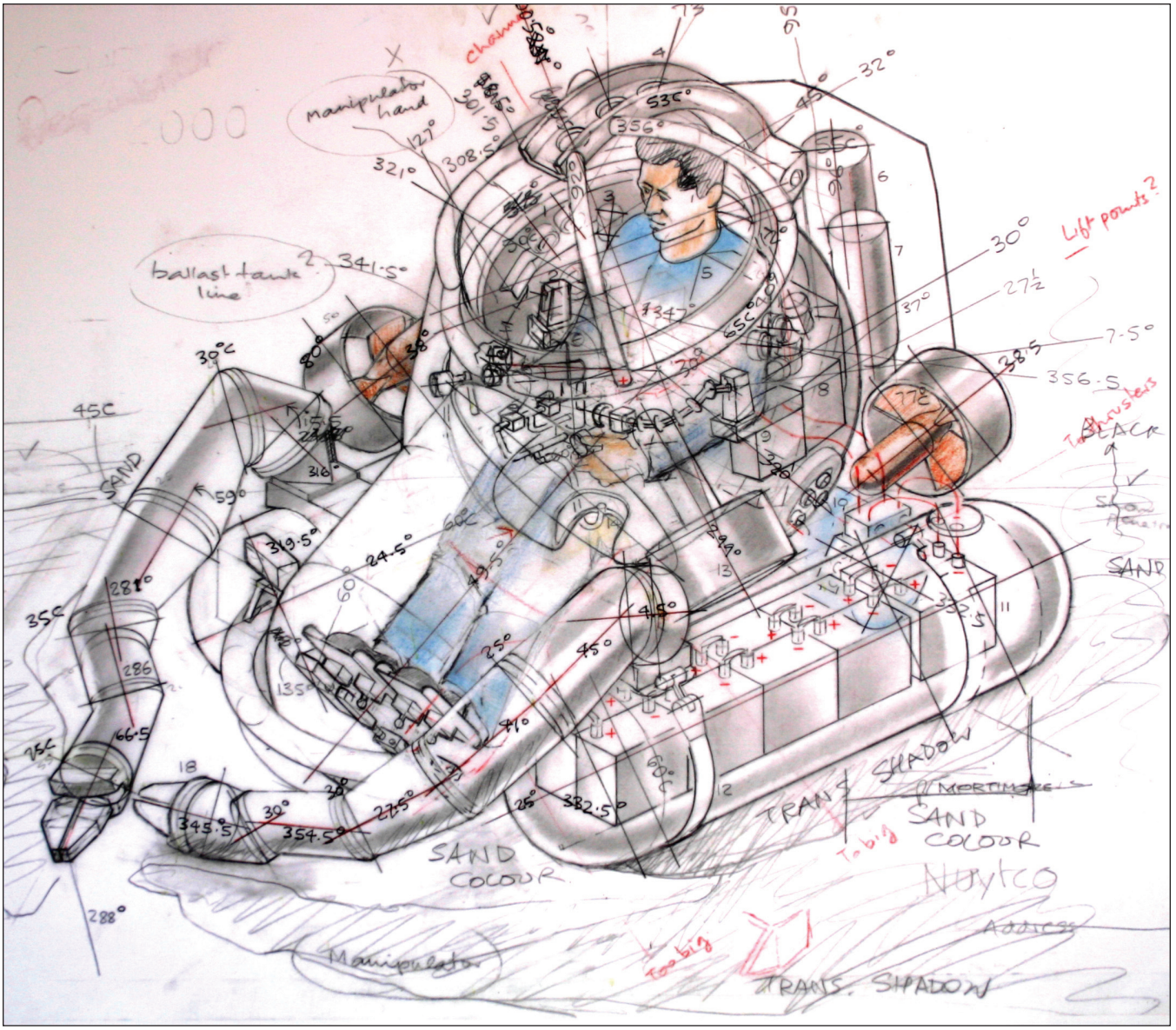
Chapter 2



Design Toolkit

Chapter 2: **Design Toolkit**

Stories From Real Life: Quest for a Ship of Gold

Chapter Outline

Chapter Learning Outcomes

- Describe the major challenges when designing and building an underwater vehicle, regardless of size.
- Describe specific strategies to address common design and building challenges (for example, how to be proactive about team safety), as well as how to keep a project on schedule and within budget.
- Explain the nature and importance of various design strategies, for example:

  1) being proactive about project management

  2) using the design spiral approach
- Explain how the various design methodology stages, (for example, identifying constraints) help define an underwater vehicle before it ever gets built.

***Figure 2.1.cover: Concept Drawing of* Deep Worker**

Systematically working through the steps in a design methodology will help you arrive at a realistic concept drawing of your vehicle, such as this one of the Deep Worker *submersible.*

A concept drawing, along with parts lists, cost estimates, and other information you've collected, allows you to assess the feasibility of building it.

Image courtesy of Phil Nuytten, Nuytco Research, Ltd.