

If you want to teach people a new way of thinking, don't bother trying to teach them. Instead, give them a tool, the use of which will lead to new ways of thinking.
—Buckminster Fuller

System Dynamics for Change Management

How a Computer Learning Lab Facilitated a Fundamental Culture Transformation

Leadership at a family-owned business made a long-debated decision to transition to different type of business – to implement an employee stock ownership plan (ESOP). They believed an employee-led company would create the type of loyalty needed to become more competitive in the construction services and maintenance market. Employees would take more personal ownership of business decisions and simultaneously *increase productivity* while *reducing unnecessary costs* – thus, the transition would lead to an increase in overall profitability.

This was a risky transition, because employees had no experience making the types of decisions necessary to be successful under the new leadership model. What if the employees didn't effectively adjust to the environment? What leadership needed was an ability for employees (leadership included) to experience the new way of operating to better learn the skills they would need.

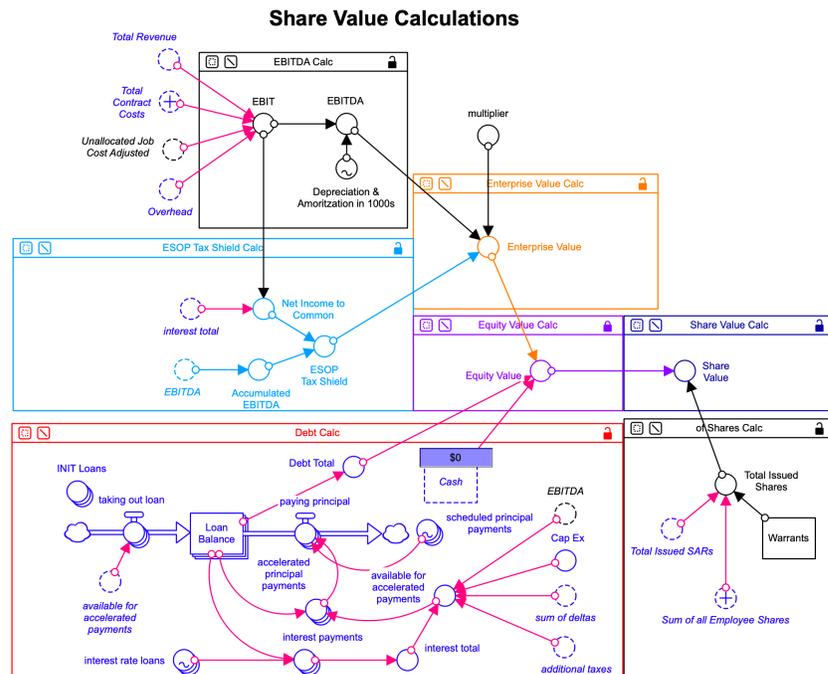
The company worked with a system dynamics consultant to build a simulation of the ESOP business model that calculated how future decisions would impact business performance and the financial health of the organization. Further, the model predicted the average individual compensation an employee would make based on organizational performance. Employees could see exactly how much money they'd make now *and* have available for retirement.

Learning-filled Sessions

The leadership team from the company hosted several employee sessions where the employees learned the basics of the future ESOP organization, including potential personal financial benefits. They also learned the new range of decisions they would make under this new structure – and their impact.

In one of the first sessions, employees first proposed they run a “break even” type business and extract the profit with higher wages and more investment in their retirement plans. This meant taking from funds that would normally be used to invest in increasing and maintaining core business infrastructure.

They could easily test the impact of these decisions by adjusting the decision sliders on the interface (see example below). The result: they learned *not reinvesting* in the core business infrastructure (equipment, training) would contribute to rapidly *losing competitiveness* and *going out of business*. By slowly adjusting their decisions on the control panel, they built deeper insight into the business and the impacts of various



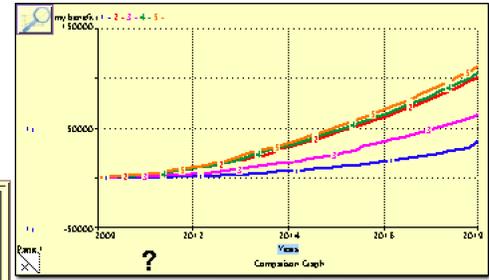
tradeoffs: renting versus buying equipment; hiring FTEs versus contractors; and investing in capital and people.

Employee Ownership Learning Lab

Improving my ESOP returns: What will maximize my benefits?

Years	2015	2016	2017	2018
My Total Shares	935	1,058	1,179	1,296
my benefit	\$60,760	\$76,017	\$92,996	\$111,721
Share Value	\$65	\$72	\$79	\$86

Cost % (per contract) for...	
Labor	57.8%
Materials	27.2%
Company Equip	6.3%
3rd Party Equip	2.1%
Subs	6.6%



My initial compensation **Annual % change to my compensation**

50000
80000
20000 140000

0.7
2.5
0.0 5.0

Simulate value **Reset all**

for comparison purposes...

% of Total Pala Compensation that Applies: 70
Individual 401(k) Contributions: 6.0
Company 401(k) Contributions: 0

60 100
0.0 20.0
0 100

defer % match %

What if these changed?
% change (per contract) in costs for...

Labor Cost: 0
Materials: 0
Subs: -5
Equipment*: 75

*Utilization % that's company owned

Invoicing and billing performance (average per contract)

35 75
60
Avg bill collections in days

7 14
14
Avg days to get bills out

Other Business Assumptions

0.0
0.0
-5.0 5.0
Annual % change in the number of contracts

% change in revenue generated per contract: 0

% change in Overhead: 0

0.120
0.120
0.060 0.180
Margin (fraction)

Impact

The learning lab and its corresponding curriculum won an innovation award from the National Center for Employee Ownership – an organization supporting ESOPs. Why? Because the lab helped leadership and employees fully understand how the new business model worked – including how they could best thrive in this new structure. And that helped the company successfully transition to a competitive and profitable ESOP-based business.