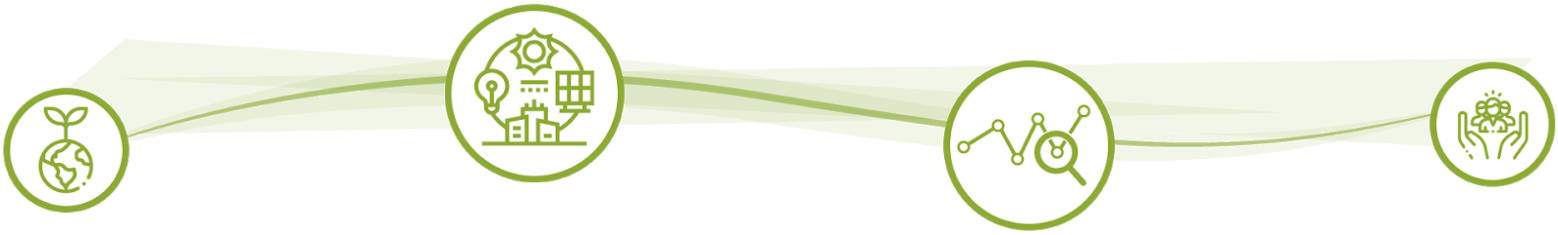
EDEN
GEOTECH



CDO Playbook: 2021

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www.edengeotech.com

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Part I:

Company Mission & Tech Portfolio

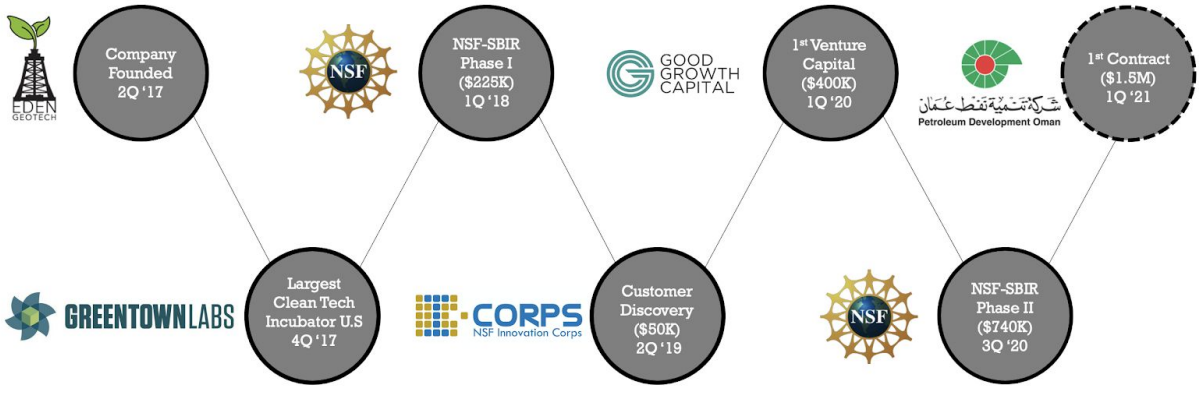
Mission and History

Mission

Eden Geotech is developing innovative geotechnical solutions for a sustainable energy future. The company mission is to help lead the transition from hydrocarbon fuel toward renewable forms of power. We are developing a business portfolio of proprietary technologies for petroleum, geothermal, and water desalination industries in the U.S and abroad as well as predictive data systems that help energy producers better understand their customers and their unique individual needs.

Company History

Eden Geotech is a Boston-based energy startup. The company is headquartered at Greentown Labs, the largest clean technology startup incubator in the United States. To date, Eden has been supported by the United States National Science Foundation (NSF) and the MiSK Foundation (Saudi Arabia).



Eden Geotech Roadmap (2017 - 2021)

