Book Review:

Ingenious
by Jason Fagone

Overview

Prizes totaling ten million dollars, over one hundred teams, and the goal of creating a mass-production car that can reach 100 MPG are the subject of Ingenious. In this book, Jason Fagone embeds himself with high school students reworking Ford’s, racers creating a car that weighs only 800 pounds, and a government administrator creating a car from scratch in his garage. A story about everyday people striving to do a great thing, this book could be a good fit for you.

The X Prize

Over the past ten years, the X Prize foundation has created several challenges that they have opened up to the world. These challenges are audacious, difficult, and a spur for addressing some of the world’s great problems. The 2004 X-prize motivated Elon Musk to begin what is now the space travel company Space X, and one current challenge is to create a noninvasive medical scanner for quickly sussing out problems in a human (think Star Trek’s tricorder).

The 2010 Progressive Automotive X Prize sought to drum up fresh ideas for drastically improving the fuel efficiency of the world’s cars. In response to this call, over one hundred teams with drastically different backgrounds and designs registered. Ingenious pays particular attention to three teams, spending time with them as they form their plans, construct their vehicles, and put their creations through the competition’s grueling trials. One particularly tough assessment was the “Moose Test”, where a car going forty five miles an hour must turn quickly twice, simulating the demands on a car that must dodge first a moose, then an oncoming car. This is the test that might cause a top-heavy SUV to roll, and proved a significant obstacle for some of these cars, too.

The Submissions

One of the book’s strengths is communicating the urgency and passion that the different groups put into their cars. The long hours, innovation, and will to create a working prototype under duress are all inspiring. A high-school team from West Philadelphia puts together perhaps the vehicle closest to the mass market’s expectations, converting a Ford Focus while continuing busy high school lives. Another
team was comprised of a furloughed municipal government worker, building one of the most aerodynamic submissions from his garage, with help of his friends, and mostly from scratch (the Illuminati Motor Works “Seven”, pictured below). A notably absent participant is any major car company; each decided the competition would present a no-win scenario.

Stress-test

While each group’s little successes and progress towards incredible goals are tremendous, what is nearly as astounding in this book is the sheer stress placed on the participants. Perhaps unsurprising to entrepreneurs and others who put their entire lives into a project, the books’ chronicle of the burdens placed on the health and relationships of the team leaders lays bare the risk that people take on when they strive to take on such monumental projects as these, in such a narrow time frame. The profiles of the people involved show how different personality types and work styles fit different tasks, and how those personalities cause friction and sometimes break down. Nevertheless, the book might have you staying up a little bit later in the evening, reading a few more pages, and thinking about what great call you could respond to.

Should you read this book?

This book does an excellent job of making a variety of topics very interesting. Team dynamics, organizational psychology, and character studies blend well with talk of thermodynamics, design process, and fuel tradeoffs. Under it all is the driving force of the competition, and the different responses to the reinvention of the most iconic American product. I thoroughly enjoyed this book, and if you’re interested in the automotive industry or innovation, I bet you will too.

Terence O’Neill is the Entrepreneurship Librarian at Michigan State University, where he works to connect entrepreneurs to resources that will better inform their business decisions. Through a background in libraries and community education, Terence has worked to support business and innovation internationally and throughout Michigan.

Have a book you want reviewed, or another comment? You can reach Terence at oneillt@msu.edu.