


# How to Improve Your Website

## (Lessons from Google)



Where do **YOU** want to go? **Search**

by John Langlois, PMP®, SCPM®  
projectEZ Consulting

**M**any people consider IBM to be a big, blue Tyrannosaur's dinosaur<sup>1</sup> and the [ibm.com](http://ibm.com) home page on the web does let out an impressive T-Rex roar.



IBM sells a plethora of different products. You can purchase a server, for instance, in a variety of flavors: System x, System i, System p, and System z. And their software catalog is so large that it is alphabetized A to Z for your convenience. Given that most people spend less than 15 seconds on a web page, IBM presents far too many choices for a casual web surfer to find what he or she is looking for.

A company's home page is a visual depiction of the shell that consumers must crack to get at the soft gooey products inside. It is also reflective of the IT infrastructure that supports the company.

All companies have an IT infrastructure shell to sustain operations. The shell of older companies, however, can become so layered that it is practically impenetrable. You see, there is a point where an egg changes its function from one of providing shelter and sustenance to one that confines and squeezes its occupant to death. If your IT systems are making you feel a bit confined, then your egg has changed function. You need to break out to survive.

---

<sup>1</sup> T-Rex: The Carnivorous king of the Cretaceous period. A fully grown T-Rex can measure 40 foot in length and weighs over 7 tons. It's long sharp teeth are well designed to rip through the flesh of other large dinosaurs.

“*What would an ibmey user experience look like?*”

If we were to design a company website from scratch, what would it look like? What are the principles that will contribute to a an “ibmey” (pronounced i.bee.em.ee) user experience? This report will discuss this concept and show how we can apply lessons from Google to build a next generation website to help customers find and order what they need from a fast, friendly and occassionally quirky guide.

### How Hard is Your Shell?

Over the course of its long and storied history, IBM constructed complex layers of an IT infrastructure shell to support both internal operations and external data pipelines to the world of partners and clients. The varied architectures, based on the technology models of the time, tightly coupled data with each application and hard wired data paths between disparate systems.

Slowly, imperceptibly, a multilayer monolithic legacy system shell formed. That shell can become fossilized and hard as a rock.

Try to order an IBM server with middleware software and a maintenance upgrade from any web interface and you will see just how wickedly rigid the shell can be. I dare you. I double dare you. Count the clicks. Document the process. Scary isn't it? Don't feel bad, I can't do it either. We all need a certified sales specialist to crack through that shell. I wonder how many sales opportunities we lose because clients and partners either can't crack the shell or don't have the patience to try?

## Crack the Shell

We would be wise to sharpen our figurative egg tooth before we start flaying away at our confining shell. Abraham Lincoln offered this sage advice on the matter, "Give me six hours to chop down a tree and I will spend the first four sharpening the axe."

To apply that wisdom here, we should document a few guiding principles before we start defining use cases, ripping out our existing IT plumbing and deploying expensive IT equipment, software and services.

Here's a starter list for an IBM user experience:

- Encourages clients to self serve
- Encourages friendly two-way communication
- Gently guides the client through the site maze

After discussing these guiding principles, this paper will explore some roadblocks that established companies face when they try to crack through their shell. There are strong forces at play to prevent a company from introducing a new customer focused web experience.

Survival or extinction ... which path will you take?



### Encourage Clients to Self Serve

The home page for Google is an instructive example of a company that openly encourages self service. The interface is aesthetically clean and simple. It presents a blank search field and trusts that you know what to do with it.

***Principle #1: Design your IT System to permit internal and external clients to self serve.***



This interface assumes that you can perform a Boolean search even if you don't know what the term "Boolean" means! There's no horizontal or vertical navigation menus. The page doesn't bore you with a marketing spin about the wonderful things that Google can do. It's a wide open highway to information. Kind of makes you feel curious, doesn't it?

Here's a few additional observations about this Google web interface design:

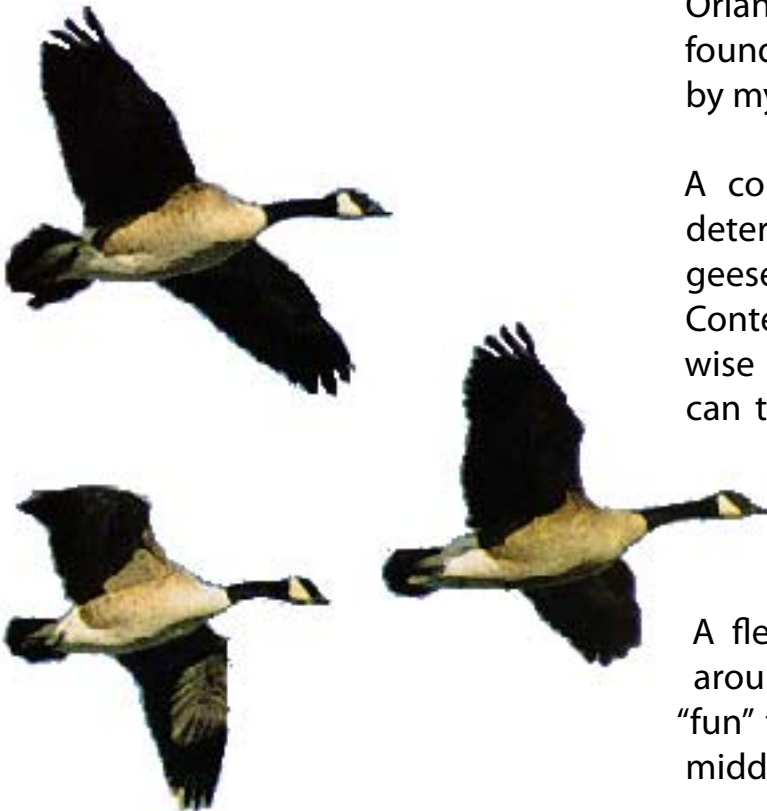
- Google's homepage is full of white space to reduce distractions.
- It is built around your interests and not those of the company.
- It gives you total control over how to get to your destination. It does not force you to navigate company defined menu trees to find what you are looking for.

