

How SOA Fits into Cloud Computing

Prof. Paul A. Strassmann, George Mason University
2010 SOA Symposium
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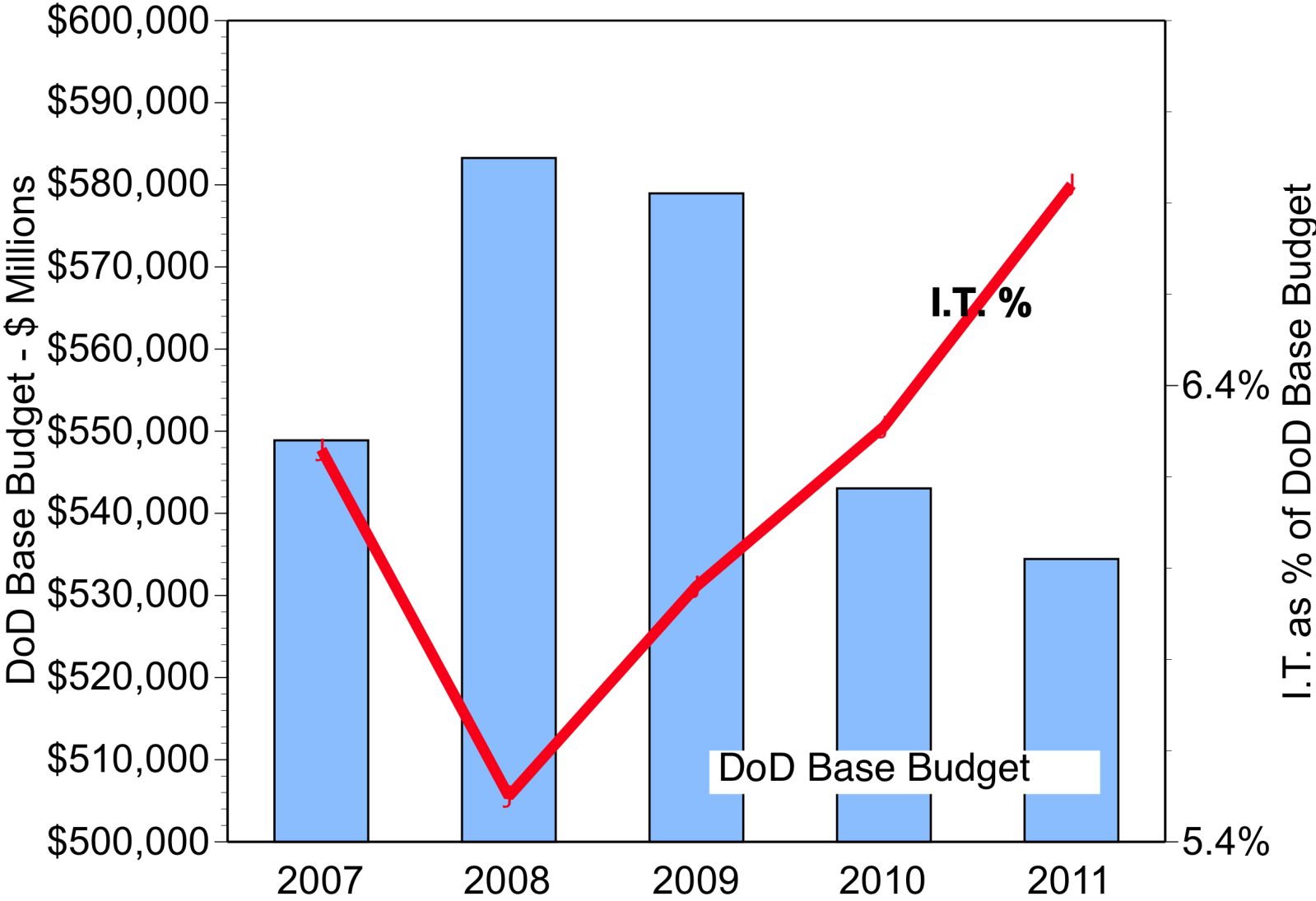
FY2011 Spending for I.T.

| IT Spending | FY2009 Actuals | FY2010 Enacted | FY2011 Budget |
|------------------|-------------------|-------------------|------------------|
| DoD - \$Billions | \$34.5 | \$34.3 | 36.5 ? |

