



## INTRODUCTION

**element6 Dynamics** is harnessing the power of science to regenerate our planet by addressing its serious carbon imbalance—at scale. Our plan for **over one million acres** of industrial hemp under cultivation will sequester vast amounts of carbon and feed **60 processing facilities** that transform the crop into essential value-added hemp-derived materials for major paper/pulp, plastics, and animal feed manufacturers. In turn, these nature-based solutions further impact the planet by reducing tree harvesting, hydrocarbon emissions, and livestock methane emissions. The company will be both a **net-negative carbon** business and an important source of nature-based carbon offsets used by enterprises seeking to reduce their carbon footprint to meet their ESG goals and/or regulatory requirements.

**element6 Dynamics** is at the forefront of an **industrial paradigm shift** away from putting carbon into the atmosphere to taking carbon out. **element6 Dynamics** uses the hemp plant's ability to **capture carbon** from the atmosphere, locking it into its plant fibers and into the soil, where it has many beneficial effects including **soil regeneration** and **remediation**. Industrial hemp grows rapidly in a wide range of conditions, sequestering large amounts of carbon (approximately 5 tons of CO<sub>2</sub>/acre/year, more than most forest ecosystems) while enhancing soil health. Industrial hemp is also rich in cellulose and other materials that make it an ideal and **sustainable source of industrial fibers, oils, and plant-based proteins**, among many other products.

## SCIENCE AND IMAGINATION—STRATEGIC INDUSTRY FOCUS

Modest innovations in materials science and production processes allow for the large-scale adoption of sustainable industrial hemp-based materials to displace destructive materials and processes in common use today. **element6 Dynamics** is currently engaged in a range of R&D partnerships with leading universities as well as strategic development and supplier discussions with major corporations in the paper, plastic, and protein industries.

## IMPACT

**element 6 Dynamics'** impact is multi-dimensional and goes well beyond addressing our planet's serious carbon imbalance. How we do it is as important as what we do. Our nature-based solutions create significant economic opportunities for farmers nationwide, including our many partnerships with Indian Country. Similarly, our planned network of processing facilities will create circular economies in communities around the country. Cultivating industrial hemp on land previously compromised by industry delivers still more impact, as the practice can remove toxins and provide a range of other restorative benefits. The dynamics of what we do and how we do it are far-reaching and their impact is ever-growing and evolving.

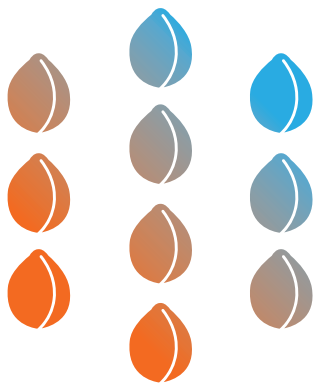
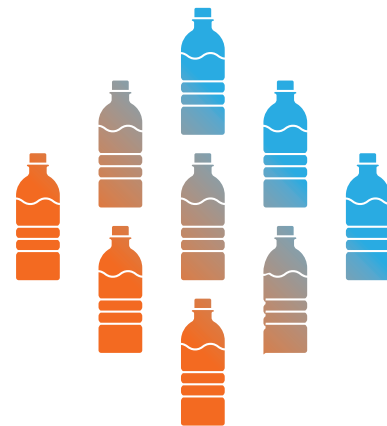


## PULP

Hemp production for pulp and paper will reduce the number of trees harvested for the nearly 80 million tons of paper used in the U.S. each year. Hemp was the major feedstock for paper production globally for 2,000 years until the 1880s. It declined with US Federal regulations against the crop (repealed in 2018) completely unrelated to its suitability for paper. Because hemp stalks contain a much higher percentage of cellulose than trees and grow more rapidly, one acre of hemp can supply the equivalent raw material for pulp/paper production of at least four acres of forest. Hemp fibers are naturally stronger than tree fibers, and are also whiter, requiring less bleaching in production. From seed to harvest, hemp grows in 180 days with the potential of a multi-harvest year, depending on climate.

## PLASTIC

The production of plastics in the U.S. alone results in over 150 billion pounds of petroleum-based material every year. Hemp stalk can be micronized, pelletized, and mixed into plastic resins at up to 25% by weight of the components currently used to manufacture virgin plastic. Using hemp-based materials in the production of plastics, including PLA, polypropylene, HDPE, ABS, and others results in a more sustainable version of the product without compromising quality or raw material cost.



## PROTEIN

Hemp seeds are a nutrient-dense, protein-rich grain that has the potential to help mitigate the current global animal feed shortage. The current global market size has reached an unprecedented 1 billion tons of animal feed produced each year, and with an ever-increasing appetite, scarcity of resources (such as nitrogen), and soil nutrient depletion, the need for a protein alternative is imperative. When compared to traditional animal feed proteins, like corn or soybeans, hemp seeds are similar in protein and carbohydrates and are even richer in key compounds like Omega 3, Omega 6, and Omega 9 fatty acids.