Alex Levitz
The Sustainable World
Case Presentation

As the CFO of Acme I would like to introduce a three-tiered strategic framework that will provide a plethora of economic and environmental benefits for our company. The three facets that comprise this plan are the acquisition of an incinerator, the establishment of a small fertilizer production system, and the gradual transition to obtaining our energy from on-site renewable sources (e.g. solar and wind), all of which will create new income streams for Acme whilst simultaneously reducing our environmental impact. However, due to the immense amount of capital and planning required the implementation of this plan will necessarily occur gradually, as rushing its effectuation could irreparably damage the financial future and overall viability of Acme. Thus, I propose that we strive to implement one facet of this plan each year, starting with the acquisition of an incinerator.

Economically the addition of an incinerator has the potential to significantly reduce our waste disposal costs, whilst simultaneously creating another income stream. For example, each month we produce 31 tons of organic waste (including our custom processes), which costs us $60,000 per month to have incinerated ($720,000 annually). I have found an incinerator that will cost a minimum of $600,000 and a maximum of $1,000,000 to purchase (not including shipping and installation); however, it has a maximum daily capacity of approximately 50 tons. Thus, we will also have the ability to create another source of profit from incinerating waste from other North Country companies. For example, if we only incinerated 10 tons per day charging $1,000 per ton (this is the cheapest rate per ton in regards to what we are paying for the disposal of heptane residues), in a 251-day work year (e.g. 2015) our annual revenue could be 2.51 million (this is obviously a low and loose estimate). There would indeed be numerous annual costs, such as maintenance, a number of new employees, the necessary fuel, and disposing of the ash that is remaining in the incinerator (i.e. landfilling it) (Eco Cycle, 2011). However, after the initial startup costs this Acme expansion has the potential to help guarantee the financial future of our wonderful company.

In regards to the environment the implementation of our incinerator will reduce our overall impact. Firstly, operating our own incinerator will eliminate the need to transport our yearly 372 tons of organic waste to an offsite incineration company. This adheres to Naomi Klein's recommendation of relocalizing production in order to reduce the fossil fuel emissions that result from the transportation of goods, which in our case is 820,120 pounds of waste (Klein, 2011). We will still have to truck off the incinerator ash to a landfill, which could be as much as 25% of the processed waste by weight (Eco Cycle, 2011). However, this is still an improvement vis-à-vis trucking off all of our waste. Incinerating waste poses some environmental and health issues, such as the emission of CO_2 and a variety of other gases and nanoparticles that can adversely impact human health, although there are

numerous processes that we can implement to mitigate these undesirable effects (Wiesner & Plata, 2012). For example, we can utilize the COlloidal Silica Medium to Obtain Safe inert (COSMOS) technology in the inertization of major heavy metals that are present in the incinerator ash (Guarienti et al., 2014). There are a plethora of additional processes that we can utilize, such as quenching, scrubbing, wet electrostatic precipitation, etc., all of which reduce our impact on the environment and human health (Strzelecki, 2001). Another big issue with incinerators as evidenced in a case study pertaining to the contamination of livestock due to a small waste incinerator is that they must be continually upgraded in order to reduce their overall impact (Halldorsson et al., 2011). Thus, we can ensure that the emissions and environmental standards of our incinerator exceed the set requirements through our diligence and commitment to safe and sustainable practices.

In all, the addition of an incinerator has the potential to provide Acme with a plethora of benefits. As aforementioned having our own incinerator will not only benefit our financial future, but it will also benefit the health of the environment. We will be able to guarantee that our organic waste is incinerated in the most environmentally benign manner possible by persistently updating our incinerator with more efficient technologies. We will also be significantly reducing the fossil fuel emissions due to the transportation of our wastes, and reducing the costs of transporting our waste and obviously its incineration. This Acme addition will also provide us with another income stream, which could eventually provide us with the necessary capital to expand our chemical production capacity. Therefore, I beseech you all to adopt and embrace the myriad of benefits that our incinerator will provide, and I respectfully request the sanctioning of this proposal.

