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**Quickest conversion of Animal Waste
into Organic Fertilizer (Solid & Liquid)
with minimal energy consumption**

August 2020

Country of origin: Iran

The Problem

Four trends/issues are converging to create an unsustainable farm soil management:



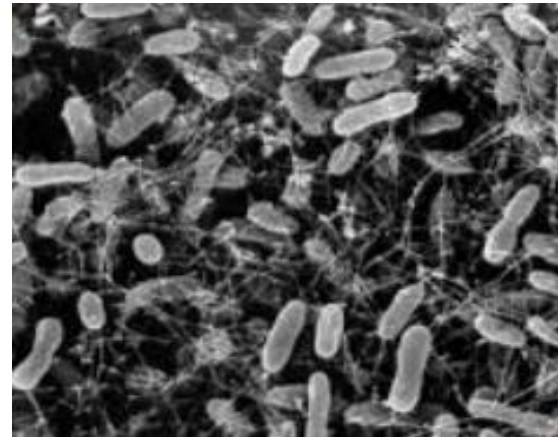
Demand for Fertilizers

- Global need for food and agricultural products is increasing, which requires access to fertilizers that can revive the nutrients in the soil



Chemical Fertilizers
Unsustainable

- Chemical fertilizer production involves chemical processes extremely harmful to the environment also causing buildup of chemicals in the soil



Organic Fertilizer must be
done right

- Most farmers use archaic means i.e. place manure in pools, causing pathogens to contaminate the environment and hazardous fluids to leach into the ground



