The Exorbitant Cost of Doing Nothing

Efficient IT may not be at the top of your IT management priority list—but it should be. People often mistake steady state for steady expense outlay. But "business as usual" can be massively expensive. Operating costs are rising, even if your data center infrastructure stays constant, as underutilization of existing assets create more exorbitant expenses. Without a clear focus on efficiency, and if you don't take advantage of available savings, capital expenses will skyrocket as the organization is forced to react to the growing needs of the business.

With so many other pressing concerns, why should you start an efficiency initiative now? Proactively addressing IT efficiency generates real and significant savings, often immediately and with negligible costs. Relatively modest management efforts and resource reallocation can generate substantial savings.

What's needed is a holistic view of the business critical IT infrastructure landscape—and the leadership to keep efficiency efforts on course.

To achieve meaningful and lasting IT efficiency, both the facilities and the operations organizations need to contribute equally. Cooperation yields a leaner—and greener—data center that maximizes the strategic value of your capital investment. Save millions in both OpEx and CapEx, and transform your IT infrastructure from a cost center into a competitive advantage.

Compare these two data centers—one who kept a steady course of business as usual and one who embraced a holistic Efficient IT approach. See how much money you could be leaving on the table, and instead of asking "Why Efficient IT right now?" you'll be saying "Let's get started!"

The Following is
Based on a True Story

You have a choice to make:
Steady State?
or
Efficient IT!

Profile: Data Center X
- Tier III Topology 30,000
  2U servers increasing at
  5% per year
- 6 kW per rack, $0.10
  per kW-h initially

Data Center X wants to cut energy costs, so decides to do some facility-side fine tuning. Beyond that, it is business as usual.
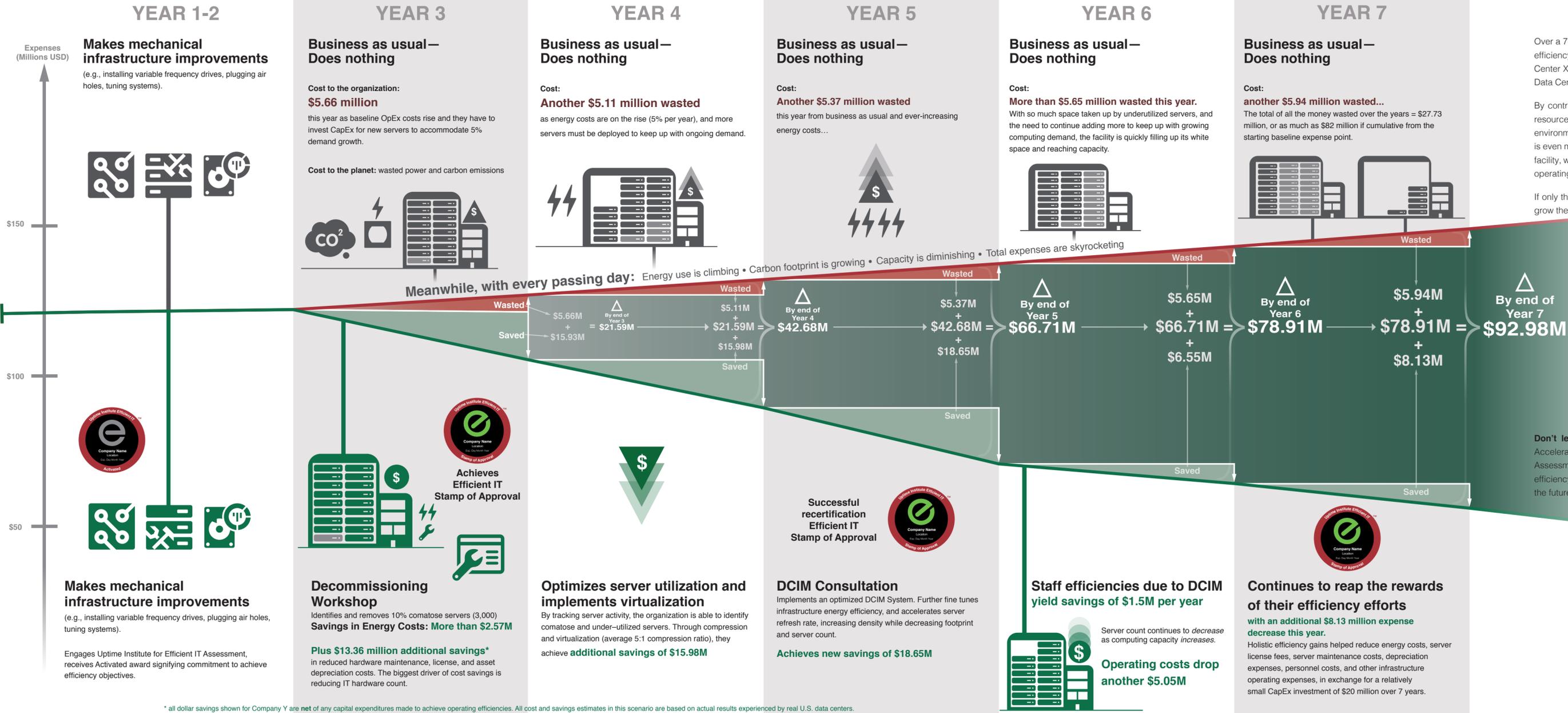
Profile: Data Center Y
- Tier III Topology 30,000
  2U servers increasing at
  5% per year
- 6 kW per rack, $0.10
  per kW-h initially

Data Center Y's leadership has decided to tackle the issue of infrastructure efficiency. Their goals: to lower energy usage, tune up system performance, reduce resource consumption, and lower their carbon footprint.

