

High-Tech Dilemma: Rethinking Technology and Your Small Business

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Owning Your Own Assets

For business owners, conventional wisdom has always been that it is more cost-effective and provides the business more control if “we own our assets.” In some areas this may be true. However, the fast-changing world of technology is the antithesis of this conventional wisdom. Only the largest organizations have the in-house resources to purchase, maintain, and evolve their technology infrastructure. Small and medium-sized organizations (historically) have great difficulty exploiting the latest technology solutions. There are many reasons for this, but it essentially comes down to money:

- High up-front costs of purchasing hardware and software, plus the cost of providing the infrastructure (space, racks, network, cabling, etc.) to deliver technology.
- The costs of in-house staffing to support the hardware, software, and infrastructure for delivering technology solutions once they are implemented.
- Expertise to adapt the technology to new opportunities and strategies as the business grows & changes, and end-user/customer needs evolve.

For this reason small businesses remain at a disadvantage with respect to technology in addition to generally fearing it.

Reaping The Benefits of High Technology

The Problem: How does a small or medium-sized business, non-profit, or governmental organization cost-effectively reap the benefits of cutting edge technology?

Ironically, the solution to this high-tech dilemma is modeled after something most of us consider to be very low-tech – farming.

The average farmer in the United States has been an undercapitalized individual or family, who had all they could handle in managing the core farming business. To be truly successful, however, they needed access to items outside the routine of their day-to-day tasks – specialized equipment like combines, cleaning facilities, and product sales and marketing. As a practical matter, it was difficult (if not impossible) to provide these components individually. However, by picking the right partners and sharing the costs, the creation of cooperatives gave them access to far better tools and thereby gave their businesses the greatest possible chance to thrive.

The Solution: Hosted hardware, software, and integrated Web solutions apply the “cooperative” principle to technology – spread the costs of cutting edge technology over many organizations in order to provide access for all of the organization.

The Urge To "Do It All..."

This approach allows a large number of organizations to effectively “share” the cost of obtaining cutting edge technology. Still, the urge to “do it all” is pervasive among business owners as the entrepreneurial spirit is always in full swing. Consider the following:

An Analogy: A patient receives a prescription from a doctor for a life saving medication but can make no sense of it. What does the patient do? To whom does the patient take the prescription? Should the patient interpret the instructions or take it to a trained professional?

Most would consider this a silly question and would say, “Take it to a Pharmacist!” Yet the reality is that most business owners essentially try to prescribe and interpret their own technology prescription.

How you say? Consider the five year Total Cost of Ownership case study of an unnamed hosted software Applications Services Provider (ASP) whose main offering are E-Commerce Web Applications:

Asset Cost Breakdown	
Web Technology Infrastructure	Cost
Enterprise Server Software Development	\$400,000
Email Server Software	\$1,000
Operating System Software	\$11,600
Database Software	\$3,000
Gramm-Leach-Bliley Act Data Security Compliance	\$20,000
Security & Disaster Recovery	\$7,000
High Speed Internet Business Uplink	\$10,000

A Grand Total of \$462,600!

This is an average cost of \$92,520 per year. Accelerating change, real-time needs for information, widely dispersed customers and distribution channels; these are the challenges of businesses as we have moved away from the industrial and into the information age. The technology gap between the smaller operator and their Fortune 500 counterparts continues to widen with the advantage going to corporations. Aligning with a small business “technology” partner, places the expertise in the

hands of those who know it best and helps level the field of competition by allowing business owners to concentrate on what they know best...their business.

More so, however is that technology is simply the end solution to a business problem. Most business owners do not have the time it takes to properly determine the technology needed to solve the problems their business is facing; and therefore pay for the wrong solution. Or, many fail to recognize they have a problem which needs to be resolved.

For a practical application let's use the problem of *Tracking Sales Commissions* as an example to drive home the process for realizing a business problem and mapping in a technology solution to "fix it."

