



Executive Whitepaper

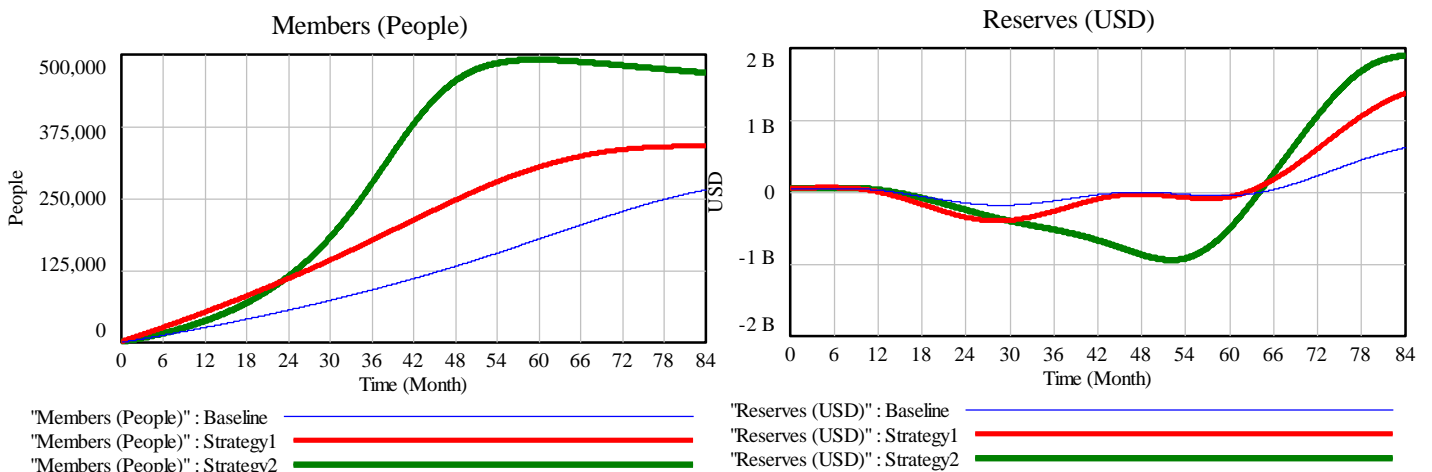
Dialectic Simulation Consulting LLC provides value to clients by improving performance, evaluating strategies and helping solve problems. We do this through simulation science. We are seeking early-adopters who we can provide significant value to as well as obtain references and cases.

To demonstrate simulation science in evaluating strategies we've developed a 1/10th – 1/20th diorama simulation of "Sharing, Inc." a make-believe company in the Sharing Economy that provides lodging, transportation, delivery services, or other "by-the-sip" services to subscribing members. Sharing, Inc. provides these services to retail subscribers through a network of "in-house" providers or by leasing providers from other networks as-needed. To chart the company's future senior management wants to compare growth strategies against a baseline over the next eight years. The diorama simulation model encompasses a variety of factors including market dynamics, customer behaviors, provider acquisition & dynamics, employee behaviors and even manager reactions to changing circumstances.

The first growth strategy grows the subscriber base by improving advertising to increase conversions. It also seeks to increase adoption by new customers referred by current customers. The second strategy focuses entirely on encouraging current customers to refer new customers. The marketing specifics are below:

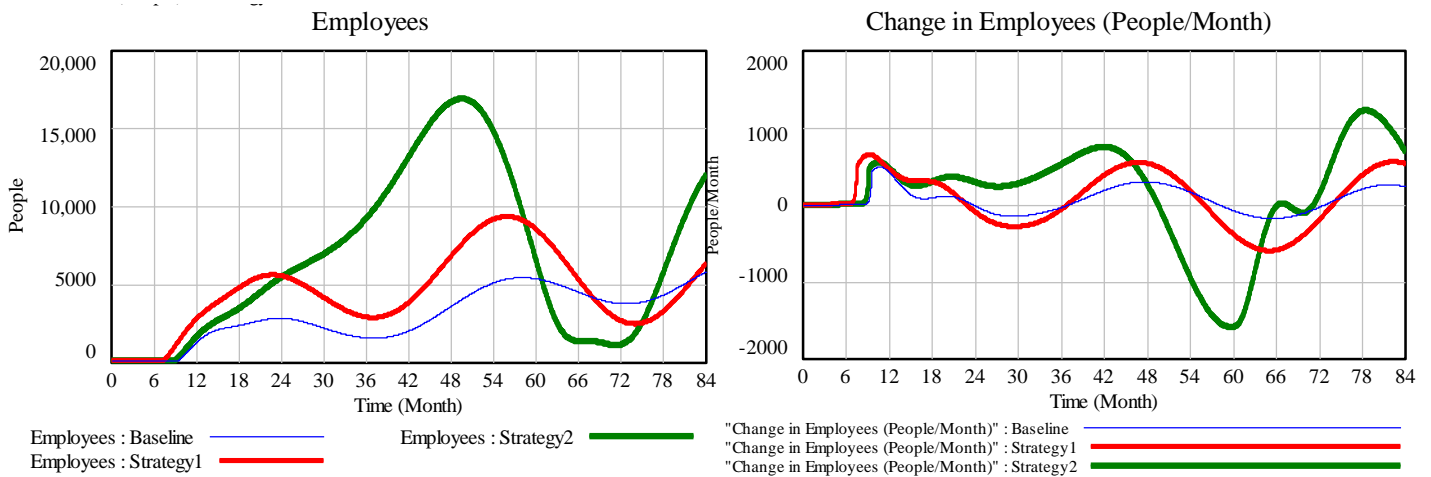
Strategy	Conversion Rate of Advertising	New Customer Contact Rate by Current Customer	Word of Mouth Adoption Rate
Baseline – Marketing As Is	.2% Conversion rate	10	1%
Strategy 1 – Improved Advertising & Easier	Improve by 50%	Keep Same	Improve by 50%
Strategy 2	Keep Same	Improve by 20%	Keep Same

Assuming both strategies are implemented successfully how do they compare? First, the simulation helps us understand performance in subscribing Members and cash Reserves of the company.



Strategy 2 is more successful in gaining Members. However, it also has a period of worse financial performance. The company would have to seek sources of additional cash in new funding for bonds.

What causes this? With a simulation available, Sharing Inc’s managers can take any performance behavior identify exactly what caused it to emerge. Looking through the scenario results we identify the cause of the financial drain lies in Employees necessary to support the network of Providers. In the two charts below on the left is the total number of Employees. On the right is the Change in Employee per month where positive equals hiring and negative equals firing.



As Strategy 2 gained members quickly the managers in the simulation “reacted” with stronger than necessary hiring. They dramatically over-hired versus what was actually needed resulting in negative cash flows drawing down financial reserves and drastic layoffs to fix the problems. This *worse-before-better* pattern is easy enough to see in the rear-view mirror – but with the simulation now it can be seen in advance!

Simulations enable testing strategies for improving performance or overcoming problems under real-world conditions without the cost, risk or time of a real-world pilot or deployment. In the case above, a third strategy can be developed that captures the benefit but minimizes the consequences.

How our firm uses simulation science and the kinds of problems best suited for these approaches are explained in more detail in the attached technical note included for review by yourself or your technical team.

If you believe some of your current enterprise challenges are wicked mess problems or have additional questions please contact us. We are very interested in working with you.

Visit our website at www.dialecticsims.com for more information and examples of how our work can apply to Business & Strategy, National Security, and Political Intelligence.

Or inquire directly at info@dialecticsims.com for more information.