References:

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6) Halldorsson et al. (2011). Contamination of livestock due to the operation of a small waste incinerator: A case incident in Skutulsfjörður, Iceland, in 2010. *Acta Veterinaria Scandinavica*. Retrieved from http://eds.b.ebscohost.com.webproxy.potsdam.edu:2048/ehost/pdfviewer/pdfviewer?sid=dbe34579-2b17-4c34-be58-ca7f12856328@sessionmgr112&vid=0&hid=111

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Acme Incinerator Proposal

Daily incineration (in tons)	Annual incineration (in tons)	Daily projected revenue	Annual projected revenue
10	2,510	$7,500	$1,882,500
30	7,530	$22,500	$5,647,500
40	10,040	$30,000	$7,530,000
50	12,550	$37,500	$9,412,500

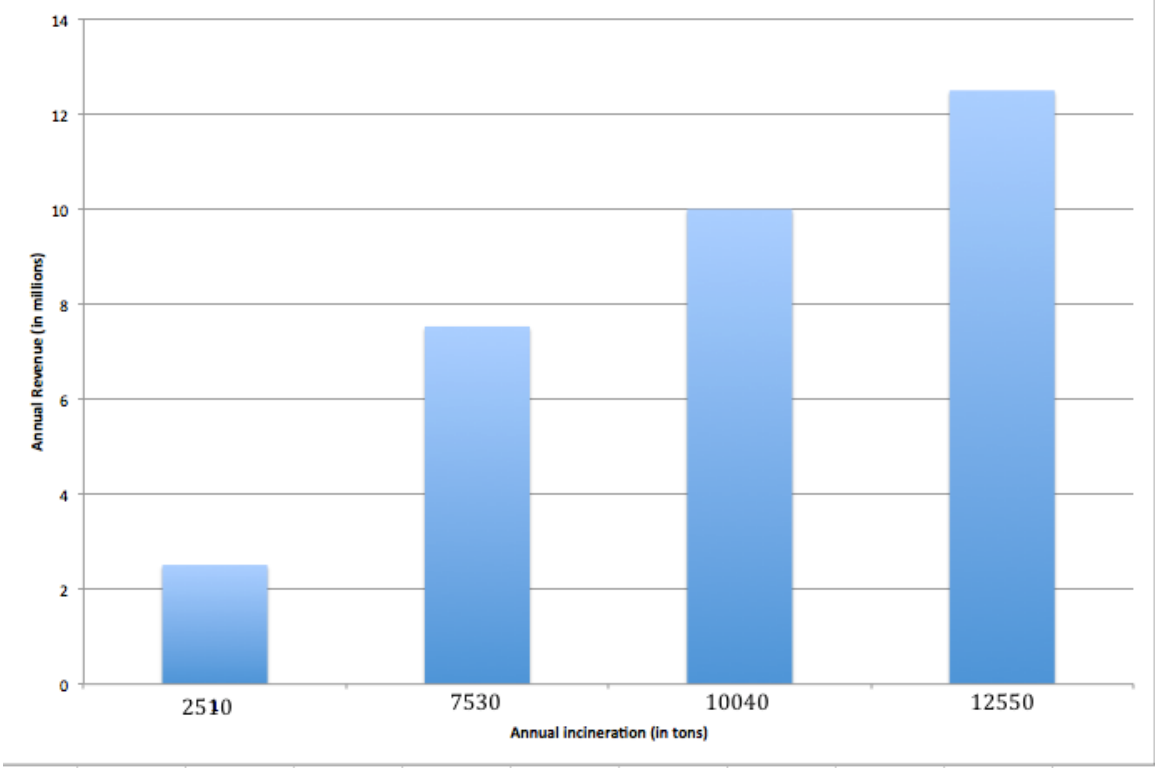
Table 1. This table assumes that our average revenue per ton will be **$750**, and that there are **251** workdays in a year.

Daily incineration (in tons)	Annual incineration (in tons)	Daily projected revenue	Annual projected revenue
10	2,510	$10,000	$2,510,000
30	7,530	$30,000	$7,530,000
40	10,040	$40,000	$10,040,000
50	12,550	$50,000	$12,550,000

Table 2. This table assumes that our average revenue per ton will be **$1,000**, and that there are **251** workdays in a year.

Daily incineration (in tons)	Annual incineration (in tons)	Daily projected revenue	Annual projected revenue
10	2,510	$12,500	$3,137,500
30	7,530	$37,500	$9,412,500
40	10,040	$50,000	$12,550,000
50	12,550	$62,500	$15,687,500

Table 3. This table assumes that our average revenue per ton will be **$1,250**, and that there are **251** workdays in a year.



Graph 1. This graph represents the potential annual revenue given varying annual incineration quantities, and also assuming that the average revenue per ton is **$1,000**, and that there are **251** workdays in the year.