

Running an Engineering Company

By: Scott Lindelow



Caveats

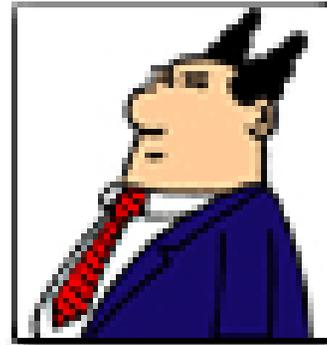
- I'm not an attorney
- I'm not a CPA
- I'm not a business consultant

Why do you want to run your own company?

- Personal satisfaction
- Greater income (or at least the potential)
- Less work
- Ability to set your own schedule
- Desire to teach and motivate others
- Personal control issues (ok, that's mine)

No, really, it's because....

- You know you can do it better than that pointy haired guy in the corner office



The Boss

So, are these goals realistic?

- Webster says an entrepreneur is derived from Old French and means
“One who organizes, manages, and assumes the risks of a business or enterprise”

True Definition

- I'd rather work 80 hours a week for myself than 40 hours a week for someone else.
- For us, it's actually only about 60 hours a week or so

Before you get started

- Competitive analysis
- Barriers to entry
- Economic moat
- Clients
- Partner? Electrical only?

The Dark Side

- Should you be an Electrical Engineering firm or have in-house Mechanical too?
- What do your clients think – how will it impact your client base?

You've decided

- Type of corporation – LLC, Inc., etc.
- File corporate registration papers
- Get Tax ID number
- Equipment – computer, fax, phones....
- Software
- Insurance
- Logo

You've still decided

- Stationery/Business Cards
- Place of business
- Furniture
- Marketing materials
- Retirement plan
- Bank account....

Face it

- Accountant
- Attorney
- Retirement planner (for those profits)
- Payroll
- Marketing material help

Oh yeah, we also need

- CLIENTS

- What is your competitive advantage?
 - Cost?
 - Quality
 - Focused niche - cost
 - Focused niche – differentiation
- Think about your differentiation

Differentiation Strategy

- Build in a difference – Real or imagined
- What can I do that is difficult for my competition to copy – Quality? Cost? Branding?
- Want to signal value to your clients.
- Must keep cost of differentiation in line – charge more than it costs. Profit, not a dirty word.

Now, here's where the entrepreneurship comes in

- You are the owner and have a couple of small jobs. You have to:
 - Survey
 - Design
 - Draw
 - Shop Drawings
 - RFIs
 - Inspections/traveling

And that was the non-owner stuff

- You also have to:
 - Continue to market your firm and, no, a sign out front does not constitute marketing
 - Prepare proposals
 - Prepare invoices
 - Collections (Believe it or not)
 - Receive payments and pay bills
 - Do bookkeeping functions
 - Prepare presentations your partner foisted upon you
 - Maybe have a personal life

I'm tired

- Hire someone to help with production
 - Payroll including taxes
 - Worker's compensation insurance
 - Health insurance
 - Human Resources issues
 - Did you hire the right person – same work ethic as you, same drive, motivation?
 - Are they going to leave, start their own company and try to take your clients?

Daily Issues

- Staffing for projects
 - Are you too big?
 - Are you too small?
 - These are hard issues because as the owner, the cost of others salary is a direct hit to your personal income. But their production should be profitable.
 - Will clients see you as capable of larger projects?
 - However, you may have more free time for marketing, growing, managing. Oh, and family.

Daily Issues Continued

- What's most important to keeping your company operating smoothly?
 - Marketing?
 - Sound Engineering?
 - Good bookkeeping decisions?
 - Happy employees?
 - You've forgotten already – it's a business!

Most Important Is

- Cash Flow. Period. (My opinion).
- Cash comes from several sources:
 - Paid in capital by partners (that's you)
 - Revenue
 - Debt (Loans either by partners, bank, SBA)
 - Sale of stock (New partners)

Accounting

- Must have good accounting system
- Hire an expert in the system
- Track expenses vs. overhead
- Track time spent on projects
- Track receivables
 - Amount outstanding
 - Total days sales outstanding
 - 30/60/90 column

Annual Review of Company

- SWOT Analysis
 - Strengths
 - Weaknesses
 - Opportunities
 - Threats
- Both internal and external

Strengths

- What do we do well?
 - Type of project (spec office building, retail, hospital)?
 - Does this give us an enhanced competitiveness?
 - Is it a resource we have (specific software or tools)
 - Is it customer service?
 - Is it our brand name?

Weaknesses

- What do we do poorly
 - Marketing?
 - Follow up?
 - Quality Control?
 - Training?
 - Communication?
 - Diversification or market types within our industry?

Opportunities

- Within our industry – what gives us an advantage?
 - Our knowledge of a system?
 - Having lighting design on staff?
 - Having communication design on staff?
 - Shifting market focus (such as condos)
- How can we use that to our advantage?

Threats

- Within the industry – something that threatens or weakens our competitive position
 - New competitor
 - Our services offered by somebody else
 - New marketing strategy by competitor
- External
 - Economic forecast

Five forces model – affects market position, profitability

- Rivalry among competitors
- Potential entry
- Substitute products
- Power of suppliers
- Power of buyers

Rivalry Among Sellers

- Usually the strongest force
 - Prices
 - Marketing
 - Customer service
 - Technology
 - Innovation

Rivalry Is High When

- Overall industry profitability is dropping
- Growth is slow
- Number of competitors is rising
- Cost to switch suppliers is low

Potential Entry

- Barriers to entry or “moat”.
 - Costs (Economic moat)
 - Knowhow
 - Governmental regulations
 - Name recognition
 - How incumbents are likely to react

Substitute Products

- Same purpose, different supplier
 - Design build by contractors
- Switching costs – is it inexpensive to switch from one supplier to another?

Power of Suppliers

- Materials
- Labor
- Equipment
- Cost of capital
- Typically suppliers in our field have low levels of power – Fed Ex vs. UPS

Power of Buyers

- Clients
- Client's power can be significant
 - When times are busy, their power can be lower (cost to switch is greater)
 - Think about what you can do to minimize their power

Five Forces for Engineering

- Rivalry – High – Many competitors
- Potential Entry – High – Easy to start new company
- Substitute Products – High – Easy to switch
- Power of Suppliers – Low
- Power of Buyers – Variable, but mostly high

What Do We Want to Be?

- This is personal
- You are shaping your future and your company
- 3 person firm?
- 30 person firm?
- 300 person firm?

Strategies

- **Corporate Level Strategies**
 - Highest level of strategy for a corporation – usually a growth strategy
- **Business Level Strategies**
 - Typically at the level of a single business
 - How to implement the corporate level strategy
- **Functional Level Strategies**
 - Down to department level

Strategic Plan

- 1) Scan the environment
- 2) Mission statement – General statement of purpose
- 3) Set objectives – Something that can be measured or accomplished (transform mission statement into action)
- 4) Strategy – How to accomplish objectives (Specifics required)

Strategic Implementation

- Implementation – work with subordinates to determine requirements for implementation
- Evaluation and control – measure something and compare outcome to objective

Final Thoughts

- When you're up to your ass in alligators, it's hard to remember your mission is to drain the swamp
- Management meetings do not need to be formal, but they do need to occur
- Your corporate mission does not include making your employees happy.
 - However, happy employees usually make better employees

Even More Final Thoughts

- You don't plan to fail, you fail to plan
- Hope is not a business strategy