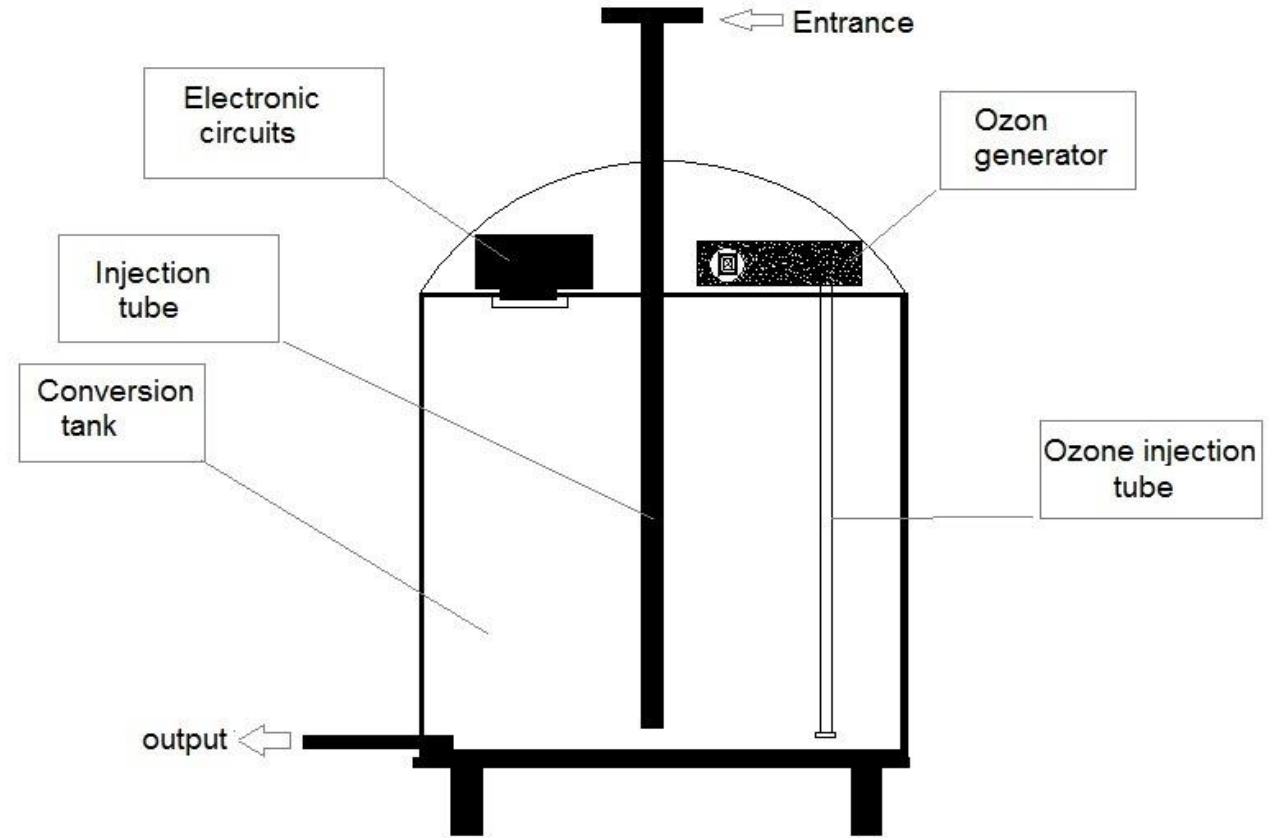
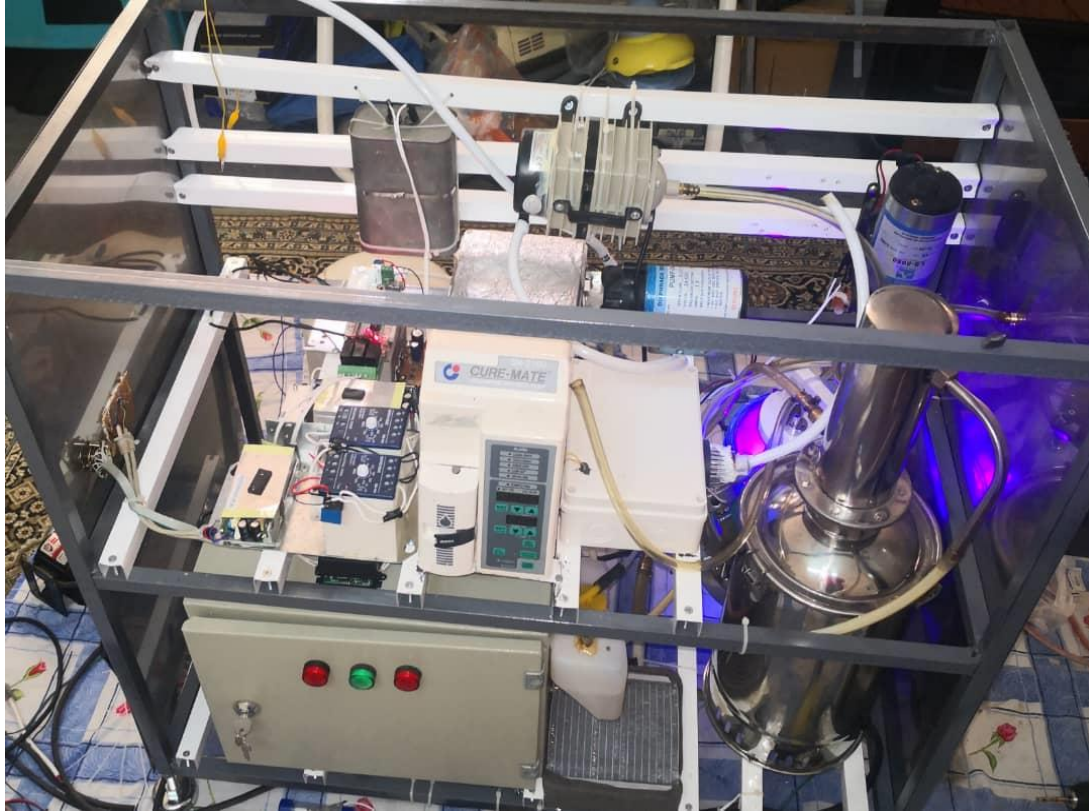
Liquid Fertilizers wasted +
high energy consumption

- Most high tech solution providers vaporize liquid portion of waste instead of decontaminating it and converting to liquid fertilizer

