You cannot see through a cloud and, frequently, within one without a lot of technical assistance. Attractive from the outside, pilots within have found themselves dependent upon elaborate instruments and outside guidance.

Clouds are leased digital assets offered through companies that keep them somewhere off-site. In fact, they offer a company the ability to outsource its software and hardware. How much? At the extreme, all of it. Clouds can turn IT into a utility, its use scaled to what the company needs to purchase at any moment. Just as executives have no need to know the site of their power generation beyond the line entering their facilities, so too are executives increasingly losing any necessity to know where their data, computational apparatus, software, and algorithms reside. The engulfing clouds bring yet another digitally disruptive change to competition.

Legacy spaghetti is what companies call the coils of software, hardware, applications, and op systems that bind together and tentacle into everything they now do. It serves and is served by an entire generation of silos, some even created and many others made more durable by its very existence. Its strands are the toughest barrier to a firm’s exploration of cloud computing. It’s the if-it-aint-broke explanation for inertia.

It was exactly that sort of inertia that left most of the greatest news publishing businesses behind the curve of internet application until it was too late for many and still threatens the future of virtually all of those remaining. In fact, cloud computing offers its users easier access to its information, an exponentially advanced ability for internal interaction across all time, geographic, and departmental lines, the application of analytic power to understand and strategically focus the
totality of the large data to which firms have access, expand operational control, to scale digital assets at whim at negligible costs, to access huge new libraries of proven software tools, and to discard the drag of rarely or never used digital assets (cutting neatly through imposed software bundles).

And what are the objections? Are they real, or to what degree are they excuses raised by threatened keepers of legacy spaghetti?

The warnings against cloud computing seem to boil down to four classes: security, reliability, regulation, and of course costs.

Security: “Information is power!” You’ve heard, and you believe that message. Consequently, it’s in a company’s best interest to maximize information while minimizing the accessibility of its own proprietary information. Firewalls are like Everest to hackers—they climb them … because they are there. Malware bombs are delivered all of the time, planting their worms, viruses, and other malevolent idiosyncrasies into the fallow soil of company data systems. If they’re arriving now on a retail level to business servers, how much more dangerous are the wholesale targets of clouds? Well, unquestionably bad guys have penetrated clouds. But frankly, the only system that can’t be penetrated by a computer is one that doesn’t have any computers. Beyond that, you can have as much security as you can buy. Frankly, cloud owners can buy a lot more than small companies and even most of the large ones. And they can dedicate the people who are best at security entirely to the problem.

Moreover, they have aimed their attention not only at external threats, but also to stopping internal breaches while constructing stronger hierarchical layers of permissions so that administrators who are responsible for greater knowledge will have what they need while others will not. Economies of scale will increasingly build the strongest security into clouds.

As for reliability, there’s a growing body of research, easily Googled up, that demonstrates that the clouds are many multiples more reliable than most corporate systems. And with their ability to diversify and backup geographically as well as across platforms, those reliability levels will only explode.

The regulatory climate is a different beast. While nature’s clouds drift easily across political boundaries, the digital clouds are having more trouble. Many nations have restrictions regarding information flows across borders. Within America there’s an alphabet soup of agencies claiming regulatory jurisdiction over broadcast, wireless, and wired transmissions. Ironically it’s the most centralized governments like China that seem to have the least regulatory inefficiencies impeding cloud development. However, so far the cloud firms have found compatibility with relative efficiency to allow reasonably spontaneous flow through regulatory storms.

And cost? What percent of your firm’s total costs are committed to IT now? Most firms find that number to be in the low single digits. So just how bearable are even multiples of the present outlays? However, beyond initial difficulties involved in cutting through and jettisoning legacy spaghetti and vested silo interests, firms are discovering cost savings. And these savings are happening on both income statements and balance sheets as capital investments are morphed into current spending for utility payments while expensive IT technicians become less necessary for the expansion, maintenance, and replacement of existing equipment and the production of internally dedicated systems.

A word of advice here. Whether or not your company should enter or enter farther into cloud computing is a decision that needs to be done independently of the existing internal IT departments. News publishing firms unfortunately relied upon internet advice from their existing editors and writers … perhaps the largest reason that they held onto an obsolete culture way beyond any business justification. Increasingly, IT internally has ceased to be a line management division and
instead has receded to tactical operations importance. Clouds will continue that trend. Very soon most firms will discover that they are purchasing IT as a utility and hiring consultants to customize the fit. Just as electrical engineering firms and electrical contractors customize the interface between business users and the electric utility, so too will the importance of consulting, full-service, software, and cyber hardware firms to provide idiosyncratic navigation into and through clouds by replacing in-house IT executives and technicians. Analysts expect the transition will be complete by 2022 at the latest.