State of Florida

Data Center Cost Analysis and Consolidation Feasibility Study

Stakeholders Advisory Committee Meeting #2

27 February 2008

State of Florida Senate

Gartner

Agenda

- Introductions
- Project Status and Important Dates
- Preliminary Findings
- Data Center System Discussion
- Critical Success Factors
- Discussion

Project Status

Current Status of the Project

- Delivered the Packages to the Agencies 2/2/08
  - Preliminary Findings
  - Data Validation Packages
- ➢ Stakeholders Meeting #2 2/27/08
- Data due back 3/3/08
- Final Report due 3/17/08

Data Center Consolidation and Feasibility Assessment Preliminary Findings

Preliminary Findings - Methodology

- The analysis is based on data received as of February 15th
- Gartner identified pending issues with data and forwarded those issues to the agencies for review and verification. Gartner's initial validation focused on broad ranges of:
  - Cost
  - Staffing
  - Productivity
  - Workload
- The findings will be updated based on clarifications and updated data received by the agencies submitted by March 3rd
  - Validation of the data is critical and urgently needed
  - Accuracy of the final report will be based on this updated data

Benchmarking Discussion

- Gartner's benchmarking methodology involves a comparison of your data versus “peer” groups of multiple observations from the Gartner’s benchmarking database
- Peers are a collection of recent benchmarking observations with similar workload characteristics. Peers represent typically 6-8 observations and are selected from a variety of industries and geographies.
- For the Enterprise Computing (Data Center) technology, peers were selected for the X86-Windows, Unix and Mainframe technologies. There were no observations for “other” or Unisys technologies. The iSeries technology’s cost was too small a technology to warrant this type of analysis.
- For this study the peers were North American observations.
- Peers groups are independent views. Observations selected for the X86-Windows technology are not the same as observations for the UNIX or Mainframe technologies.
- For purposes of this analysis we developed three peers for each technology.
  - Small, Medium & Large
  - Based on Florida’s workload

Data Centers Facilities –
Original Scope; Analyzed To Date; and For Final Analysis

Data Centers Analyzed			
Agency	**Original**	**Analyzed**	**Final (TBD)**
Department of Management Services– SRC with client agencies	1	1	1
Department of Children and Family Services	3	1	3+
Department of Transportation	3	2	3+
Department of Financial Services	2	1	1+
Department of Corrections	1	1	1
Florida Department of Law Enforcement	1	1	1
Department of Highway Safety and Motor Vehicles	1	1	1+
Department of State	1	1	1
Department of Environmental Protection	2	1	1+
Department of Education	1	1	2+
Department of Agriculture and Consumer Services	2	1	2
Department of Business and Professional Regulations	1	1	1
Department of Revenue	1	2	2
Agency for Workforce Innovation	0	1	1
Department of Health	0	0	1+
Total	20	16	23+

Benchmarking the DMS-SRC

- For the DMS–SRC, Gartner combined the workload that is hosted and supported by DMS with the agency workloads that are co-located at the SRC. The intent was to compare and analyze the composite workload supported by the SRC. This approach presents a combined workload and costs of the client agencies and DMS.
- The DMS-SRC analysis involved more workload and cost estimation on Gartner's part and as such are labeled as estimates.