Solution / Innovation

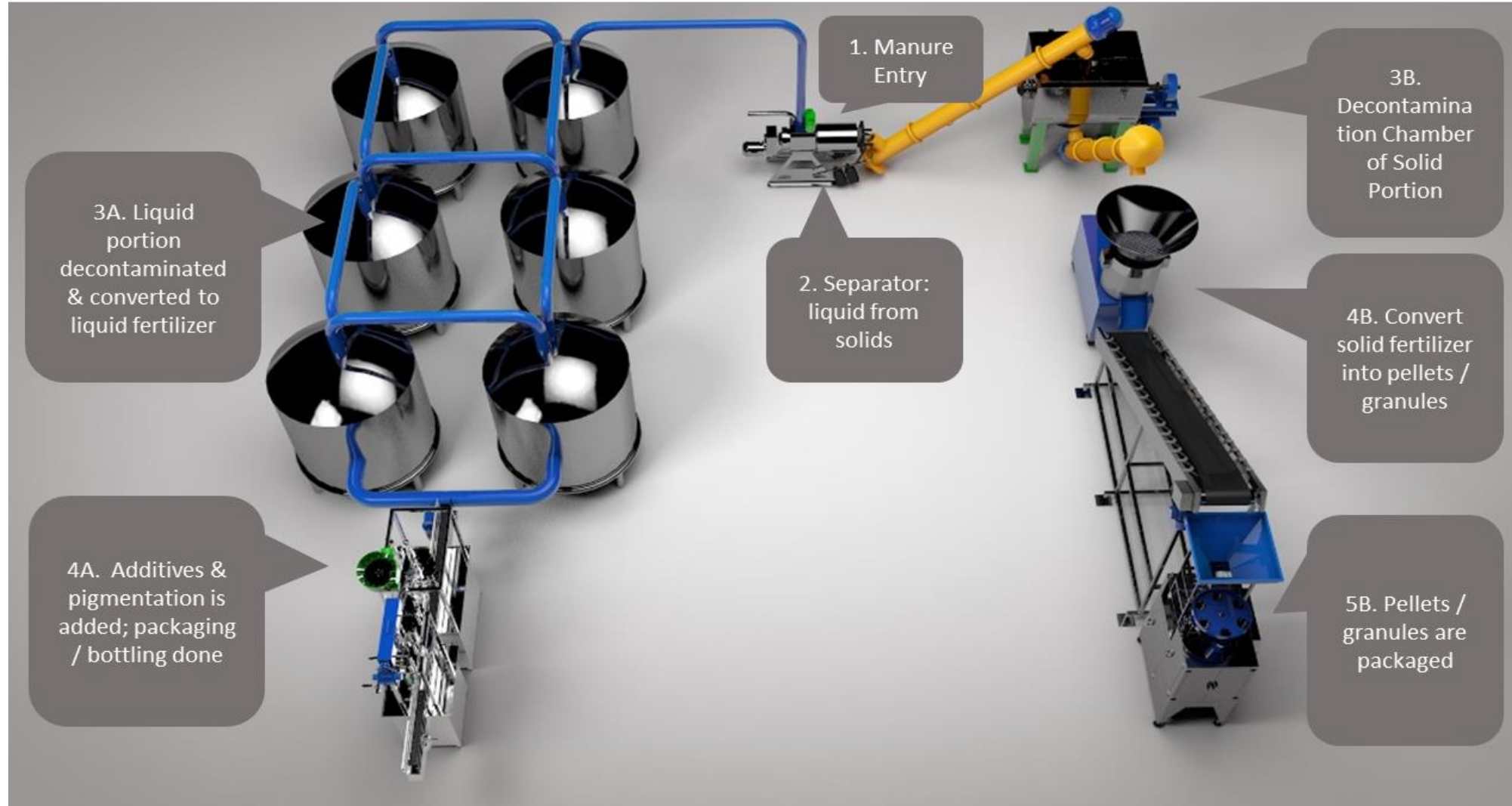
- We use proprietary technology that combines piezoelectric waves, UV rays, infrared waves, and ozone to fully decontaminate the manure – converting it to fertilizer that is free of all pathogens.
- The pathogen-free fertilizer can be used for farming, but also for home gardening projects
- Liquid fertilizer can be used for irrigation of crop farms; it can also be packaged for retail for landscaping and home gardening projects
- Our solution uses contained chambers and uses energy efficient, proprietary technology to do the decontamination in less than 1 day rendering the output pathogen and odour free yet with the necessary nutrients for crops.