We can blame Google for teaching people to self serve. Google, googled and googling are now recognized terms in Webster's dictionary.

Consumers are now fairly adept data miners at home. For example, I was able to leverage the Google portal to purchase a low cost flight to Orlando for a conference and to select an aisle seat so I could stretch my legs. I was able to view the five day weather forecast for Orlando which prompted me to pack a sweater. I even found discount tickets for Disney World. I did this all by myself like a big boy!

A conference attendee said that he was able to determine from a Google search that migrating geese tend to swim in the pool in the back of Disney's Contemporary hotel this time of year so it would be wise to swim in another pool. That's right, Google can tell you when geese are pooping in your hotel pool. It was noteworthy that the traveler did not specifically ask about geese; he found that piece of information quite by accident by reading a hotel review from a fellow traveler. A flexible IT system encourages clients to wander around aimlessly. Can you image a day when it is "fun" to shop around for an IBM server loaded with middleware?

The point is that we are accustomed to being able to easily retrieve targeted information at home and that sets high expectations for what we expect from our internal IT systems. Sunil Chandra, Technology and Operations Director at Google, states that "employees expect the same level of technology at work as they



***Principle #2: Fire the data broker and let me query and interact with the system anyway I choose.***

get at home.”<sup>2</sup> I can attest to the truthiness<sup>3</sup> of that statement. I always treat systems that violate this principle with contempt and disdain.

### **Encourage Two Way Communication**


Just a decade ago, we scheduled time with a travel agent to book a trip. We told the agent when we’d like to depart. Then the agent typed away on a green phosphorous screen cabled to a monolithic legacy system called Sabre. Eventually the agent told us what flights were available. This was an asynchronous process that inserted a middleman to interpret requests and control data flows. These agents often worked against our personal interests when they recommended higher priced flights where they enjoyed a promotional kickback.

Today, you can access the Sabre computer reservation system directly through any web interface and book you own flight. You can query the system endlessly and make modifications to your travel arrangements on the fly. The conversation is now synchronous between you and the reservation system. It’s a mistake to define rigid paths through the purchase process. Instead, permit the client to adjust their direction on the fly.

Clients are conditioned to connect, communicate and

<sup>2</sup> Keynote address by Chandra Sunil at Project World® and World Congress for Business Analysts®, Orlando Florida, November 20, 2008.

<sup>3</sup> truthiness (noun): “truth that comes from the gut, not books” (Stephen Colbert, Comedy Central’s “The Colbert Report,” October 2005.



collaborate collectively. The days of influencing clients with 30 second TV commercials and static magazine pages are out. Blogs, wikis, YouTube and other mediums to share and collaborate are in. We should encourage clients to annotate and categorize content any way they choose. In addition, our IT system should make it easy for any client to share data treasures via digg, del.icio.us and technocrati. And IBM employees, all 388,000 of them, should be encouraged to rate the companies pages on these external services.

If I were a client, I would love to see reviews, both good and bad, from other clients who have deployed similar hardware, software and/or services. The problem is that I don't trust company sponsored references. Frankly, we are all a little jaded by the promotional parade that companies blast on their sites. We're instinctively distrustful of company owned pages because we know that they are biased. So our new IT system should open the communication doors widely. Moderate the communication flow, but don't try to control it.

### **Gently Guide the Client Through the Maze**

A delightful web page is a bit friendly and quirky. I feel comfortable asking a friend for advice. "Hey, IBM, I need to reduce my electrical bill in the data center, what should I do?" Answer: Fill out this 10 page survey and we'll send out a representative to help you complete an engagement contract.

***Principle #3: Be friendly and conversational as you gently guide clients through your site maze.***

No. No. No. I just want to talk for a few minutes. I'm not ready for T-Rex to assault my office! Okay. Let's reset our approach to this client.

"We've got this cool *power savings* technology that allows you to you to automatically put your servers to sleep during nonpeak hours. This can help you reduce CPU power usage by 30%. Do you want to learn more?"

