


<p>Company Name and Contact Details:</p>	
<p>LanzaTech NZ Ltd Sean Simpson, CSO www.lanzatech.co.nz Barbara@lanzatech.co.nz + 64 (0) 9 373 4929</p>	<p>Core Skill(s):</p>
<p>LanzaTech was founded in early 2005 to develop, and commercialize proprietary technologies for the production of lowest cost fuel ethanol from the carbon monoxide in low-hydrogen waste gases produced by the steel industry. The company is now ready to undertake the next stage on this critical path, the pilot-scale demonstration of its fuel ethanol production from both biomass syngas and industrial waste gas feedstocks. A pilot plant design has been developed that will allow ethanol production from each of these feedstocks to be demonstrated at scale over the next 12 months.</p>	<ul style="list-style-type: none"> • Fermentation Technology • Technology Innovation • Plant Design • Waste to Fuel generation
<p>The company attracted series A investment from a US investor consortium led by Khosla Ventures. LanzaTech was the only non-US company to attract funding, highlighting the potential of our technology in the field of ethanol production. With the increased funding, we were able to expand the focus of our process development program to include biomass-derived syngas (this contains elevated levels of hydrogen gas). Thus, our gas fermentation technology can be applied commercially to enable the production of fuels from either industrial waste gas or biomass derived syngas.</p>	<p>Biofuel Focus:</p>
<p>Specifically, our plan is to develop an ethanol production process that can be retrofitted to industrial facilities to generate ethanol from the carbon monoxide component of waste flue gases.</p>	<ul style="list-style-type: none"> • 2nd generation Biofuel
<p>Last year we received additional funding from the Foundation for Research, Science and Technology. We have now been able to scale up our process, running a world first pilot plant at a steel mill in South Auckland. There is huge global potential in making fuel from waste gases, which are already being produced in big volumes and going to waste.</p>	<p>Core Product/Activity:</p>
<p>LanzaTech is also able to use syngas that can be produced from waste cellulosic biomass (woody biomass) and municipal waste by gasification to produce ethanol.</p>	<ul style="list-style-type: none"> • Biofuel from biomass syngas • Biofuel from industrial waste gas feedstocks
<p>The clear advantage of this approach to capturing the energy in biomass is that through gasification over 90% of the energy is made available for fermentation whereas more conventional technologies (for instance cellulose fermentation), may only access the carbohydrate portion of the biomass.</p>	<p>Key Project Activities:</p>
<p>The LanzaTech process addresses the global need for cost-competitive low carbon transport fuel, has the flexibility to either be used to reduce GHG emissions from steel manufacture or through the direct displacement of fossil fuels with biomass derived ethanol.</p>	<ul style="list-style-type: none"> • Pilot plant – Auckland Steel Mill
<p>Today the company employs a large team, has a strong, rapidly growing patent portfolio, and has adopted an aggressive stage-gated critical path through process piloting to commercialization.</p>	<p>Leading Edge:</p>
	<p><i>A key advantage of the LanzaTech process is that it is “feedstock agnostic” i.e. It can use almost any organic waste or biomass allowing it to focus on those that are available in high volumes, are low value and are non food (e.g. municipal waste, organic industrial waste (tyres), waste wood).</i></p>
	<p>Investment Base:</p>
	<ul style="list-style-type: none"> • US Investors • NZ Investors
	<p>Employees:</p>
	<ul style="list-style-type: none"> • 24 skilled (Degree level and above) • 2 part-time (Degree level) • 1 Master student
	<p>Production Capacity:</p>
	<p>n/a (Process in development)</p>