Cost Information By Agency

Total Cost by Agency and Technology Area							
Agency	**X86-Windows**	**Unix**	**Mainframe IBM**	**Mainframe Unisys**	**iSeries**	**Other**	**Total**
DACS	$ 561,569	$ 1,227,263	$ -	$ -	$ -	$ -	$ 1,788,832
DCF	$ 3,457,807	$ -	$ 18,270,460	$ 2,617,615	$ -	$ -	$ 24,345,882
DEP	$ 1,852,415	$ -	$ -	$ -	$ -	$ -	$ 1,852,415
DFS	$ 3,052,024	$ 5,493,203	$ 7,876,378	$ -	$377,625	$ -	$ 16,799,231
DMS	$ 6,538,857	$ 10,431,632	$ 4,387,781	$ 254,224	$ -	$ 284,853	$ 21,897,347
DOC	$ 976,358	$ -	$ 6,124,216	$ -	$ -	$ -	$ 7,100,574
DOR	$ 554,800	$ 684,150	$ -	$ 1,053,248	$ -	$ 922,255	$ 3,214,453
DOS	$ 1,093,355	$ 1,790,493	$ -	$ -	$ -	$ 252,589	$ 3,136,437
DOT	$ 3,159,077	$ 1,758,775	$ 4,639,079	$ -	$ -	$ 1,342,000	$ 10,898,931
DBPR	$ 327,741	$ -	$ -	$ -	$ -	$ -	$ 327,741
FDLE	$ 6,076,078	$ 718,792	$ -	$ 1,155,581	$ -	$ 535,971	$ 8,486,422
HSMV	$ 860,036	$ 771,990	$ 2,811,243	$ -	$ -	$ -	$ 4,443,269
DOE	$ 1,753,390	$ -	$ -	$ -	$ -	$ -	$ 1,753,390
AWI	$ 602,024	$ 158,746	$ -	$ -	$ -	$ -	$ 760,770
Total	**$ 30,865,532**	**$ 23,035,045**	**$ 44,109,158**	**$ 5,080,668**	**$377,625**	**$3,337,668**	**$106,805,695**
% of Total Cost	**28.9%**	**21.6%**	**41.3%**	**4.8%**	**0.4%**	**3.1%**	**100.0%**

Cost Information DMS-SRC Estimated

DMS Cost Profile – DMS and Client Agency Costs						
Agency	**Total Cost**	**X86-Windows**	**UNIX**	**MF**	**MF-UNISYS**	**Other**
SRC	$ 8,224,043	$ 1,039,772	$ 2,376,991	$ 4,387,781	$ 254,225	$ 171,675
APD	$ 206,274	$ 206,274	$ -	$ -	$ -	$ -
AWI	$ 485,915	$ 147,352	$ 338,563	$ -	$ -	$ -
DCA	$ 146,649	$ 146,649	$ -	$ -	$ -	$ -
DCF	$ 62,191	$ 62,191	$ -	$ -	$ -	$ -
DEM	$ 166,572	$ 166,572	$ -	$ -	$ -	$ -
DJJ	$ 2,894	$ 2,894	$ -	$ -	$ -	$ -
DOE	$ 54,850	$ 54,850	$ -	$ -	$ -	$ -
DOEA	$ 272,246	$ 272,246	$ -	$ -	$ -	$ -
DOH	$ 3,987,741	$ 2,671,877	$ 1,315,864	$ -	$ -	$ -
DOR	$ 5,708,424	$ 1,430,276	$ 4,278,148	$ -	$ -	$ -
DOS	$ 1,989,489	$ 113,709	$ 1,762,602	$ -	$ -	$ 113,178
EOG	$ 135,400	$ 135,400	$ -	$ -	$ -	$ -
HSMV	$ 454,661	$ 95,195	$ 359,466	$ -	$ -	$ -
Total	**$ 21,897,347**	**$ 6,545,256**	**$ 10,431,633**	**$ 4,387,781**	**$ 254,225**	**$ 284,853**

Cost Benchmarking Results vs. Peers -Total

Agency Total Cost Comparison to Peer Group (X86-Windows, Unix, IBM Mainframe)			
Agency	**Agency Total Cost**	**Peer Total Cost**	**Delta**
DACS	$ 1,788,832	$ 2,750,370	$ (961,538)
DCF	$ 21,728,267	$ 20,100,193	$ 1,628,074
DEP	$ 1,852,415	$ 1,169,075	$ 683,340
DFS	$ 16,421,606	$ 12,443,157	$ 3,978,449
DMS [1]	$ 21,358,270	$ 18,762,900	$ 2,595,370[1]
DOC	$ 6,278,564	$ 7,397,416	$ (1,118,852)
DOR	$ 1,238,951	$ 1,484,598	$ (245,647)
DOS	$ 2,883,848	$ 1,988,010	$ 895,838
DOT	$ 8,978,943	$ 9,346,298	$ (367,355)
DBPR	$ 327,741	$ 622,778	$ (295,037)
FDLE	$ 6,794,870	$ 7,948,673	$ (1,153,803)
HSMV	$ 4,443,269	$ 6,190,681	$ (1,747,411)
DOE	$ 1,753,390	$ 513,519	$ 1,239,871
AWI	$ 760,770	$ 867,055	$ (106,285)
Total	**$ 96,609,737**	**$ 91,584,722**	**$ 5,025,015**

