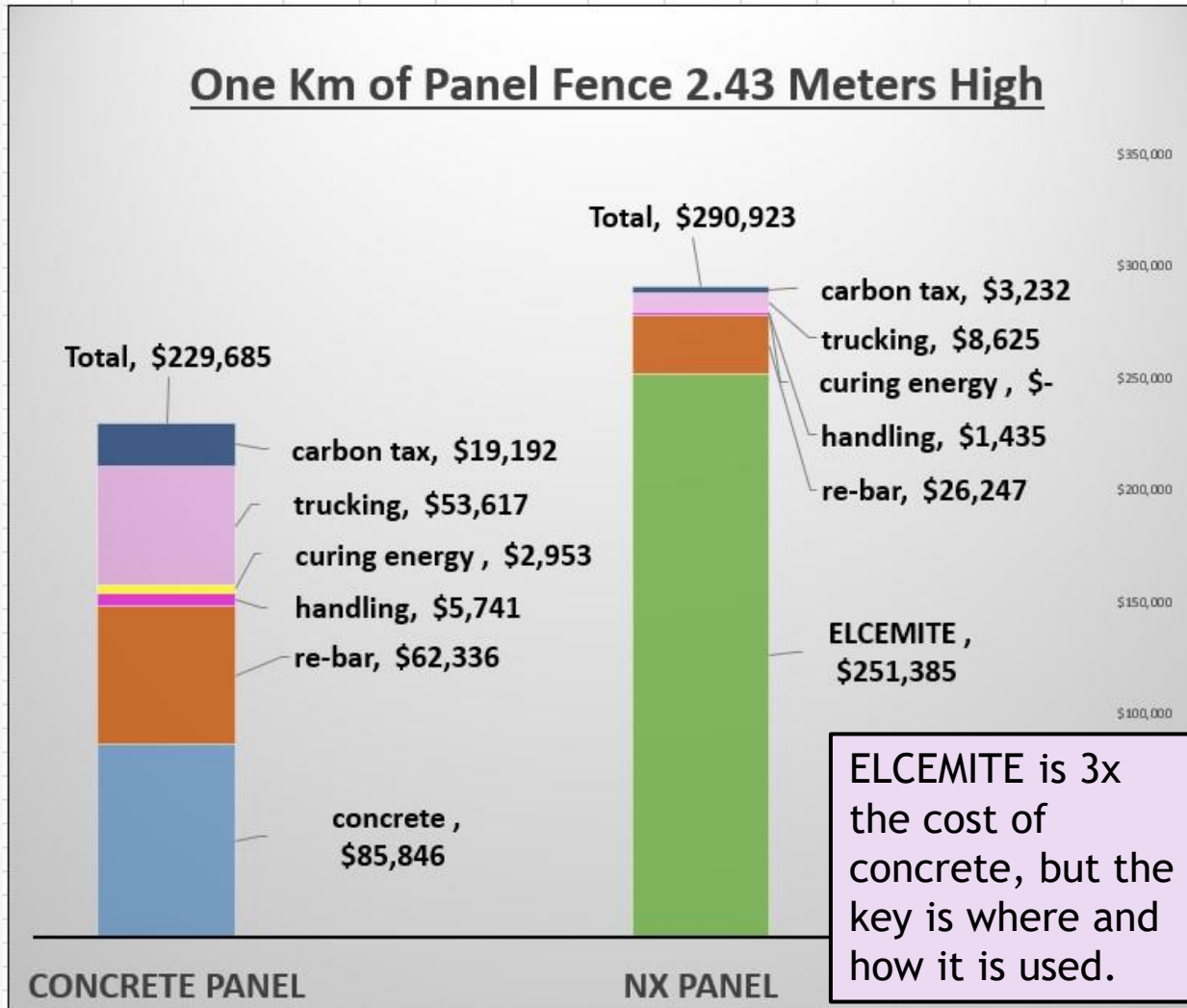
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# Appendix #4

## NX Panel vs Concrete Panel

### One Km of Panel Fence 2.43 Meters High



26.7% Increase

84% Less

83% Less

87% Less

No Sand Used In NX Panel



## Appendix #5

# Intellectual Property:

- ✓ Trade-secret formulation, trademarks and know-how,
- ✓ Proprietary processes for blending, manufacturing and mold-making,
- ✓ ELCEMITE technology creates novel applications with many patentable features.



