Alignment at Scale

Those of us in higher education information technology have often and rightfully concerned ourselves with the concept of alignment. A cursory search on the web and in our usual repositories of research (e.g., EDUCAUSE, Gartner, Burton) suggests that when we address alignment, we are almost always referring to the alignment of IT strategies and priorities to institutional strategies and priorities. It is self-evident that aligning IT efforts to institutional objectives is critical to the success of both education and research as those activities become increasingly dependent on information technology. However, I believe there is another level of alignment that equally deserves our analysis and emphasis: alignment within and among institutions of higher education.

At the Campus
Over the last year or so at Penn State, we have been deeply involved in conversations about how we will do a better job of leveraging the university’s considerable IT investment. Our conversation has been about all of information technology, not any one university IT organization. Penn State overall is highly distributed, and the total IT effort may very well be one of the most distributed operations of the university. I know Penn State is not the only institution having this conversation, because at almost every meeting and conference I attend with higher ed IT colleagues, the same anecdotes are told over and over again.

Many, if not all, of us are struggling with the same challenges on our campuses. Decades ago, there were only one or two IT organizations on our campuses. Today, many institutions have dozens and dozens (if not hundreds) of IT groups, all of which were started out of need and thoughtfulness. Many of them are very effective in serving the local needs of a research project, department, or school, yet recent analyses suggest that an organic approach to information technology may be out of synch with best practice. A decrease in IT fragmentation is frequently listed as a major opportunity for improved efficiency and effectiveness.

Many other market segments (e.g., manufacturing, design) long ago aligned similar IT efforts worldwide through consolidation and governance simplification. There are proven economies of scale in implementing the technology itself and in managing the skills of those who make it work. The time is right and the urgency is great for us to recalibrate the entirety of the IT efforts on our campuses. As colleges and universities face an era of unprecedented financial challenges, we should ensure that IT expenditures are aligned to achieving excellence and fiscal prudence.

Beyond the Campus
The same conversation about alignment is happening between campuses as well, as institutional IT leaders are realizing that they may not be sharing ideas, talent, and operations as effectively as possible. Brad Wheeler and Shelton Waggener have framed this issue of IT services between campuses as “above-campus services”; others refer to it as “cloud computing.” For years, CIOs have discussed the possibility of greater leverage in IT services if campuses could find ways to pool their efforts.

For example, a recent survey (informally and privately conducted) among forty research-intensive universities found projects and plans to construct over 600,000 square feet of data center space at an estimated cost exceeding $500 million. Most of those projects will never be funded. Given our institutions’ vast networks with Internet2, National Lambda Rail, and Regional Optical Networks, shouldn’t we be able to aggregate that need so that we can pay wholesale prices from a large operator? If our real complexity of needs exceeds what the commercial firms can provide, why not rent data center space or construct it ourselves in areas of low-cost power? The economics are quite compelling, yet how do we move this ten-year-old conversation forward? Likewise, is maintaining the heterogeneity of business processes on each of our campuses worth the cost? Most of us would say no, but fifteen years into the ERP era, we have little real progress in standardization of what are arguably fairly common activities (e.g., paying an invoice, enrolling a student in a class).

In addition, our above-campus professional efforts are as distributed as our local campus IT efforts. We live in an alphabet soup of meetings and associations, all of whose existence and sustenance spring from nonprofit good intention. Just as it is time to review and consider our distributed campus IT efforts, so is it time to seriously confront the notion of above-campus IT alignment in both multi-campus IT service delivery and multi-campus professional organizations.
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Our institutions must collectively achieve alignment at scale—an unprecedented, mind-boggling scale within the IT layer both at our individual campuses and among them. Although the large-scale IT alignment must serve our own institutions in the end, the alignment is necessary nonetheless. This multidimensional alignment, with much at stake and countless people involved, is as important to accomplish as it is complex.

We could probably agree on a list of five to ten behavioral guideposts that are necessary for success in each dimension. In an effort to make the complex as simple as it can be, I have narrowed the list down to two that I believe will be the foundations for success: trust and courage. We need to trust one another (in either context, on campus or above campus) to operate our organizations in an aligned way. We also need to have the courage to make the changes necessary to achieve the new alignments.

We have shown that we can do this. Internet2 was born of both trust and courage when college and university leaders achieved alignment at scale as networks became critical to our mission. Those leaders foresaw that our collective scale could reduce costs, and they acted to create the networks that higher education would need. The community-source projects have also demonstrated collective trust and courage among many institutions, and most recently InCommon is doing the same. These examples demonstrate that the process of aggregating our needs and solving them through common behaviors can evolve over time as needs change. We can no longer cling to the age-old excuse that absolute local control is the best path to success. Rather, alignment at scale may be the best path to success among the challenges of this decade.

These ideas for alignment among our campuses are not new. But the urgency for real achievement has never been greater. Many of our institutions face a period of decreasing finances and rising costs—a period that some call “The New Normal.” I believe that on our campuses and between our institutions, IT leaders must pursue an era of unprecedented alignment in ways we have not yet tried. Alignment at scale must become part of the CIO’s mission.

Notes

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