



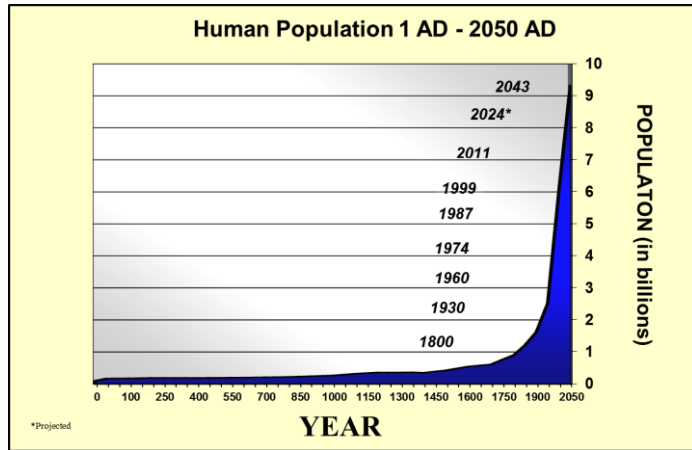
Accelerating the transition to sustainable practice : A materials perspective

04 May 2016
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Carbon Conversions Inc.



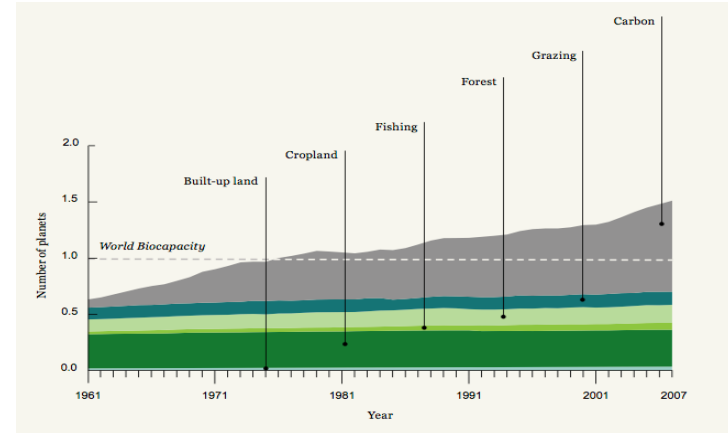
Need for sustainability

Population growth



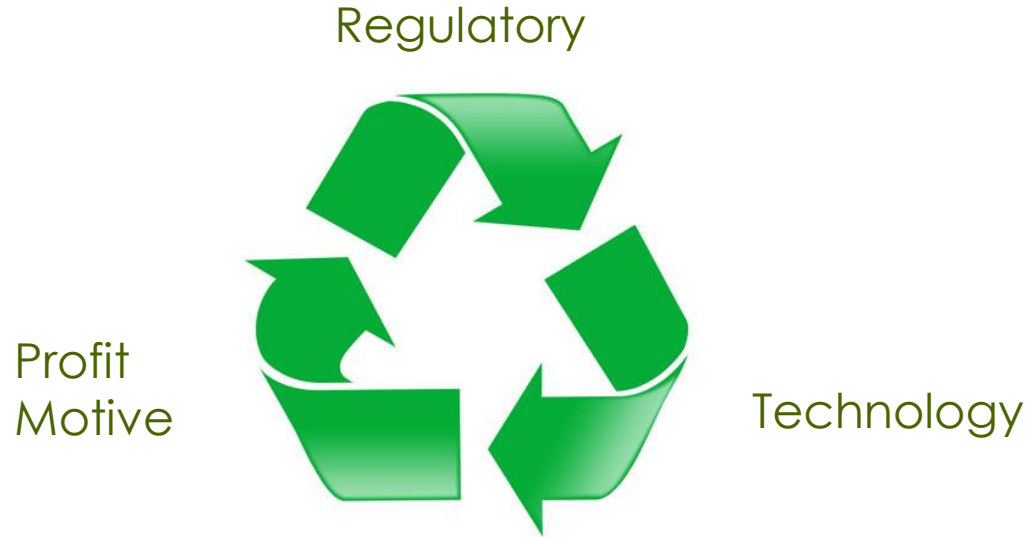
Source : Population Education dot org

Earth's finite capacity



Source : Snohomish Observer dot com

Industrial elements of sustainability



How to combine these elements with specialized know-how to create balanced and robust outcomes ?