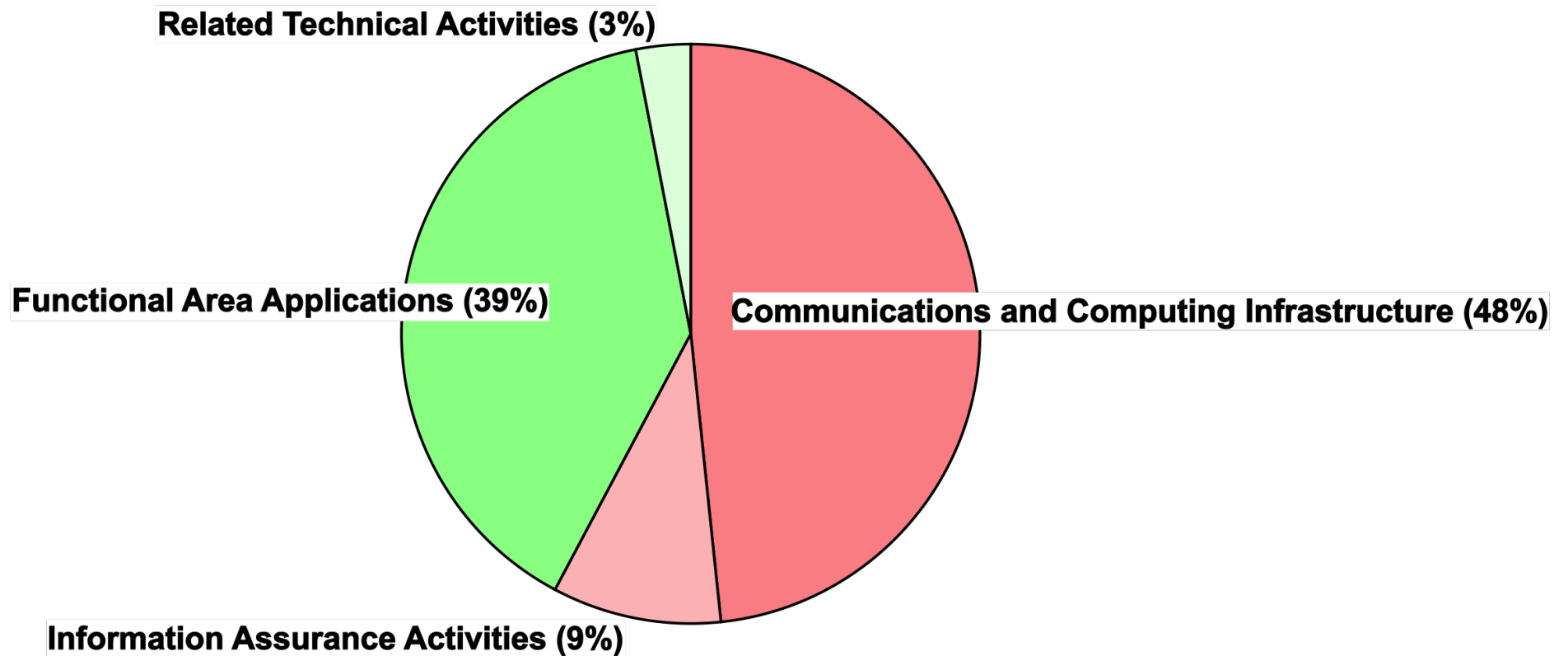
Note: I.T. spending does not include costs of >150,000 soldiers & civilians, or >\$15 Billions

SOURCE: <http://www.whitehouse.gov/omb/e-gov/>

Will I.T. Increase as the Base Budget Declines?