Our Technology



Our Product / System

Note: Manure can be fed to system through different types of feeders



Business Model

- Typical customer:
 - Any manure producing animal farm (e.g. cattle beef, dairy, poultry, egg producing)
 - The average sized poultry farm in Canada can use a 6-ton-per-day machine (250 KG of manure per hour)
 - # animal farms in Canada: 205,730
- How will they put it in your pocket.
 - A slow, messy, odorous process now converts manure into odourless, packaged fertilizers in one of two forms:
 - Granules/Pellets - \$1 per lb in large quantities
 - Liquid fertilizers – 1 gallon sells for \$47
 - Therefore, the system will become a cash cow for farmers



Go to market plan

- How will you reach your customers.
 - Low hanging fruit:
 - Approach farmers and farmers associations/cooperatives in province
 - Approach farmers and farmers associations/cooperatives across Canada
 - Exports to the US
 - Exports to other advanced economies
 - Exports to other countries
 - by this time we have reduced production costs significantly by
 - in-housing,
 - R&D in component production, and
 - R&D and automation in assembly

Competitive analysis

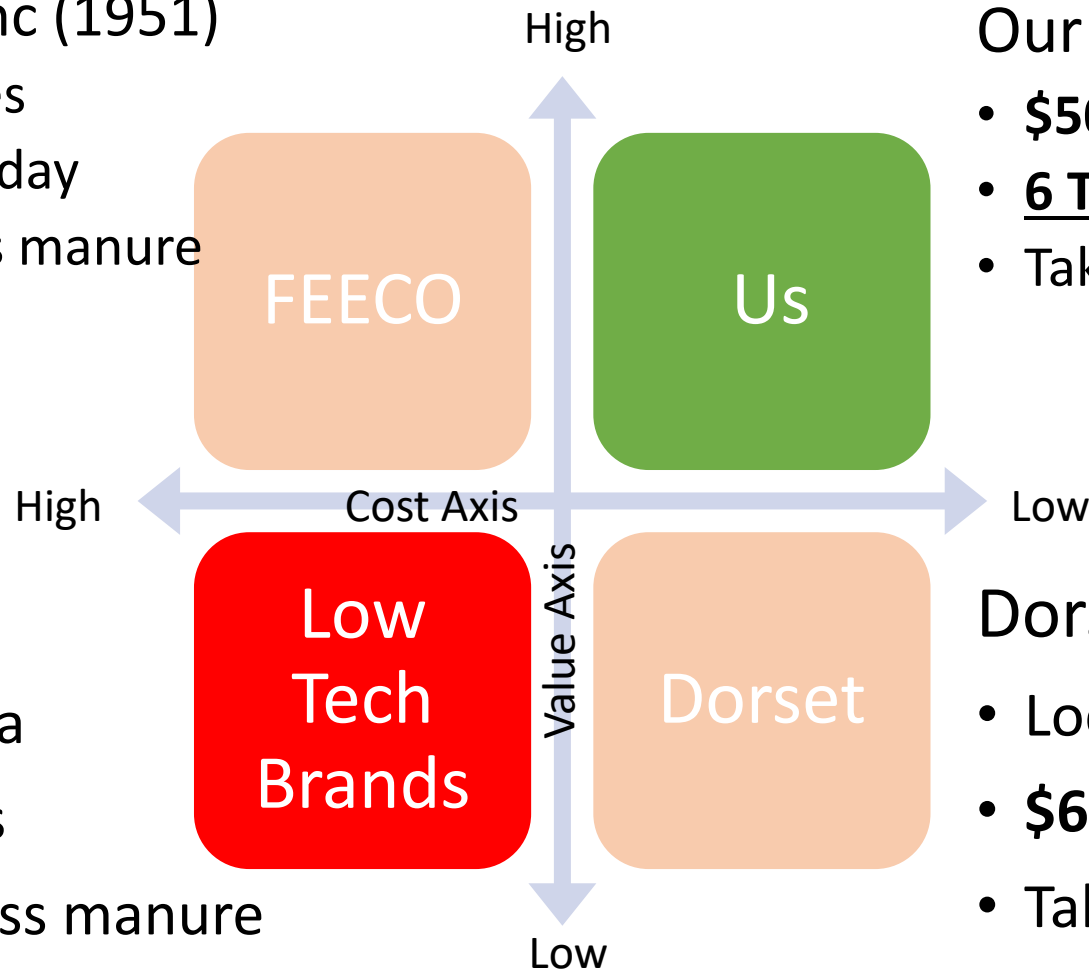
Little Space
Quick processing
High-Tech

FEECO International Inc (1951)

