

B2G: THE EXCITEMENT OF AN OLD-LINE INDUSTRY

October 2013

"It is not 'Can any of us imagine better?' but 'Can we all do better?'

Object whatsoever is possible, still the question recurs, 'Can we do better?'"

Abraham Lincoln, Second Annual Message to Congress, 1862

Government represents one of the most challenging sectors in which to build a business. Yet the challenges represent opportunities for those bold enough to tackle them. Winning requires patience, deep pockets, and cutting-edge technology.

Below we discuss four key points that indicate dramatic upside for the best companies: 1) Old technology provides opportunities for order-of-magnitude improvements; 2) Big institutions signal huge markets; 3) Industry pressures demand new efficiencies; and 4) Challenging sales cycles increase barriers to entry and foster customer retention. One can expect similar dynamics across other old-line industries like finance, energy, healthcare, and education.

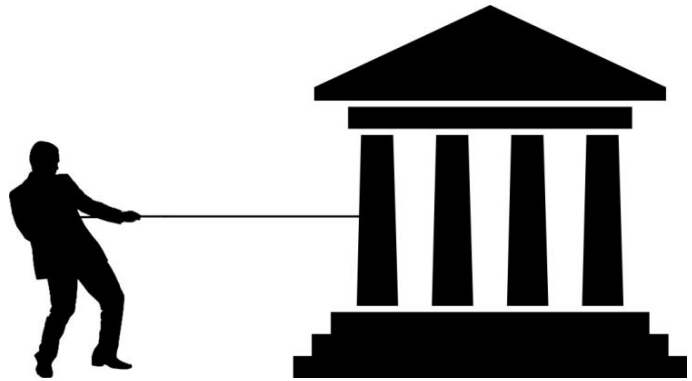
1. OLD TECHNOLOGY PROVIDES OPPORTUNITIES FOR ORDER-OF-MAGNITUDE IMPROVEMENTS

Government information technology is notoriously antiquated. Interfaces stem from the 1980s and 1990s. Code-bases in most enterprise platforms stem from the 1970s. There's paper everywhere. Most major deployments are customized monstrosities built by paid-by-the-hour engineers from giant consultancies. Dissatisfied customers represent the norm.

Why is this exciting? Because chances for radical improvement lay around like gold nuggets in 1849. New technologies can streamline basic workflows across whole enterprises, and create transparency and intelligence where little exists. Collectively, this represents an opportunity to fix the world's most important and pervasive industry by shining a light on inefficient structures and enabling insights and comparisons that are impossible with current IT.

Consider a basic question that the CEO of a city (called a City Manager) might ask: "How much have we spent on police pensions in the last five years?" Finding that answer in most cities constitutes a research project. One might call "IT" to run reports from the accounting system, scroll through Excel spreadsheets with tens of thousands of rows to find a few disparate lines, or sift through a 300-page budget PDF.

With new reporting technology, that question and others like it now require five clicks and about 15 seconds. The answer comes with manifold visualizations, each of which can be exported and shared digitally or in print.



More complicated workflows result in more dramatic gains. Comparing actual operating expenses to budget, for instance, requires hours each month from department, division, and program directors across a city. Rather than catch bad guys, the police chief must sift through Excel spreadsheets to see whether his units are spending according to plan. Some governments forego certain analyses altogether, waiting until the end of the year to evaluate performance.

These workflows can now take minutes, and department heads and finance professionals can complete them on the web from their laptops in their pajamas over the weekend (rather than the customary in-office desktop log-in). For its part, the City Council (like a Board of Directors) can prepare for weekly and monthly meetings without bothering senior staff for expenditure reports.

Man-machine symbiosis, which we have described in *The Coming Transformation*, reaches its apogee in the government space. Hard, zero-sum decisions present themselves weekly, and highly trained and experienced managers make million-dollar decisions as a matter of course. The best technology enables better policy analysis and trade-offs, while increasing the accuracy of, and reducing the time required to, pull data and crunch it.

2. BIG INSTITUTIONS SIGNAL HUGE MARKETS

Even small governments make for big customers. By revenue, many cities and counties would rank in the Fortune 500. These massive institutions, the number of them, and the need for productivity and technology gains means that extracting value is possible at scale.

The U.S. boasts 19,000 cities and towns, and twice that number of Special Districts. (Cities are typically general-purpose governments that provide a range of services like fire, police, library, and parks, whereas special districts are special-purpose governments that serve one function like the provision of water, sewers, or flood control). There are 12,000 school districts, 3,000 counties, and 50 states, each with hundreds (or thousands) of separate agencies and departments.

The United States has 50 states, 3,000 counties, 12,000 school districts, 19,000 cities and towns, 38,000 special districts, and tens of thousands of state agencies and departments.

The nearly \$60 BN spent in the U.S. by these 80,000 state and local governments on IT will grow around the rate of inflation (3%+). Software sales will grow faster both nominally and as a percentage of the pie. Spending on hardware and consulting will shrink. Whether one looks to create a niche business or accrue a big chunk of the market, opportunities are ripe for software-as-a-service (SaaS) models, business intelligence, and waste and fraud prevention technology.