## Best Kept A Trade-Secret:

- Letters Patent would explain the invention making it easier to copy and use without authorization.

# Impact Of Collaboration:

**BECOME LOW CARBON,  
RESOURCE EFFICIENT AND  
SOCIALLY INCLUSIVE**

With

**EXCLUSIVE  
TECHNOLOGY**



**EXPERTISE &  
KNOWHOW**



**AVAILABLE  
GRANT MONEY**



**ECOLOGICAL  
STEWARDSHIP**

**ECONOMIC  
PROSPERITY**

## Appendix #7

# References (Page 1 of 2):

- [1] Miller, Norman. “[The Industry Creating a Third of the World’s Waste - BBC Future](#)” *BBC Homepage*, Dec. 2021
- [2] Big Rentz “[23 Construction Waste Statistics & Tips to Reduce Landfill Debris](#)” April 12, 2021
- [3] “Housing | UN-Habitat.” *UN-Habitat - A Better Urban Future* | <https://unhabitat.org/topic/housing#>
- [4] *Grand View Research, Inc.* “[Fencing Market Size | Industry Report, 2022-2030.](#)” *Market Research Reports & Consulting.*
- [5] Persistence Market Research “[Global Steep Slope Roofing Materials Market: Industry Analysis & Forecast.](#)”
- [6] Giri, Suprateek. “[Fiber Cement Siding Market - Forecast to 2031](#) | Global Insight Services.” *Market Research Reports*, 26 July 2022,
- [7] Pulidindi, Kiran, and Sayan Mukherjee. “[Wooden Decking Market Share 2021-2027 | Industry Growth Report.](#)” *Global Market Insights Inc.*, Global Market Insights Inc., 24 Feb. 2021,
- [8] MENAFN.COM. “[Global Composite Decking Market To Reach US\\$5.8 Billion By The Year 2027](#)” *Business & Financial - International News, Currencies & Economic Indicators* | MENAFN.COM, 16 May 2022,
- [9] *Grand View Research, Inc.*, “[Precast Concrete Market Size & Share Report, 2022-2030.](#)” *Market Research Reports & Consulting.*
- [10] *Global Market Research Reports & Consulting*, “[Exterior Wall Systems Market Growth, Industry Forecast, 2029.](#)” *Fortune Business Insights™*
- [11] *The Freedonia Group*, “[Hardscaping Products - Market Size, Market Share, Market Leaders, Demand Forecast, Sales, Company Profiles, Market Research, Industry Trends and Companies - The Freedonia Group.](#)”

# References (Page 2 of 2):

[12] *MarketsandMarkets*, "[Decorative Concrete Market | Global Industry Size Forecast.](#)"

[13] Pulidindi, Kiran, and Saurabh Bhalerao. "[Passive Fire Protection Materials Market Statistics - 2027.](#)" *Global Market Insights Inc.*, 27 Aug. 2021, and Pulidindi, Kiran, and Soumalya Chakraborty. "[Seismic Reinforcement Materials Market Size Worth \\$40 Billion by 2025.](#)" *Global Market Insights Inc.*, 31 May 2019,

[14] Markets, Research. "[Global Vertical Garden Construction Strategic Business.](#)" *GlobeNewswire News Room*, Research and Markets, 3AD,

[15] *MarketsandMarkets*, "[3D Printing Construction Market, Industry Size Forecast, \[Latest\].](#)"

[16] Pulidindi, Kiran, and Saurabh Bhalerao. "[Passive Fire Protection Materials Market Statistics - 2027.](#)" *Global Market Insights Inc.*, 27 Aug. 2021,

[17] Pulidindi, Kiran, and Soumalya Chakraborty. "[Seismic Reinforcement Materials Market Size Worth \\$40 Billion by 2025.](#)" *Global Market Insights Inc.*, 31 May 2019,

[18] ReportLinker. "[Global Self-Leveling Concrete Market to Reach \\$9 Billion By 2027.](#)" *GlobeNewswire News Room*, ReportLinker, 12AD,

[19] *Global Market Research Reports & Consulting*, "[Exterior Wall Systems Market Growth, Industry Forecast, 2029.](#)" *Fortune Business Insights™*

[20] *Global Market Research Reports & Consulting*, "[Container Homes Market Size, Share | Growth Analysis \[2029\].](#)" *Fortune Business Insights™*