- Location: United States
- **\$1.3M USD** for 6 Ton/day
- Takes 1 day to process manure

Our Solution

- **\$500,000 CAD**
- **6 Tons** per day
- Takes 1 day to process manure



Cost for 6 Ton/day

Low Tech Brands

- Location: Mostly Asia
- Inexpensive Systems
- Take weeks to process manure

Dorset Green Machines (1984)

- Location: Netherlands
- **\$620,780 CAD** for 6 ton/day
- Takes 2-3 days to process manure

Management Team



Mohsen Khalaj

- CEO and Head of R&D
- GM of optometric lens cutting company since 1999
- Technical Manager of Optometry and Glasses Manufacturing Departments since 2018



Alireza Moradgholi

- VP Sales and Marketing
- Extensive sales and marketing experience / strong English skills
- R&D and teaching experience in educational institutions



Mahtab Rashvand

- Head of HR
- Experience in Office Administration and HR Management



Ali Rashvand

- VP Operations
- Extensive project management and teaching experience
- BA in Science and passionate about the sciences

Financial Projections and key metrics

- Below is 5 year pro forma income statement assuming \$523k loan

Our facility allows for 10-15 units to be produced / year

	Year				
	1	2	3	4	5
# Units Manufactured and Sold	5	6	7	8	9
Revenues	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000
Direct Materials	1,080,000	1,296,000	1,512,000	1,728,000	1,944,000
Direct Labour	220,000	264,000	308,000	352,000	396,000
Gross Profit	1,200,000	1,440,000	1,680,000	1,920,000	2,160,000
Operating Expenses					
Salaries (excl. direct labour)	665,000	665,000	665,000	665,000	665,000
CPP, EI, Benefits	132,122	132,122	132,122	132,122	132,122
Rent	170,000	170,000	170,000	170,000	170,000
Marketing	140,000	140,000	140,000	140,000	140,000
Depreciation	9,500	9,500	9,500	9,500	9,500
Other Operating Expenses	80,000	80,000	80,000	80,000	80,000
Operating Profit	3,378	243,378	483,378	723,378	963,378
Interest Expense	31,249	29,978	25,386	20,463	15,183
Net Before Tax Income	- 27,871	213,399	457,991	702,915	948,195
Corporate Tax Payable	-	23,191	57,249	113,229	174,549
Net After Tax Income	- 27,871	190,208	400,742	589,686	773,646
Net Profit Margin (After Tax)	-1%	6%	11%	15%	17%

Key Metrics

- # sales leads in pipeline
- R&D - # projects in pipeline
- Production cost/unit (Gross Margin)
- Operating Margin