Equity opportunities may be significant for early employees and investors in major enterprise endeavors. (Opportunity costs for those focused on games, mobile apps, or new social networks may be significant as well). We see an additional element of social responsibility involved, however. Our society and the large institutions that direct its course suffer from a decaying IT infrastructure. New advances in technology make possible a reformulation of sprawling bureaucracies and their workflows. This will result in years of time-savings, improved decisions, and a stronger cultural fabric based on value creation and productivity gains.

3. INDUSTRY PRESSURES DEMAND NEW EFFICIENCIES

Three cities in California fell bankrupt in 2012. In 2013, Detroit set the record for the largest Chapter 9 filing. With tax revenues just returning to pre-2008 levels, governments need to do more with less. Accordingly, products that can increase “top line” revenues or reduce “bottom line” costs will win customers and build value.

New technologies will enable cities large and small not only to produce insights from their own data, but also to compare spending trends to those in other cities. Performance benchmarks or “apples-to-apples comparisons” have been called the “holy grail” of municipal finance, because present capabilities force cities to call neighboring cities to gather data or hire expensive consultants to prepare reports that go out of date by the time they print.

In addition to comparative analytics, cities will take advantage of financial trend monitoring and drill-downs to the “checkbook level.” Imagine seeing not only a budget category, like uniforms for the fire department, but also the payments for the boots, pants, and belts. This will result in cost savings through comparisons with purchases from other municipalities and improved competition among vendors in bidding.

Immense technical challenges present themselves. Platforms will leverage natural language processing to map the ontology of charts of accounts (the financial structure of a government), machine learning to recommend quality comparisons and throw up flags for financial trend monitoring (“your reserve balances have declined for three years in a row – might want to check that!”), and rapid processing and searching of massive transactional data sets to answer questions on and find efficiencies in vendor payments (for example, to show all payments between \$25,000 and \$50,000 out of enterprise funds and help evaluate them against market metrics).

Initially, this type of technology saves time for government knowledge workers accessing and analyzing data. It can then grow into software that will save billions in the aggregate by improving decisions and offering intelligent comparisons and recommendations across the expenditure spectrum. The challenges require rare engineering expertise across a variety of subfields; the solutions will come from true technology companies, not large consultancies.

4. CHALLENGING SALES CYCLES INCREASE BARRIERS TO ENTRY AND FOSTER CUSTOMER RETENTION

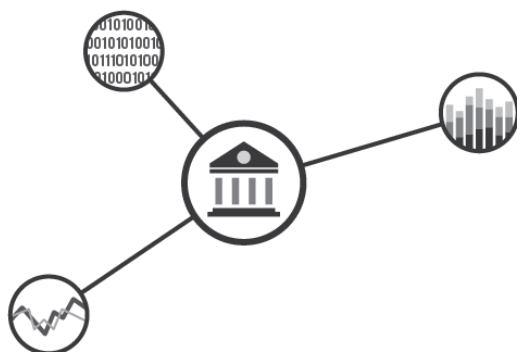
Government purchasing processes are cumbersome. Governments frequently require “wet-signatures” on snail-mailed “hard-copies” of contracts. Vendors have to pay for business licenses, show proof of insurance policies, and file extensive (even notarized) disclosures. Organizational cultures reward risk-aversion and conservative leadership.

The weeks or months spent in the government sales process explains why so many smart technologists focus on the consumer space. Entrepreneurs launch start-ups so they can avoid bureaucracies. But this gap between consumer and enterprise in the startup world gives the best enterprise startups room to run.

In the mobile world, a startup might expect 5% attrition per month. In the government space, expect less than 5% attrition per year. Provided one keeps improving, serving, and building value, “once you’re in, you’re in” and customers may stay customers for years.

With officials recognizing the imperatives of innovation and embracing the Open Government movement in particular, a new generation of leadership will emerge. This leader, like many before her, is highly trained and educated. Yet she carries a tolerance

for risk. She sees value in new technology, prizes its acquisition, and remains open to iterating on business processes. She champions innovation within the organization. And, by force of will and repeated wins (and mistakes), she infuses a culture of agile decision-making.



Managers like Jim Keene in Palo Alto and Joni Patillo in Dublin, CA; Finance Directors like Matt Pressey in Salinas and John Adams in Thousand Oaks, CA; and Mayors like Alex Torpey in South Orange, NJ and Mike Kasperzsak in Mountain View, CA demonstrate these qualities. These elected and appointed officials see value in cutting new paths based on better tools. They build trust in their communities and engage other administrators and electeds in the business of politics.

Most startups won't find these visionaries. Most startups will wither and die for lack of deep pockets. Or they'll just give up. Selling to bureaucracies often requires creating a network effect, because so few purchasers will go near the bleeding-edge. This is why "red tape" actually excites us with respect to the business we are building at OpenGov.com. The bureaucracy obscures the changes taking place, makes it hard to find the early-adopters and reach critical mass, and ensures that winners take all.

Other important industries promise similar problems and opportunities. In finance, for example, Addepar has battled its way into elite institutions with the promise of improving the financial reporting landscape. Other success stories are emerging in energy, education, healthcare, logistics, and construction.

The right path for a startup-company in an old-line industry is arduous and immensely rewarding. Conventional wisdom says that it's too hard to build a business in government (or other major industries), and this has kept many from trying. Grand outcomes await for those top young companies bold enough to venture and win.

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