Expenses
(Millions USD)

$150
$100
$50

Legend

Expense Total - X	
Expense Total - Y	
Wasted - X	
Saved - Y	
Continued Savings	

YEAR 1-2

Makes mechanical infrastructure improvements
(e.g., installing variable frequency drives, plugging air holes, tuning systems).

Makes mechanical infrastructure improvements
(e.g., installing variable frequency drives, plugging air holes, tuning systems).

YEAR 3

Business as usual— Does nothing

Cost to the organization:
$5.66 million
this year as baseline OpEx costs rise and they have to invest CapEx for new servers to accommodate 5% demand growth.

Cost to the planet: wasted power and carbon emissions

Decommissioning Workshop
Identifies and removes 10% comatose servers (3,000)
Savings in Energy Costs: More than $2.57M

Plus $13.36 million additional savings*
in reduced hardware maintenance, license, and asset depreciation costs. The biggest driver of cost savings is reducing IT hardware count.

Engages Uptime Institute for Efficient IT Assessment, receives Activated award signifying commitment to achieve efficiency objectives.

Achieves Efficient IT Stamp of Approval

YEAR 4

Business as usual— Does nothing

Cost:
Another $5.11 million wasted
as energy costs are on the rise (5% per year), and more servers must be deployed to keep up with ongoing demand.

Optimizes server utilization and implements virtualization
By tracking server activity, the organization is able to identify comatose and under–utilized servers. Through compression and virtualization (average 5:1 compression ratio), they achieve **additional savings of $15.98M**

YEAR 5

Business as usual— Does nothing

Cost:
Another $5.37 million wasted
this year from business as usual and ever-increasing energy costs…

DCIM Consultation
Implements an optimized DCIM System. Further fine tunes infrastructure energy efficiency, and accelerates server refresh rate, increasing density while decreasing footprint and server count.

Achieves new savings of $18.65M

Successful recertification Efficient IT Stamp of Approval

YEAR 6

Business as usual— Does nothing

Cost:
More than $5.65 million wasted this year.
With so much space taken up by underutilized servers, and the need to continue adding more to keep up with growing computing demand, the facility is quickly filling up its white space and reaching capacity.

Staff efficiencies due to DCIM
yield savings of $1.5M per year

Server count continues to decrease as computing capacity increases.

Operating costs drop another $5.05M

YEAR 7

Business as usual— Does nothing

Cost:
another $5.94 million wasted...
The total of all the money wasted over the years = $27.73 million, or as much as $82 million if cumulative from the starting baseline expense point.

Continues to reap the rewards of their efficiency efforts
with an additional $8.13 million expense decrease this year.
Holistic efficiency gains helped reduce energy costs, server license fees, server maintenance costs, depreciation expenses, personnel costs, and other infrastructure operating expenses, in exchange for a relatively small CapEx investment of $20 million over 7 years.

Meanwhile, with every passing day: Energy use is climbing • Carbon footprint is growing • Capacity is diminishing • Total expenses are skyrocketing

Wasted $5.66M + $15.93M

By end of Year 3 = $21.59M

Wasted $5.11M + $21.59M + $15.98M

By end of Year 4 = $42.68M

Wasted $5.37M + $42.68M = + $18.65M

By end of Year 5 = $66.71M

$5.65M + $66.71M = + $6.55M

By end of Year 6 = $78.91M

$5.94M + $78.91M = + $8.13M

By end of Year 7 = $92.98M

RESULTS

Over a 7-year span, Data Center Y's direct savings total $65.24 million. The success of their continued efficiency efforts is in the Delta of nearly $100 million compared to the unnecessary spending by Data Center X. When compounded over the same time span, this results in an ROI of more than 10:1 from Data Center Y's modest investments in efficiency.

By contrast, Data Center X is overspending every year, watching as costs keep rising and wasting resources, while missing out on opportunities to invest their capital more effectively and improve their environmental footprint. And the story doesn't end there for Data Center X; the impact of their inaction is even more far reaching. With current capacity maxed out, they will probably have to construct a new facility, which can cost approximately $12 million per MW or more, plus any associated jump in baseline operating expenses. Together, these illustrate the **Exorbitant Cost of Doing Nothing**.

If only they'd implemented efficiency measures early, they could have been applying their savings to grow the business, from launching new strategic initiatives to making additional capital investments.

Their choice cost them millions.
What choice will you make?

Don't let your dollars go to waste just to support business as usual—start saving now! Accelerating the timeline on efficiency accelerates the savings. Uptime Institute's Efficient IT Assessment will help identify the right approaches to reduce resource consumption, increase efficiency, and optimize your mechanical and IT systems so you can start putting your money towards the future of the business, today.

Uptime Institute®

For more information, please contact Uptime Institute—
http://uptimeinstitute.com/contact-us
or email us at:
info@uptimeinstitute.com