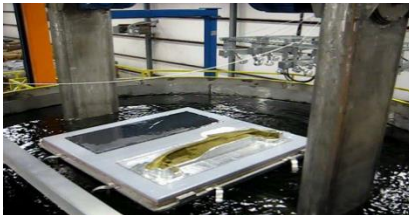
One story



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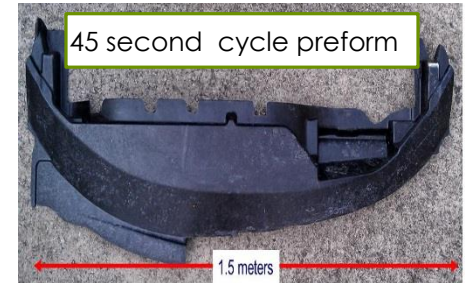
50,000 SF Facility
Lake City, SC



- 1st commercial scale carbon materials recycling facility in the Americas
- Existing capacity to convert 4 million pounds/year excess carbon to new forms
- Producing short fibers , non-woven fabrics and 3-D preforms
- Blends with organic and inorganic fibers routine

Carbon Conversions Inc.

- Advanced materials supplier to industry
- Carbon recycling is a core competency
- Current focus is aimed at light weighting parts across multiple industries
- Near horizon is best in world cost of complex part geometries via preform



Carbon Conversions : Funding

- 2009 : 50/50 Government / private investor funding
- 2016 : 0/5/95 Government / private investor / customer orders
- 2017 : 0/0/100 Customer orders

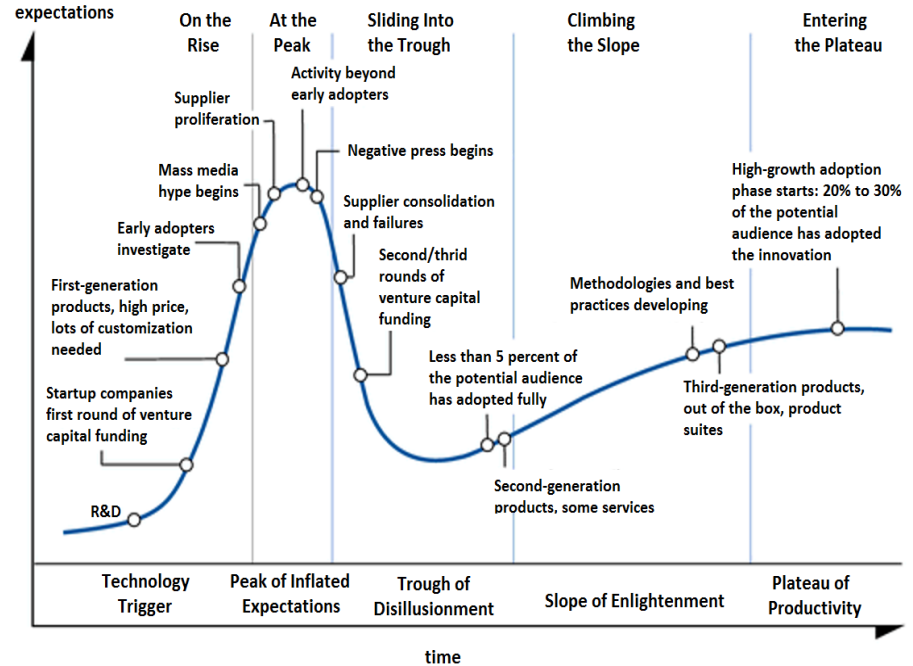
Carbon Conversions is an example of how a 7-10 year horizon to break even business survives until profitability

Carbon Conversions: what went right

- Strong working relationships with relevant academia and strategic institutions to leverage their assets
- Engaged potential suppliers and customers very early in company development to define products value
- Assisted prospective customers accumulation of proprietary advantage to support their risk taking
- Flexed the business model to fit up and downstream value chains to strengthen delivery capability

Lessons learned

- Small , early wins during “trough” are a big help
- Avoid customer dead ends & cull low viable projects early
- Measure the few right things aggressively and wait the remainder
- Be ready for a big win



Source : Gartner/ ATI Group via Wikipedia

Thank you and Questions

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