Key Milestones

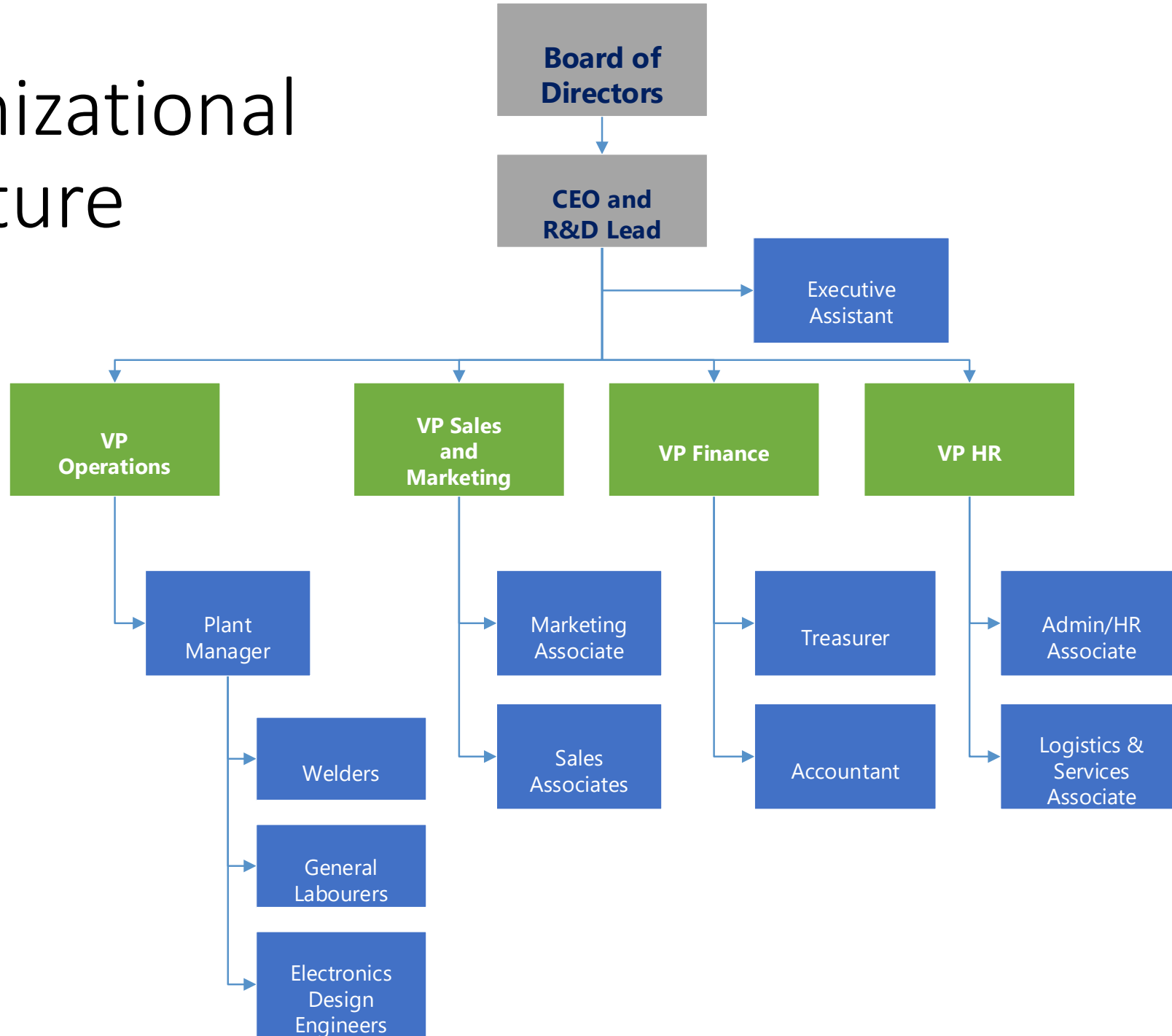
- Enter new markets
- Invest in product innovation
- Invest in cost reduction initiatives e.g. in-housing

Current Status, and Milestones achieved

- TRL stage: 9 – Fully operational units already manufactured
- Patent obtained for invention in Iran
- Units with different capacities have been successfully deployed so far:
 - 3 tonnes / day
 - 6 tonnes / day
 - 12 tonnes / day – no request yet, but easily able to manufacture this
- Two products will meet needs of majority of industrial customers:
 - 6T / day processing capacity
 - 12T / day processing capacity

Additional Slides

Organizational Structure



Total Capital Required

Cash on Hand

Cash to last 4 Months (includes salaries, marketing, etc.) 421,229

Assumes founders will postpone their first year salaries

Expenses

Leasehold improvements 80,000

Patenting in Canada and the US 20,000

Professional Logo and Branding 5,000

Trademarking Logo & Name in Canada 1,400

Trademarking Logo & Name in the US 1,400

Hiring Process (ads, literature) 1,000

Stationery 1,000

Incorporation 1,000

Prepaid Utilities

Prepaid rent and deposit (equal to 4 months' rent) 56,667

Prepaid utilities 2,000

Capital Expenditure

Initial inventory - Enough to fulfill first order 216,000

Equipment (incl. delivery) - Complete list in report 65,000

Funds Needed for Venture: 871,696

Source of Funds

Paid in Capital 348,678

Loan amount 523,018

Thank You