Team

Founding Team

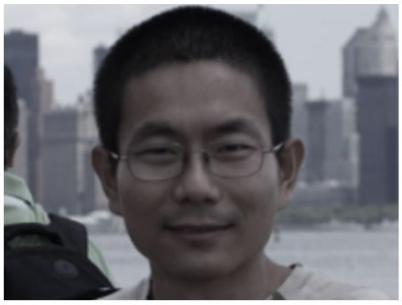
Paris Smalls
CEO, Co-founder

Ammar Alali
COO, Co-founder

Mehrdad Mehrvand
CTO

Angel Rodriguez
Business Development

Kyoung Min
Petroleum Engineer



Chunfung Meng
Senior Geoscientist

Technology Portfolio

Electro-hydraulic Fracturing

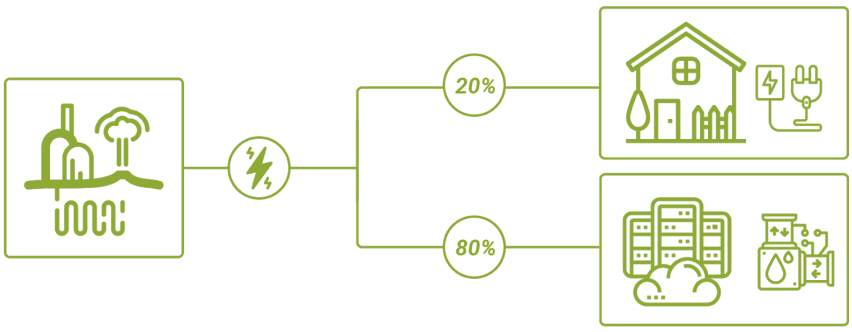
Whereas traditional hydraulic fracturing is expensive, environmentally hazardous and requires an abundant amount of water, Eden's **Electro-hydraulic Fracturing** technology provides a faster, safer and more cost-effective solution to reservoir stimulation. When compared to traditional methods, Eden's technology is especially advantageous in its higher recovery rate of fracturing fluids and reduced water use and groundwater contamination.

Wireless Power

Eden's **Wireless Power** technology provides a simple, yet reliable alternative to the current downhole power delivery methods: wired completion and lithium batteries. By utilizing piezoelectric devices, Wireless Power can harvest **vibrational energy** and convert it into electricity that can power downhole sensors and other technologies. Compared to the current methods, this is a more cost-effective and reliable solution that can be integrated into current well completion designs with minimum interference. This technology will also directly increase the capacity of data analytics to maximize oversight for oil & gas producers.

Geothermal Integration

Eden's technology portfolio also includes **geothermal technology** capable of harnessing the Earth's subsurface heat into clean electricity renewable resources. When this power is integrated into water desalination production and advanced computation, our geothermal technology can increase output from renewable sources and decrease dependence on fossil fuels.



Part II:

Eden Data Office

Introduction: Why a *Chief Data Officer*?

A *Chief Data Officer* will assume the following 5 roles:

1. Business Modeling

Overview

How will we use the data office to enable a new business opportunity with geothermal power?

What are valuable data points?

1. Geological Data
2. Power Production and Capacity
3. Market Data and Future Trends

Use Case / Pilot Design

Bit-Roc Pilot at The Geysers
Write a pilot proposal to include data management.

Value Proposition

Novel integration means new knowledge. We intend to capture the data points to then inform our commercial strategy.

Implementation

- Market analysis of California Grid system
- Business model for selling to power grids similar to Sonoma at scale

2. Operational Optimizer

Overview

How will we use the data office to optimize the organizational performance of the company information?

Why is data important to organizational performance [statement]

Use Case

1. Document /Archive Management -- Data Room, GDrive, Website
2. Project Management -- Monday.com / Slack / GCalendar
3. Supply Chain -- How will we track renewable power production and delivery supply-chain operation?
    a. Ie. tracking clean energy v. mixed- supply

Value Proposition

The value of each of these responsibilities

1. Due diligence
2. Deadlines and accountability (recording minutes for records)
3. Streamline commercial strategy

Implementation

1. Seed raise / Kaust Investment
2. Grants, Proposals,
3. Software design / proof of concept

3. Digital Solutions & Analytics

Overview

How will we use the data office to manage Eden's digital infrastructure and business analytics from geothermal power production?

Use Case

1) Sonoma Community MicroGrid: **Eden Analytics (B2B)**: Micro-grid customers

Value Proposition

Tracking the performance and well reserves of geothermal
Using ML /AI to improve customer acquisition through a CRM platform

Implementation

Get a 360-degree view of your customers and provide superior service with AI-powered behavioral insights

Create personalized and targeted marketing campaigns for all customer segments

Track performance metrics, access impact and make the most out of your data

Ease of adoption and frictionless integrations with other customer applications

Streamline your customer service and remove operational inneficiencies to reduce costs and improve response times

Drive customer engagement by automating and personalizing communications across email, IVR, text, achieved at scale

4. Science Policy Research

Overview

How will we use the data office to measure social benefits linked to geothermal energy and impacts on public health and economic recovery for local communities?

Data tracking algorithm to map energy insecurity in California under Covid19, and make the case for a government-backed geothermal project.

As a direct result of climate change and the COVID-19 pandemic, there is an increasing demand for energy innovation. In areas like California where, in August of 2020, rolling blackouts left hundreds of thousands of households without power. The limited amount of publicly available data surrounding these shut-off events prevent researchers from accurately measuring its true impact, whose findings directly impact **public health** and **energy security** policies. Adequate research undertaken to inform scientific policy and the importance of government support for the business case for more tax-benefits and RECS toward geothermal projects.