57% of I.T. Costs Are in an Expensive Infrastructure



SOURCE: <http://www.whitehouse.gov/omb/e-gov/>

Cost Reductions Through SOA

SOA Targets 42% of DoD I.T. Costs

| OMB Budget Grouping | Number of Programs | FY2010 IT Spending - \$ Billions |
|---|--------------------|----------------------------------|
| Communications and Computing Infrastructure | 1,547 | \$16.3 |
| Information Assurance Activities | 353 | \$3.2 |
| Functional Area Applications | 3,244 | \$13.2 |
| Related Technical Activities | 156 | \$1.0 |
| Total DoD IT Spending | 5,300 | \$33.7 |

SOURCE: <http://www.whitehouse.gov/omb/e-gov/>

Potential SOA Benefits (Without Reduction in Applications)

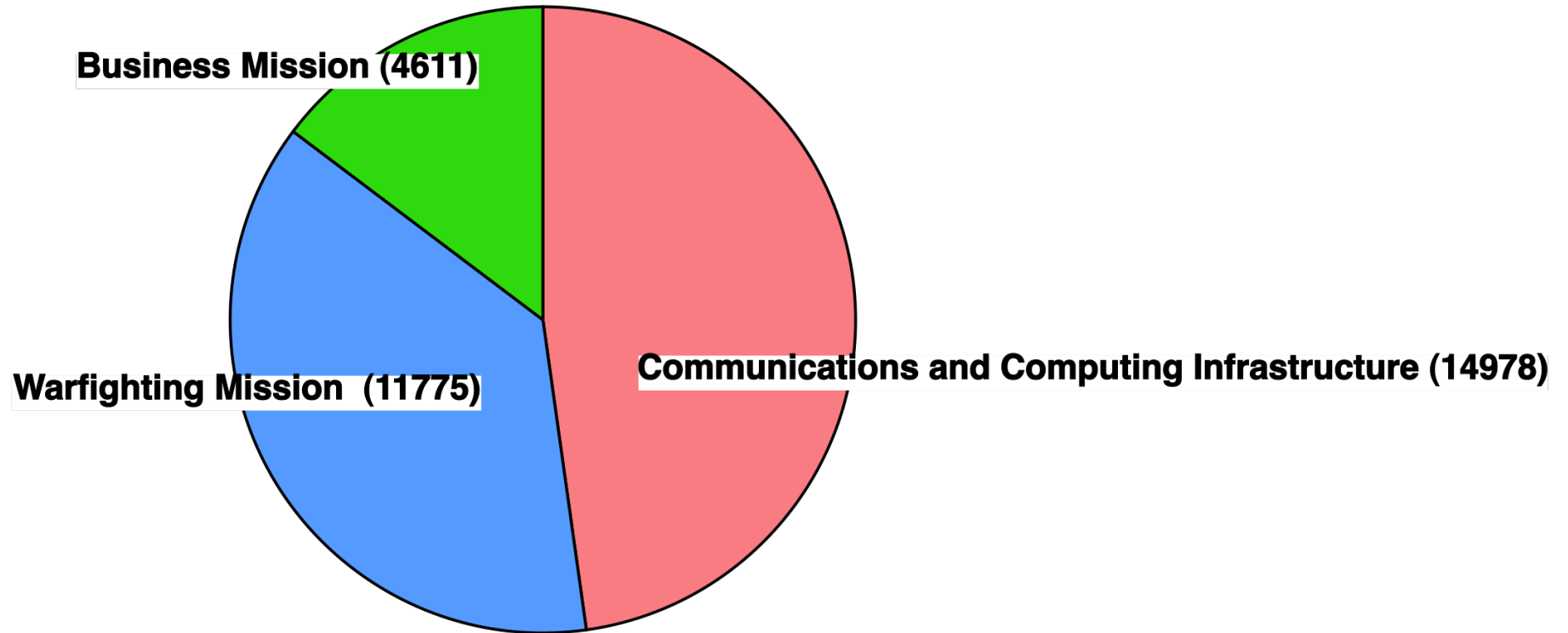
| SOA Benefit Category | Best Estimated 5 yr Savings - \$ Billions |
|---|---|
| Decreased Integration Costs | \$1.8 |
| Decreased Interface Maintenance Costs | \$4.5 |
| Decreased Application Development Costs | \$0.3 |
| Total SOA Savings | \$6.6 |

SOURCE: http://media.tibco.com/soa/soa_roi_calculator/index.html; by Alinean, Inc.

What Are the Primary Benefits of SOA?

- Discover Data from a Data Registry;
- Discover Applications Anywhere;
- Mediate the Extraction of Data from Data Bases;
- Execute Requests from Multiple Servers;
- Provide Credentials Validation to Everyone.

Major Program Interfaces – Why SOA Has Limits (\$ Mission Costs)



Cost Reductions Through Cloud Computing

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Potential Cloud Benefits in Capital and Operating Costs

| Cloud Benefit Category | Best Estimated 5 yr Savings - \$ Billions |
|-----------------------------|---|
| Data Center Savings | \$5.2 |
| Business Continuity Savings | \$8.7 |
| Desktop Savings | \$18.6 |
| Total Cloud Savings | \$32.5 |

SOURCE: https://roianalyst.alinean.com/ent_02/AutoLogin.do?d=593411470991915416

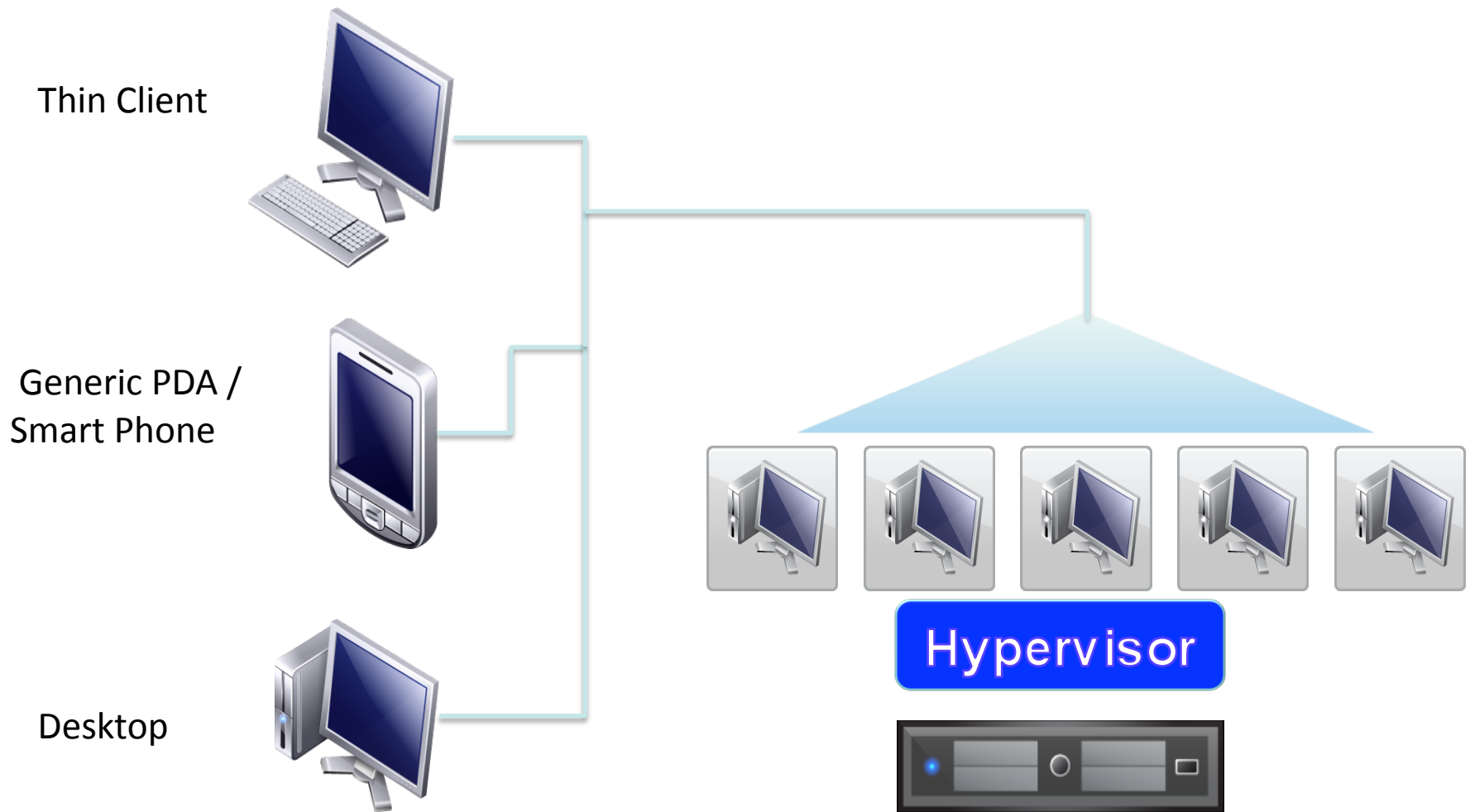
What Are Primary Benefits of Cloud Computing?

- Thin Client Management;
- Power and Cabling;
- Data Center Hardware Utilization;
- Data Center Security;
- Disaster Recovery.

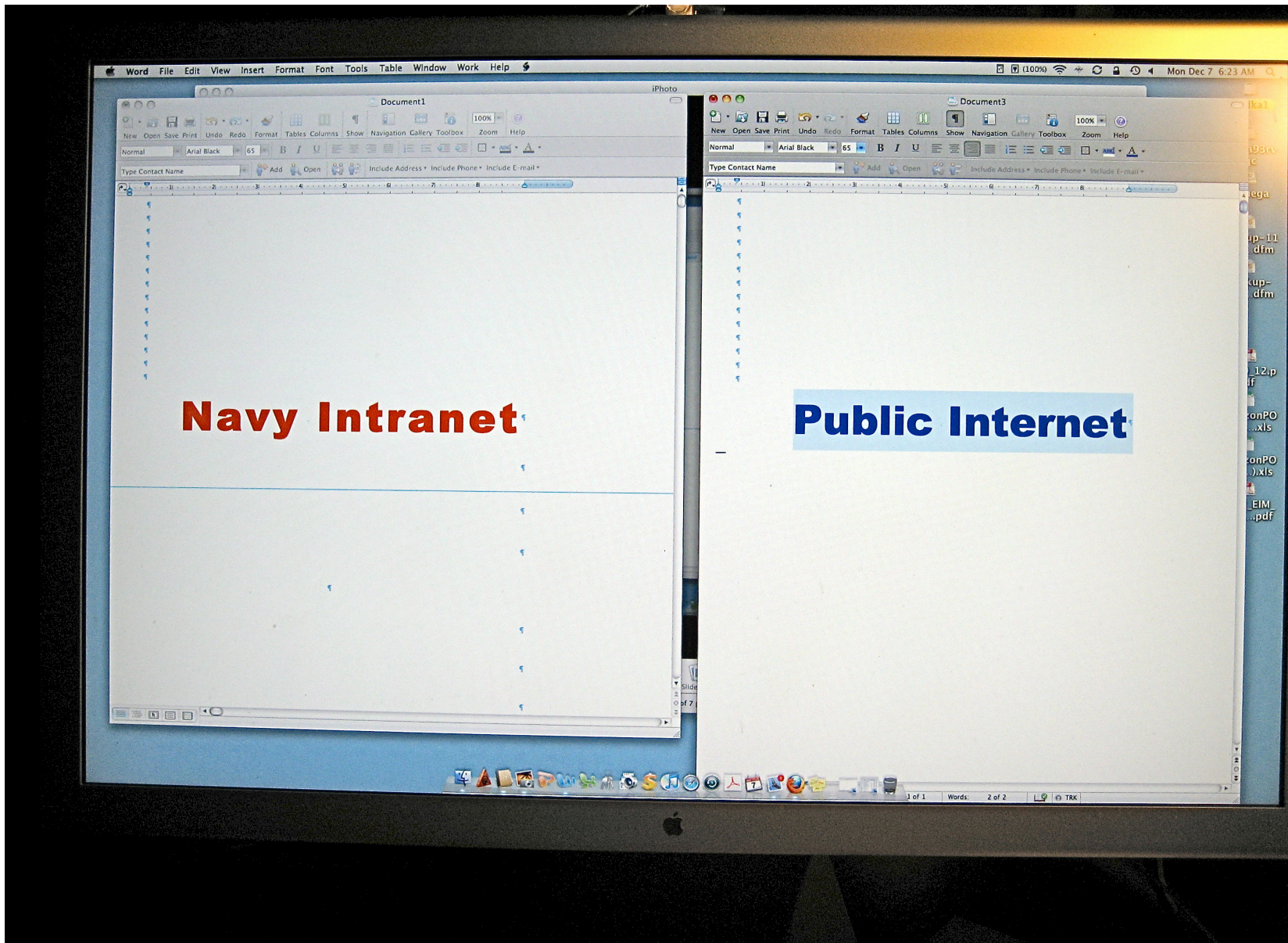
From Fat Clients to Thin Clients



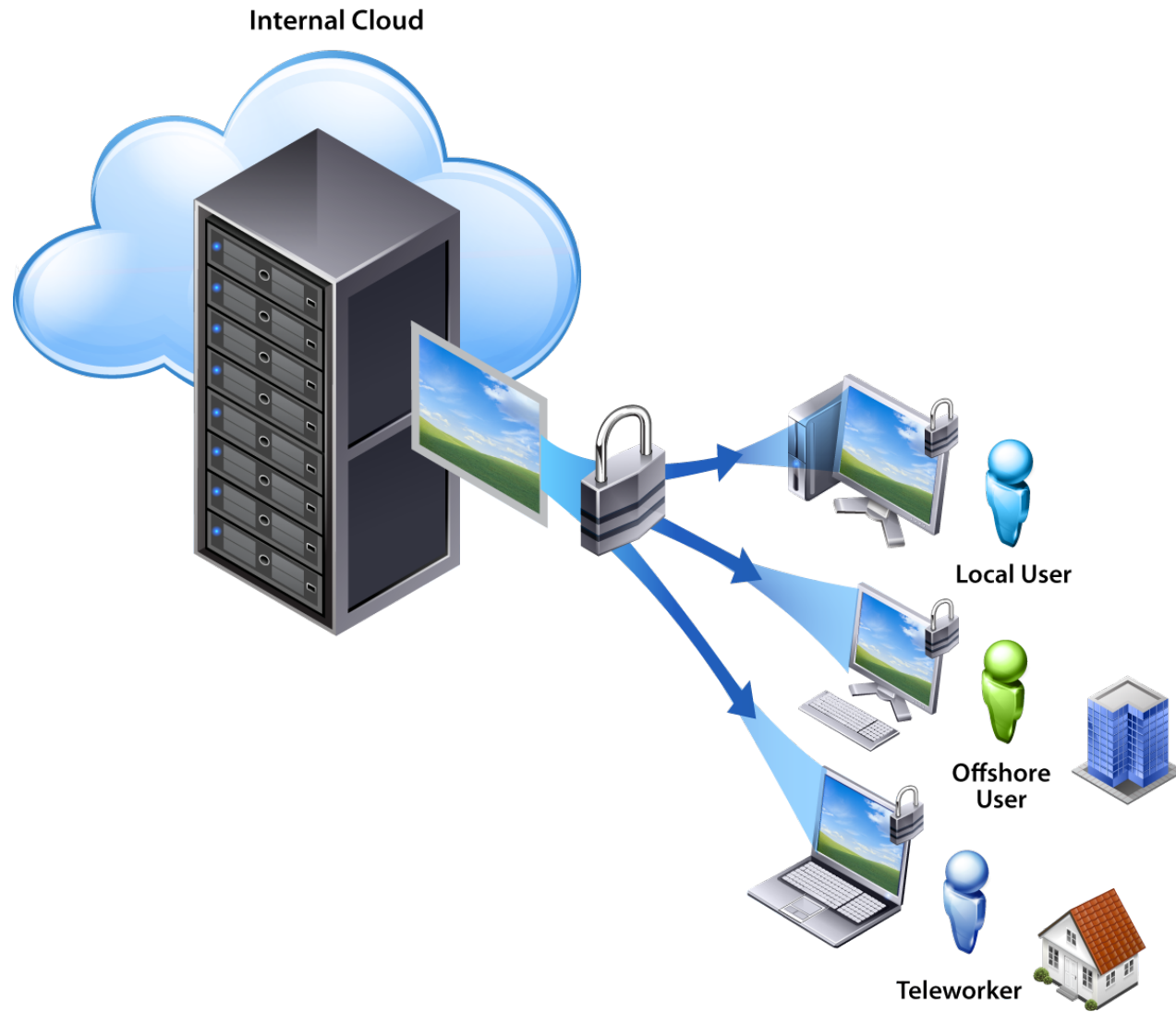
The Concept of Virtual Computers



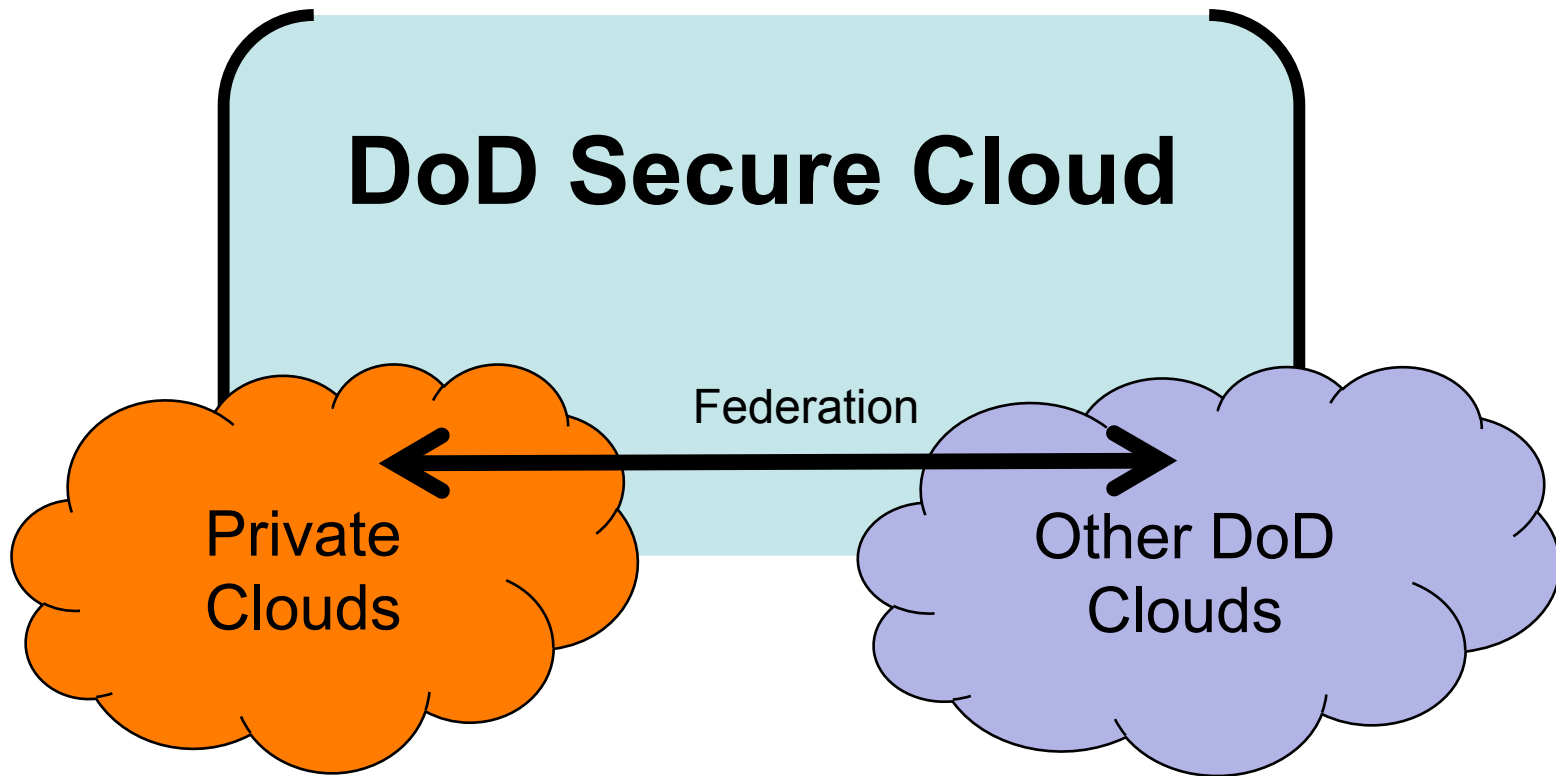
“Thin” Computers Enable Social Computing