Mainframe Hardware Costs removed from DOC and DOT Agencies and Peers

[1] Represents both DMS and Client Agencies

Personnel Benchmarking Results vs. Peers -Total

Agency Total FTE Comparison to Peer Group (X86-Windows, Unix, IBM Mainframe)			
Agency	**Agency Total FTEs**	**Peer Total FTEs**	**Delta**
DACS	11.4	12.9	(1.5)
DCF	74.3	65.3	9.0
DEP	5.0	8.8	(3.8)
DFS	75.4	46.3	29.1
DMS [1]	128.1	74.3	53.7
DOC	23.9	34.3	(10.4)
DOR	9.0	9.5	(0.5)
DOS	12.6	12.7	(0.1)
DOT	47.4	49.8	(2.4)
DBPR	1.2	4.7	(3.5)
FDLE	4.4	31.4	(27.0)
HSMV	30.1	29.8	0.3
DOE	17.0	3.8	13.2
AWI	4.8	5.7	(0.9)
Total	**444.5**	**389.2**	**55.3**

[1] Represents both DMS and Client Agencies

Data Center System
■ ■ ■ ■ Discussion

We used a screening process to narrow the scope of the project's analysis…. In order to finish in the time allotted….

1 State of Florida Computer Facility Universe (estimated 60+ facilities of various size)

2 In scope Departments (based on DC size)

1. AWI
2. DACS
3. DBPR
4. DCF(DOS)
5. DEP
6. DFS
7. DOC
8. DOE
9. DOH
10. DOR
11. DOT
12. FDLE
13. HSMV
14. DMS

3 Other Agencies with workload in the SRC

15. APD
16. DCA
17. DEM
18. DJJ
19. DOEA
20. EOG

4 Other potential target data centers

- Lottery
- FSU NW DC

Computer Facilities included in this analysis

64 computer facilities and 20 Agencies

When we talk about data center capacity… we have to talk about space AND power

- With Moore's Law, equipment is getting smaller and smaller….
- However, it also uses more and more power
  - A rack of computer equipment today may take 1.5 to 3.0 kilowatts
  - A rack of new servers can range from 10 – 40 kilowatts
- Power needs (including cooling) typically account for 60-70% of data center facility costs
- Typical situation today….
  - Plenty of space
  - Always running out of power and cooling

Space

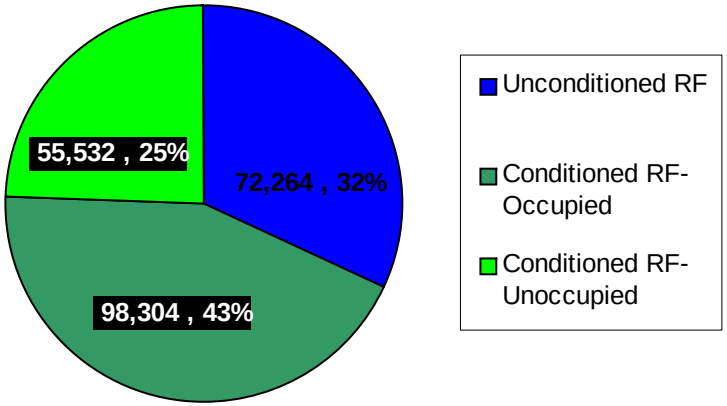
Power

Here is the universe of data centers and work load we have analyzed (summarized by Agency owning the DC)