1. Recognize the problem and decide on a solution

The first step in traditional decision making is to be aware of the problem. While this may seem silly to mention, many problems arise due to failure to properly recognize them as such; one has to be aware that a problem exists. Software is a technical solution to a real-world business problem. Recognizing the problem domain and capturing the points-of-pain enable the beginnings of a solution to alleviate the problem such as a business needing the ability to and track sales commissions in real-time.

2. Analyze the problem

What is the situation? The second step is determining the business problem in more detail. The ability to track and forecast sales commissions is a problem. Some questions to be asked are:

- Why is this a problem?
- How are sales commissions currently tracked?
- Who tracks sales commissions?
- Who can and/or should view these commissions?
- Can tracking sales commissions be simplified?

3. Identify the problems key uncertainties

What about the situation is one uncertain of? Being able to identify the problems key uncertainties is problem decomposition; which is to say the process of breaking of the problem into its smaller parts. With respect to sales commissions, the problem is tracking. Broken into smaller parts reveals the following:

- Account Executives are uncertain of their sales and commissions.
- Regional Service Managers are uncertain of sales production.

4. Determine workable solutions

Are there any solutions, technology or otherwise, which, when applied, will solve this problem? Based on the business problem and its uncertainties, a software application could be engineered to provide a technical solution. In this case, to provide a means to track sales and commissions, sales production, and facilitate incentives evaluation.

5. Gather data and analyze for technology solution alternatives

Where to look for answers? The step of gathering data begins the solution focus. In this case, gathering data begins with bringing in a technology partner to begin interviewing key business personnel, and like an architect, "blue printing" the business and a solution which will resolve the problem.

6. Adopt the best fit technology solution

Of the technology alternatives analyzed, which is best for this situation? This is typically classified by risk.

- What are the highest risk-based alternatives?
- What do we need now?
- What will solve a part of the problem?

The best fit solution should be the solution which addresses and reduces those key uncertainties from the highest risk to the lowest.

7. Develop a plan of action

How will the implementing solution alternatives be approached and handled? Development of a plan that drives solutions based on risk so the problem is attacked aggressively at its root causes, first in an effort to lessen the overall impact and second in hopes of achieving immediate results.

8. Implement the plan

How will the technology fit into the business?

- What will it do?
- How will it do it?
- Who will do it?
- Who will use it?
- Who will maintain it?
- How will success be measured and feedback obtained?

9. Elicit Feedback

Feedback can come in many forms:

- Human Surveys
- Data Analysis

Immediately evident is that technology is only 20% of the focus with 80% of the effort targeted on how the business operates and the problem(s) the technology should solve.

About the Authors



Rushton Prince began programming in 1980 and at 18, founded Direct Software Company (DISC) of Claremont California. Rushton's experience stems from roles as an Avionics Instructor and Technical Consultant for corporations such as Cessna Aircraft, Pepsi Corporation (Pizza Hut, KFC, Taco Bell), Sprint, Ameriserve, Honeywell, IBM, and the US Department of Agriculture. He possesses over 20 years of military and corporate electronics (wireless) computing systems (hardware/software) architecture and development

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Rusty is a graduate of Butler County Community College and the University of Phoenix. He holds an A.A.S. in Avionics, a B.S. in Information Technology (Summa Cum Laude), several industry certifications, and is completing his Master of Business Administration



Charles Meiers has a combination of engineering and financial training (CPA) that have been applied in 17 years of hands-on management and technology responsibilities. He has history of proven success including three years with Price Waterhouse, seven years as a senior executive with Trinidad Benham (a \$200 million commodities trading and manufacturing company), and two years as a strategic management consultant (with JMW Consultants of Stamford, Connecticut).

Chuck has used his unique combination of business skills and technology training/experience to help small, medium, and large organizations create pragmatic strategies, develop business plans, effectively integrate technology, and achieve successful quantitative results.

Chuck is a graduate of the University of Colorado and holds a B.S. in Business Administration.

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