

onsultants are reputed to be the freewheeling cowboys of chemical engineering — grasping for big paychecks to squander on a lavish lifestyle. The reality, of course, is far less glamorous. Instead, many practicing consultants describe themselves as process healers — prescribing expert advice while adhering to the physician's oath of "First, do no harm."

Independent consultants can, indeed, reap generous financial rewards. Contracts can be worth tens or even hundreds of thousands of dollars, and valuable clients can be worth millions over the course of the relationship.

However, paychecks do not come every month, and the size of the paycheck is not guaranteed. Much of a consultant's time is spent seeking opportunities, building relationships, identifying needs, closing sales, and handling administrative tasks — none of which directly generate income. An independent consultant must be patient, and have financial resources available to weather an extended drought of billable work. There are no paid vacations or benefits. If you want health insurance — go buy it.

I am the sole proprietor of my consulting business, and I have no full-time employees (although I sometimes collaborate with other independent consultants and small businesses on larger projects). Other *CEP* articles discuss alternative consulting business structures (1) and growth strategies to build larger consulting firms (2). In this article, I describe the rewards and demands of consulting based on my experience as an established independent consultant.

The 2015 AIChE Salary Survey lists a median annual salary of \$130,000 for consultants (3). Financial reward, however, is hardly reason enough to tackle the challenges and demands of independent consulting. Other perks have helped me to find job satisfaction, which I discuss here, but others may enjoy different aspects of consulting (4).

Work environment. As an independent consultant, you have the freedom to tailor your work environment to fit your lifestyle and personal needs. Do you prefer to work from home, in a shared office space, or on a yacht? You can choose, subject to your budget.

Perhaps more importantly, you can choose your colleagues, partners, and clients. I have turned down consulting opportunities because the client seemed unpleasant to work with, or because the project would have been excessively intrusive on my family life. Some clients may even be flexible and willing to adapt in order to gain your services.

For example, once I had to explain a family problem to a manager of a client company. The client promptly made accommodations to meet my family's needs, which led to a long-term, mutually beneficial relationship with both the manager and the client organization.

Office politics. My home is my work environment, so my daily interactions are primarily with my family and constant companion — my dog. He seldom disagrees with me and never partakes in interdepartmental gossip.

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The lack of internal politics is liberating, because it eliminates any possibility of backbiting or power struggles. Furthermore, my independence has allowed me to serve, at times, as a sounding board for managers in my client companies, which has helped me to build credibility and relationships.

While the absence of office politics is a definite boon, consultants are social creatures who need a professional network. The Internet enables virtual networking, but face-to-face interactions remain essential. AIChE has helped to meet this need, especially at the local section level.

Variety. Independent consultants are not only responsible for the technical work, but also marketing and administrative tasks. For me, this variety is one of the most appealing aspects of consulting.

Early in my career, I held a variety of technical positions in a large chemical company. Later, while still with the same company, I joined a small group that provided specialized consulting services. There, we all had to have at least a general understanding of all aspects of the business. Thus, I was able to see the bigger picture, while also retaining a sense of individual significance. It was during that time I realized that consulting suited me.

Each individual consulting assignment can also provide a lot of variety. Although my consulting practice started with pinch analysis, it has expanded to encompass many aspects of process energy management and efficiency. In addition, assignments outside of my core area of expertise have leveraged my interests and skills, as well as helped to ensure continued personal and professional growth.

Career responsibility. Stories of personal assessments and performance reviews at large companies too often include laments over the perceived unfairness or unreasonableness of the ranking system, and many managers, like the people they

manage, seem to be disenchanted with the system.

As an independent consultant, there is no corporation or manager to credit or blame for successes or failures, which can be both sobering and liberating. Despite having to accept full responsibility for your career, decisions do not have to be made in isolation. It is important to periodically seek perspectives from other knowledgeable people. Active participation in a professional society, such as AIChE, helps to maintain an invaluable pool of qualified advisors.

Significance and value. A survey of chemical engineers identified interesting and challenging work as the top source of workplace satisfaction (5). Typically, consultants are called upon when companies have important problems that they are unable to solve with internal resources. Invariably, this means consulting assignments are both interesting and challenging, and thus have a high inherent value. Successful completion of such a project imparts a sense of satisfaction that transcends a paycheck.

Consultants also serve as visiting experts during project execution, often fulfilling the role of instructor or mentor to members of the client organization, especially when working with junior staff. One of the greatest rewards of consulting work is watching others grasp concepts and apply them.

Flexibility. Working from home enables me to avoid the time-consuming commute most working people face daily. I also have a lot of flexibility in how I use my time — except when visiting client sites, which can impose significant constraints. There is no boss setting my schedule or demanding deliverables, so I am free to define a schedule based on my priorities, subject to the needs of the client. This flexibility allows me to make more time for personal pursuits and family activities, and it has certainly contributed to my physical, emotional, and spiritual well-being.

Flexibility and lack of accountability can also be dangerous without some method of self-imposed structure. Routines and goal-setting are important tools to ensure tasks get completed on time. For example, as a habit I end the workday by listing tasks that need to be handled the following day. I attempt to be as specific as possible, often including quantitative targets, such as the number of prospective clients to contact.

The demands

While consulting offers many rewards, it is a demanding profession that may not be right for everyone. Technical proficiency is important, but not sufficient for success. Successful consultants must overcome additional challenges and demands.

Expertise. Engineers who become independent consultants typically do so after working in industry or academia long enough to become proficient in a field, to the point that they can offer credible expertise to the industry at large. This

was the path that I followed in becoming an energy management and efficiency consultant.

Although this is a fairly logical career progression, there must be sufficient demand in the field to support a consulting career. Moreover, even if there is demand, there is no guarantee that the demand will be consistent, or that it will remain. For example, expertise in sulfur production from salt domes, which was relevant in the 1980s, is now obsolete, because almost all sulfur is now produced from natural gas and petroleum. It can be difficult for an independent consultant lacking the support of a large company or an academic institution to stay current with technology — especially when tectonic shifts occur in the industry.

An alternative approach is to seek out key problems the industry faces, and build a consulting portfolio around those issues. This requires significant market research and conscious development of expertise, but it can pay large dividends.

Marketing. Merely branding yourself an expert and starting a consulting business does not mean senior executives from every relevant company will come knocking on your door. Before a company will hire a consultant, it must have a problem that it recognizes needs outside help. And, before it hires you specifically, it must know you exist, and more importantly, want to work with you.

Effective marketing helps to solve these issues. Ideally, a consulting prospect is already aware of a problem and recognizes a need for outside help. The goal of the marketing task is then simply to make the prospect aware of your services and also to convince its management you are the ideal candidate for the job. Some marketing tasks are more involved and require spending time and effort developing an understanding of a prospect's business to uncover the problems that require consulting services.

Marketing is crucial to the success of any business, including consulting. However, it does not come naturally to most engineers, and it certainly is not incorporated into any engineering curriculum.

Relationships. Unless you have a genuine interest in people and a desire to help them, consulting and the required marketing activities are not for you. I learned the importance of relationships early in my independent consulting career.

Within days of my decision to go independent, I was invited to bid on a large job against two major consulting firms. Although the competition undercut my bid, I won the contract. The client's rigorous scoring system for judging the competing proposals, however, did not crown me the clear winner. Instead. I learned that as the client's team discussed the results someone commented, "It's got to be Rossiter. We can work with him."

We tend to think of doing business with companies, but often lose sight of the fact that companies are composed of

people; even in this data-driven age, decisions often come down to personalities, preferences, and hunches. While credible technical service is vital, clients must want to work with you, so it is essential to be flexible and interact well at a personal level. Furthermore, quality of service is a key consideration in price negotiations (1), which means being the lowest bidder may not necessarily be a good thing.

Another experience began when, a year into my consulting career, a friend introduced me to a senior manager of a major multinational company. This introduction led to over a decade's worth of steady work on a company-wide program. I was able to visit many of the company's sites and develop numerous relationships with key managers, some of whom engaged me for additional work. However, the program I was involved with came to an end. There were also changes to corporate policies and management. As a result, I now get very little work from this company, although I still make an effort to stay in touch.

A major takeaway from this experience is the importance of personal referrals — one introduction led to years of work. After the initial introduction, I was able to maintain the stream of work by developing positive relationships within the company. However, it also shows the danger of being overly reliant on a single client. For a decade, I did very little formal marketing, because the phone kept ringing and the purchase orders kept coming. This is common among consultants who begin their careers with a set of contacts from pre-consulting days, which at some point cease to be viable. Since then, I have had to change my ways and adapt to continue to develop new contacts to keep the business alive.

Tools. Relationships don't just happen — they are built. Face-to-face contact is definitely the most powerful tool for building relationships, but it is not always practical and it requires time commitment. Other tools can also be deployed to help build, maintain, and strengthen relationships:

- referrals. Some of my best projects were the result of personal referrals from previous clients. If you have done a good job for people in the past, they are usually happy to help you find future work.
- professional society membership. Active participation in AIChE and similar organizations creates opportunities for face-to-face meetings with potential clients and collaborators that can lead to valuable business opportunities.
- conference presentations. Speaking engagements also help to facilitate face-to-face contact. Audience members likely have at least a general interest in the topic. Try to gather contact information after a presentation so you can follow up to explore interests and needs.
- publications. While they rarely lead directly to consulting sales, publications can greatly enhance credibility and help move a relationship toward a sale. Of course you want

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the person who wrote the book on the topic working for you!

- *online presence*. A website is essential. In addition, blogs and business-oriented social media, such as LinkedIn, create an active presence on the web. E-newsletters are a quick and cost-effective way to keep in touch with clients and prospects, and individual emails are useful for sending specific, customized information.
- *telephone*. The telephone offers an element of immediacy that email and other electronic media cannot. Aside from face-to-face meetings, the telephone affords the most effective means of turning an initial contact into billable work.

Not every contact will lead to a sale, and it can take months or even years to progress to billable work. Rather than initiate contact with a singular goal of making a sale, view each of these opportunities as a chance to meet someone new, learn something, and make a friend.

Finances. Most financial advisors recommend maintaining a bank account with about six months of living expenses. For an independent consultant, that amount needs to be greater, at least twelve months' worth or more. Paydays for consultants are unpredictable, and business can fluctuate between feast and famine. In addition, consultants do not receive paid holidays, sick leave, or vacation time. These factors make financial discipline a must.

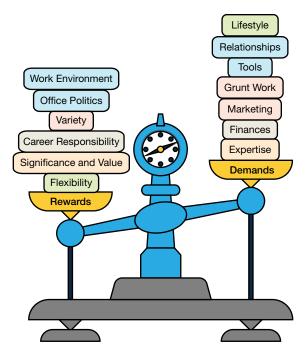
Your financial plans must account for health insurance, pension plans, and life insurance costs. Businesses are also subject to significant taxes that can get complicated if the work spans multiple jurisdictions. Also consider specific regulations at each work location. Seek professional tax and legal advice to avoid oversights.

Grunt work. Technical work and marketing are the visible aspects of consulting, but day-to-day activities also include billing, bookkeeping, recordkeeping, tax reporting, website development, office management, and writing and reviewing contracts. Many independent practitioners do all of these tasks themselves, or utilize part-time help.

Lifestyle. The flexibility of an independent consultant's schedule is bounded by the needs of the client, which can be, at times, disruptive. In the past, I have had to spend extended periods away from home, although in recent years, this need has been diminished by the capabilities of the Internet and telecommuting. Nevertheless, this is a major consideration for anyone contemplating consulting as a career path.

Closing thoughts

I have found independent consulting to be rewarding, but I have also had to balance the rewards against the demands and challenges (Figure 1). Engineers considering consulting must understand that the skills necessary extend beyond technical proficiency.



▲ Figure 1. Although it is easy to consider aspects of consulting as either a reward or a demand, the reality is that each reward is tied to a demand. These relationships help to maintain an even balance. For example, consultants typically enjoy a flexible schedule, but that schedule is constrained by the needs of the client. In addition, most would consider an independent work environment that eliminates office politics a reward, but relationships require interactions, which can introduce tensions. And while driving your own career and taking responsibility for achievements is rewarding, you have no one to blame for mistakes or to look to for financial help.

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