Example of a Private Secure Cloud Service

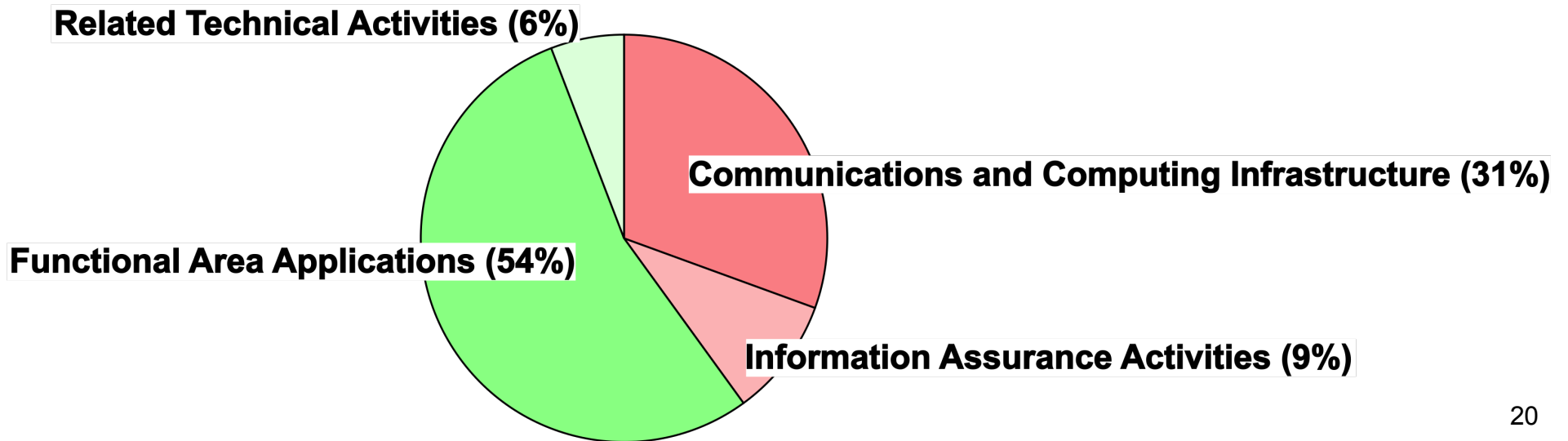
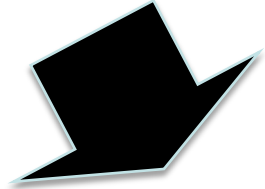
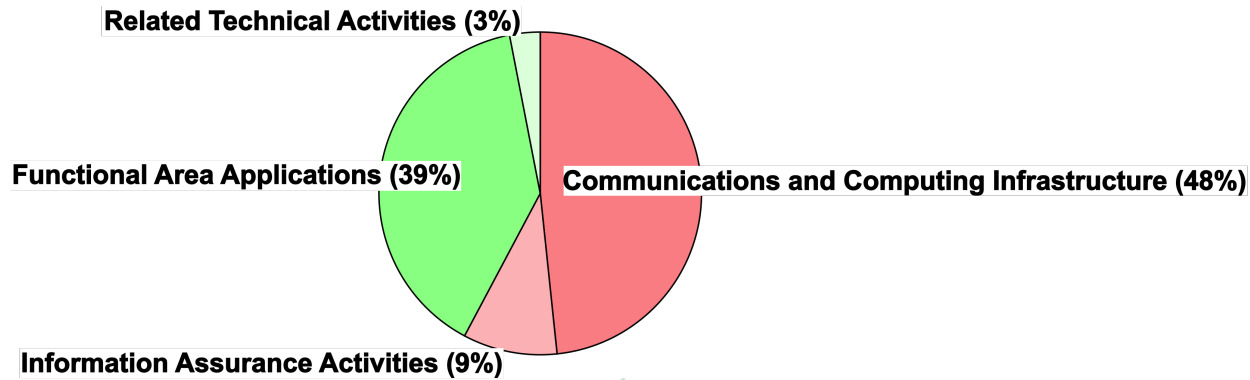


Example of Information Dominance Networks



Directions

Shift Costs from Infrastructure to Applications



Comparison of Potential Ratios

| Mission | Total Spending - \$ Billions | Average Best Estimated Savings - \$ Billions | Savings/Spending Ratio |
|-----------------|---------------------------------|--|---------------------------|
| SOA | \$14.2 | \$1.3 | 9% |
| Cloud Computing | \$19.5 | \$6.5 | 33% |

Summary

- DoD will depend on cost reductions to fund IT growth.
- SOA necessary for lower-cost migration to the cloud.
- Cloud computing reduces costs and increases security.

References:

Questions? E-mail: pstrassm@gmu.edu

Further Reference: www.strassmann.com