Notice that we didn't force the client through a navigation menu. We didn't flash a product in the client's face; we just described the benefits of a feature. This casual approach doesn't overwhelm the client with too much information. And we didn't force the curious client to launch a 100 page Adobe portable document file to find an answer. Don't you just hate launching files from web pages to "learn more information?"

Here's some other guidelines inherent in this alternate approach:

- Provide options ... but not too many options or you will induce decision paralysis.
- Include smart defaults.
- Eliminate unnecessary clicks.

### A Convenient “Untruth”

Those heavy thuds you hear are the sound of large dinosaur footsteps down the hall. They are scary predators that want to consume anybody who tries to break free from the shell. These alpha dinos will protect their turf by telling partial truths and outright lies:

- Our existing systems support major revenue streams. **True.**
- You can't touch it or the company will go extinct! **Lie.**
- Our existing systems are so complicated that they can't be documented. **Sad if True.**
- People are accustomed to our old system and they won't accept any changes. **Lie**

Really? People won't accept a change if it is better than the old system? What if the new web experience is easier to navigate and permits me to self serve? I would welcome that change, wouldn't you?

One way to evade these predators is to work around legacy systems until you have the time, money, and patience to evolve them. Sunil Chandra reminded me that airlines still use that old Sabre Reservation System. His point was that you can leave legacy systems in place for some time while you build a user centric front end experience to mask the complexity of that system from clients.

“*Don't listen to lies spun to protect the status quo.*”

## Resist Customization

Every client will try to tweak the system to satisfy their *unique* tastes and preferences. That's how fossilized shells are created over the course of decades.

As a philosophical principle, the internal plumbing for a new IT system should resist customization in at least two main areas:

- Resist local language support
- Resist building security layers

Our internal systems should be written with an English only interface. If an employee in any country asks for local language support, make them prove that they cannot learn English. Then make them prove the marginal value of creating and maintaining a translation. Internal Google applications are English-only. They realized that native language support for employees was more of a convenience than a necessity.

Google also resists building internal security layers. According to Sunil Chandra, a company should make no attempt to control the data. "You can't control data in today's world, you can only influence it." If I want to ask our ordering system, "How many widgets sold with those gadgets in the same purchase basket," let me. Maybe it is a waste of time. But it is my time to waste.

“*Resist the temptation to build another thick shell.*”

Sunil Chandra was warned that he needed to erect complex security walls around the Human Resource IT function so that only certain people could see certain data. If you don't compartmentalize data without security layers, "there will be all kinds of weird conversations." He refused to build those costly walls and was relieved to find that those weird conversations never materialized. Sunil's experience is that internal company risks are often perceptions and not reality.

Customization, security layers and translations add significant cycle time to schedules and cost to deployment and maintenance. Resist the temptation to build another thick shell.

Kiss the Crestacious period goodbye by focusing your resources and dollars on satisfying external clients. Internal client needs are secondary. Period.

Crack your egg.



## Summary

This report outlined three principles to guide the architecture of a company website:

- Encourage clients to self serve
- Encourage friendly two-way communication
- Gently guide the client through your site maze

The principle of self service centers on the belief that our IT systems should be designed around what's important to users and not what's important to the business. Our clients, both internal and external to our company, expect the same level of service that they can get at home through web portals like Google.

You will need to break through your existing IT shell whenever it starts to squeeze you to death. This cycle of birth and rebirth should continue indefinitely. And since you know that you will need to break through the shell again in the future, don't permit any IT plumber to coat the shell with complex layers of IT infrastructure that can never be unraveled.

All rules are made to be broken so breaking these guidelines may very well produce fantastic results. Experiment. Make your own rules. But whatever you do, jot down and reach a consensus on your philosophy before you start documenting use cases and spending money.



## About

### John Langlois

John Langlois is a visionary project manager who exercises wisdom to break down process barriers and cultural resistance to change.

John led the team that planned and delivered one of the most successful programs in the history of notebook computing - ThinkPad® T-series. His projects received numerous Editor Choice product awards while enjoying the highest levels of customer satisfaction.

John earned IBM's most prestigious corporate award for outstanding project performance. His work has been featured at ProjectWorld® & World Congress for Business Analysts® and PMLessonsLearned. His workshop was rated as a top 10 value at IBM's Technical Leadership exchange.

Contact us at [www.projectEZ.com](http://www.projectEZ.com) to see how we can help your organization improve project delivery.



## References

Title page: "Where do you want to go search field" created by John Langlois.

Page 2: T-Rex skelton  
[istockphoto.com](http://istockphoto.com)

Page 4: Hadrosaur egg fossil,  
[fossilhistory.com](http://fossilhistory.com)

Page 6: Flying geese, Idaho Fish 'n' Hunt.  
[idfishnhunt.com/](http://idfishnhunt.com/)

Page 12: Egg, created by John Langlois.

All rights reserved. No part of this paper may be used or reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews.