



How to Get Your IT Budget to 1 Percent of Revenue

Meeting an audacious goal such as this requires intelligent outsourcing, aggressive migration to the cloud, and savvy management of change.

Andy Nallappan , CIO, Avago Technologies



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andy.nallappan@avagotech.com

Position
Vice President,
Chief Information Officer

Company
Avago Technologies

Works from
San Jose, California

Professional Background
Andy Nallappan has served as Vice President and CIO of Avago's Global Information Services Division since 2012. He is responsible for the continuous improvement of Avago's business processes through cost-effective IT. In his long career with Hewlett-Packard, Agilent, and Avago, he has held a variety of positions overseeing enterprise applications, enterprise infrastructure, and RandD computing. He has been a pioneer in deploying cloud solutions and helped transform Avago's IT function into an industry leader.

Education
MS, University of Texas at El Paso
Bachelor of Engineering,
University of Madras

Personal Passions
Hiking in high-altitude area such as Mount Kilimanjaro, Mount Whitney, and Machu Picchu; running

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Avago Technologies semiconductor products are used in wireless communications, wired infrastructure, industrial and automotive electronics, and consumer and computing peripherals.

As a semiconductor company, Avago has thin margins, and the market changes from one year to the next. Our IT cost structure has to be flexible enough to go up and down with revenue, but with traditional IT, your costs don't flex.

We were fortunate to have the opportunity to build IT from the ground up when Avago was spun out from Agilent, in 2005. First we outsourced the whole infrastructure and all of our applications. That gave us flexibility and scalability. But our CEO set some extremely tough goals for lowering the IT budget. That's when we began to get serious about moving applications to the cloud.

These two moves have allowed us to drastically reduce our spending. In fact, with support from our CEO and CFO, we changed the whole cost structure. Today I'm proud to say that Avago's IT budget is 1.34 percent of revenue – no one in our industry has that. It wasn't hard to go from 4.5 percent to 3 or 2.5. But from 2.5 to 1.25 – that is hard.

And now I've set a goal that some might call crazy: bring IT costs down to 1 percent of revenue in the next two years. I think we can do it. We will have to look at our fixed costs — which mostly come from ERP software giants, server and storage — and make them variable costs through SaaS and other cloud offerings. We are considering cloud for server and storage, at least for development, testing, and disaster recovery. We will also continue to look at more cloud applications as they become relevant to Avago.

Making Multi-Vendor Outsourcing Work

Our first big step in reducing costs was outsourcing our noncore IT functions. We didn't want to have too many vendors because we wanted end-to-end service level agreements (SLAs). But we used to have just one vendor, and that had its drawbacks, too. We lost our power to negotiate and influence, and the flexibility was not there. So we changed our model quickly. Now we have three strategic outsourcers: Wipro for applications, HCL for infrastructure, and Orange for our voice and data networking. Using a few vendors really works well.

The biggest challenge with multi-vendor outsourcing is avoiding finger-pointing when there are problems. So from the beginning we established a one-team concept that our vendors had to buy in to and use as the framework for working together. Each vendor signs an Operational Level Agreement, or OLA, that runs through the whole process and spells out how the vendors engage with each other and resolve conflict. Everybody who

works with Avago has to pass a test that confirms that they understand this.

We have monthly reviews and give recognitions and awards to any vendor team that helps another vendor resolve an issue. That sends a message that when you work for Avago, it doesn't matter what badge you wear; you're an Avago employee, and we're all one team.

It took us about a year and a half to get this model working well. Since then, there have been no issues. I haven't heard anybody complain about our vendors in the past three years.

Of course, outsourcing is not cheap. But you end up spending more if you keep IT in-house. That's because people on the business side think the service is free, so they ask for features and functions they don't really need. They say, "I don't like the color. I don't like the comma here. I don't like this or that." This is human nature.

Not only does business ask for more — we give it to them. Our people are not able to push back because someone always comes up with a business case. They keep on tweaking. The system becomes more customized, more complicated. It has a higher maintenance cost.

When you're paying an outside vendor, you think twice.

Key Technologies at Avago

Google: Mail, contacts, calendar, sites, and IM

Workday: HR and employee expenses

Taleo: Recruitment

SumTotal: Learning management

Box: Document storage

Okta: Single sign-on identity management

Kyriba: Treasury management

Enlighta: ITIL management in the cloud

DocuSign: Contract management and e-signatures

You make sure that what you're asking for is something that you really need. The business people have to justify what they're asking for. Moreover, you don't have the whole governance nightmare of who gets priority. If I'm using my own people, projects are in a queue and have to be prioritized by the governance council – which business gets their project done first, which one gets it second. With outsourcing there's no queue. As long as a business leader brings money to the table, I'll get the people. Scalability is not an issue. I go to Wipro and HCL and Orange, and they love to do more work.

I have unlimited capability now, but people aren't asking for everything they want. They only ask for what is necessary.