Use Case

Experiment: Covid-19 has had a severe public health and economic impact on the strongest and most vulnerable people around the world. In C.A, this has exposed a serious inequity where poverty and housing are dynamically interdependent on income and electricity cost. I propose an energy experiment in which we conduct a randomized evaluation of electricity subsidies and its impact on public health and economic recovery. Will we see an improvement-- reduction of death rates and improvement of economic stability-- when electricity is subsidized? If so, this can have a significant impact on the science policy and public oversight of electricity and other forms of utilities. It will also offer a useful pathway to design a new, micro-grid system for providing local communities sufficient, affordable (clean) electricity.

CO_2 Map
Public Health
Income

_____
Energy Cost (+/- RECS)

Value Proposition

- Unlock government tax-breaks and science policy support for geothermal mining.
- Close the data discrepancy gaps in California with scaling capacity.
- To improve the quality of life for California residents by providing subsidized (renewable) electricity and measuring the impact on public health and income.

Implementation

Rockefeller Foundation Grant to test the implementation of an algorithm.

5. D.E.I & Public Relations

Overview

How will we use the data office to inform the role of DEI at Eden and foster a company culture that speaks to public discussions around climate change, technological innovation, and racial justice?

Storyboard, History of Technology, and Community engagement

Use Case

- Social Media plan
- Website
- Short documentary

Value Proposition

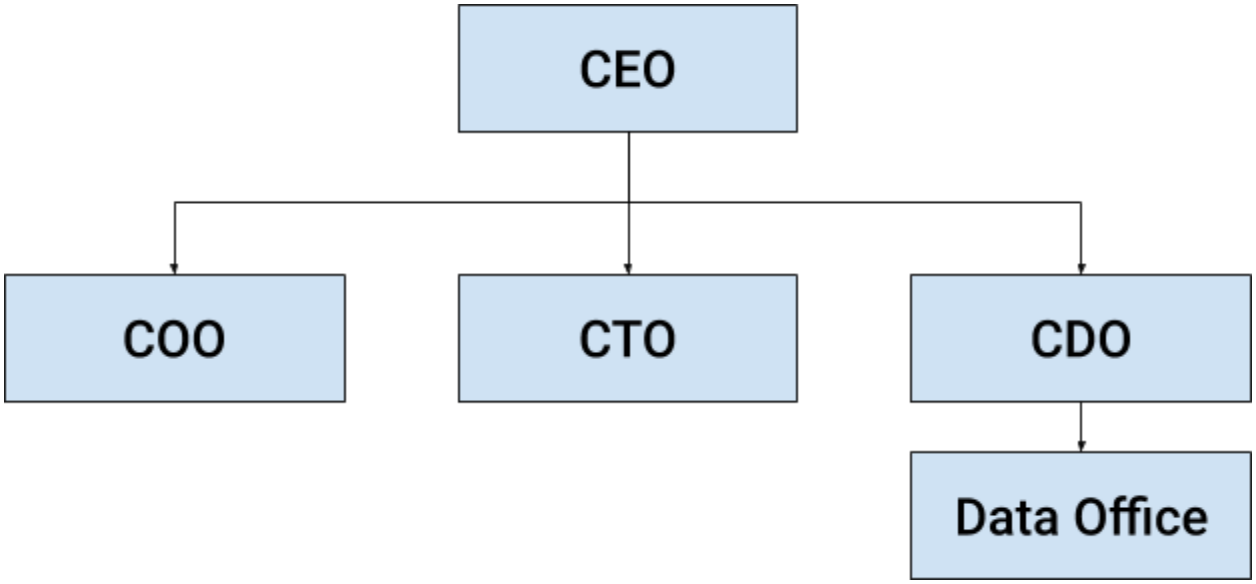
- Public support for Eden Geotech
- Cultural value that leads to more opportunities

Implementation

- Social media plan
- Website completed
- Short documentary

Team

Executive Chain of Command:



CEO - Decision making and organizational leadership
CTO - R&D and experimental lead
COO - GeoEngineering operations and workforce performance

Data Office Team:

Ángel Rodríguez - *Chief Data Officer (Ph.D, Harvard)*

Ariunbold Batjargal - *Design and Research Assistant (B.S, Brandeis)*

Anjali Singh - *Research Intern (MIT)*

Anushka Nair - *Research Intern (MIT)*

Grace Song - *Research Intern (MIT)*

Monica Hernandez - *Public Relations (firm)*

Henry Gomory - *Data Science and Statistics (Ph.D, Princeton)*

Melissa Isador - *Data Science and Urban Planning (MIT)*

Tamia Burkett - Project Manager (firm)

Part III:

Value Proposition

Security and Document Management

Scalability Across Eden Project Pilots

- Saudi Arabia

Software IP development

Sources and Bibliography