Cutting the Cord with Microsoft

We've also realized significant cost savings by moving applications to the cloud. In perhaps our boldest move, in 2009, we moved employees' e-mail, calendar, and contact applications to the cloud, making a complete switch from Microsoft Exchange to Google. It was a big deal: We were the first \$1 billion company to go live using Google's personal organizer tools instead of Microsoft Outlook. We did it for two reasons: cost and productivity. Cost-wise, the savings are black and white — about \$1.5 million a year for a product that suits us much better. With Exchange, I was giving people only 100 megs of storage for their inboxes. Then I increased it to 200. I increased it to 400. Nothing was enough. I was not able to catch up with the demand. With every increase, we needed to add more disc space and backup-and-restore and high-availability. Also, people were saving their e-mail onto their local drives. When

Andy Nallappan on...

Working with Cloud Vendors

Avago's cloud-based solutions include Google for mail, contacts, calendar, sites, and IM; Workday for HR and employee expenses; Taleo for recruitment; SumTotal for learning management; Box for document storage. We just signed on with Okta for single sign-on identity management. We're also deploying a service called Kyriba for treasury management. And we use Enlighta for ITIL management in the cloud. It's really important to do the right due diligence when working with cloud vendors. We are evaluating DocuSign for contract management and e-signatures. There are a lot of mom-and-pop companies out there. The risk is not only around data privacy and security, but also the vendors' financial stability. So we scrutinize them. We talk to the architect and the security team. And we look at who's investing in them, what type of support they have.

What to Outsource

"IT leaders should find outside solutions for all the operational, non-critical, non-value-adding parts of IT. There are companies where IT is core, but in our industry, it's the RandD, marketing, and sales that are core. I want to move up in the value chain and enable those teams to bring in more revenue and get higher margins. The revenue is important, but the margin is more important. When you liberate your IT team to move up in the value chain, you get closer to the core of your company."

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Avago is a pioneer in optical sensing for mouse technology and holds more than 5,000 patents.

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The Takeaways

- Outsourcing isn't cheap, but you spend more keeping noncore IT functions in-house. People on the business side ask for features they don't need. And IT says yes.*
- To make multi-vendor outsourcing work, establish rules for how the vendors must work with one another and resolve differences.*
- In terms of cost and productivity, moving applications such as e-mail and calendar to the cloud is a no-brainer. But beware the change management challenge: give people lots of time to prepare for the switch.*

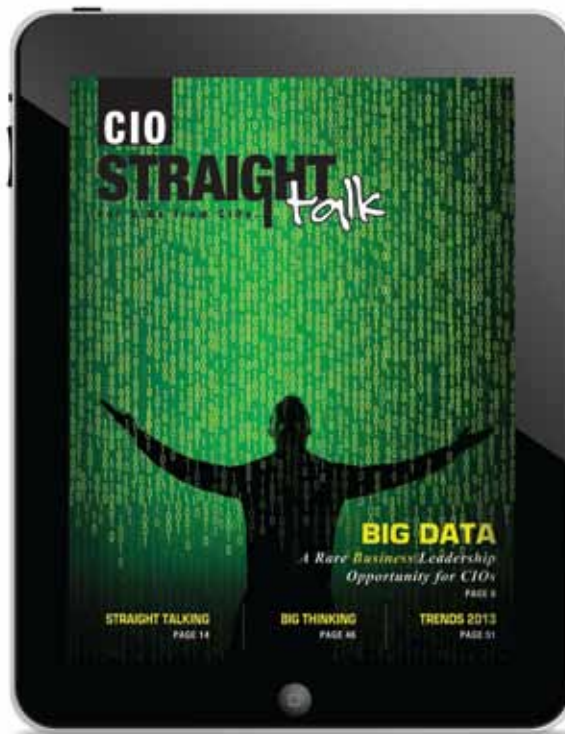
the hard drive fails, it becomes a critical issue. It was a nightmare.

And it was a productivity killer because everyone in the company had to clean out their inboxes at least once a week. They couldn't get e-mail on their personal phones or home computers, which was a problem because we are a global company, and the work schedule is 24/7. We had multiple instances of Exchange Server 2003, all locally hosted in each region. Providing web access to e-mail through Exchange at the time would have cost much more, with higher risks. When we went to Google, it liberated our employees. They can now access e-mail through their smartphones wherever they are, more securely, and at lower cost.

Making the switch wasn't hard from a technology standpoint, but the change management was really challenging. We spent about three months making sure everyone in IT understood it well and was prepared to manage it. We made sure that the CEO and the CFO supported it. There were some concerns from legal. And so we had a lot of discussions with the Google architect and the Google security team. We did a lot of preparation and planning.

Initially we were only focusing on e-mail, calendar, contact, and IM. We knew that Microsoft Office was much better than Google Docs, so we left that alone. But a lot of people – even the COO – are using Google Docs for collaboration in staff meetings and project meetings. They can see the meeting minutes as people type them. They're using the spreadsheet to work on numbers together. We didn't anticipate this because we knew Google Docs doesn't have all the bells and whistles that Microsoft Office has. So that was a surprise.

When we first made the e-mail switch and proved that it was more effective and improved productivity and brought costs down, we got a lot more support. The productivity has increased multiple times – especially now that everyone has smartphones. Now nobody would let me take Google mail out of our model.



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