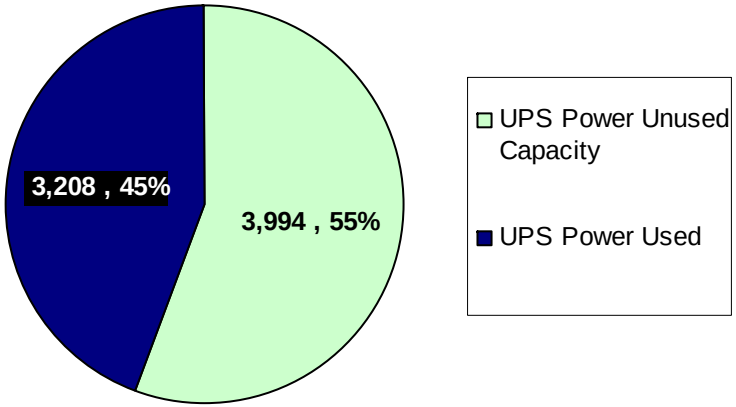
Attribute	AWI	DACS	DBPR	DCF	DEP	DFS	DHSM	DMS	DOC	DOE	DOR	DOT	FDLE	LOT	FSU	DOH	Total
# of Computer Facilities Analyzed	**1**	**2**	**1**	**7**	**2**	**3**	**1**	**1**	**1**	**3**	**2**	**23**	**2**	**1**	**1**	**13**	**64**
Total Raised Floor (sq. ft.)	**2,040**	**2,806**	**715**	**48,897**	**4,150**	**17,234**	**12,162**	**29,232**	**4,836**	**7,970**	**9,922**	**29,786**	**11,250**	**8,740**	**25,000**	**11,360**	**226,100**
Conditioned RF	2,040	2,131	715	35,078	2,500	9,500	11,580	9,256	4,500	7,410	9,922	23,870	9,100	8,740	10,000	7,494	153,836
- Conditioned RF- Occupied	*1,428*	*639*	*358*	*19,291*	*1,605*	*5,930*	*11,031*	*7,247*	*2,835*	*4,493*	*5,757*	*13,799*	*9,058*	*6,118*	*4,900*	*3,815*	*98,304*
- Conditioned RF- Unoccupied	*612*	*1,492*	*358*	*15,787*	*895*	*3,570*	*549*	*2,009*	*1,665*	*2,917*	*4,165*	*10,072*	*42*	*2,622*	*5,100*	*3,679*	*55,532*
Unconditioned RF	-	675	-	13,819	1,650	7,734	582	19,976	336	560	-	5,916	2,150	-	15,000	3,866	72,264
% of Total Conditioned Raised Floor	**1%**	**1%**	**0%**	**23%**	**2%**	**6%**	**8%**	**6%**	**3%**	**5%**	**6%**	**16%**	**6%**	**6%**	**7%**	**5%**	100%
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total UPS Power Capacity (kilowatts)	**144**	**89**	**90**	**1,615**	**342**	**343**	**304**	**522**	**203**	**86**	**360**	**1,619**	**230**	**125**	**362**	**768**	**7,202**
UPS Power Unused Capacity	126	22	45	1,031	135	207	192	28	130	0	273	907	56	67	170	603	3,994
UPS Power Used	18	67	45	584	207	136	112	494	73	86	87	712	173	58	192	165	3,208
Legacy Servers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of iSeries (AS400)	-	-	-	2	7	2	-	2	-	-	-	-	-	-	-	-	13
Number of IBM Mainframes	-	-	-	4	-	1	1	1	1	-	-	1	-	-	1	-	10
Number of IBM Mainframe MIPS	-	-	-	3,002	-	1,086	172	322	1,040	-	-	500	-	-	1,004	-	7,126
Number of Unisys Mainframe MIPS	-	-	-	98	-	-	-	40	-	-	30	-	200	-	-	-	368
Non Legacy Servers																	
Physical Servers	64	139	57	473	167	285	249	785	93	228	109	1,000	447	82	6	307	4,491
Logical Servers	127	141	78	546	188	365	249	890	107	272	115	1,162	495	128	18	349	5,374
- File and Print	4%	6%	10%	12%	22%	8%	4%	6%	4%	5%	13%	6%	2%	15%	11%	9%	7%
- Messaging & Calandering	5%	3%	19%	8%	8%	5%	4%	9%	12%	8%	8%	5%	4%	5%	11%	4%	6%
- Infrastructure	13%	6%	9%	12%	10%	4%	19%	12%	7%	11%	10%	21%	7%	7%	11%	13%	13%
- Web or HTTP	12%	21%	18%	6%	15%	20%	9%	14%	7%	15%	11%	11%	11%	10%	11%	17%	12%
- Application	43%	33%	24%	36%	22%	31%	50%	38%	53%	40%	33%	31%	61%	16%	11%	20%	36%
- Database	23%	16%	15%	12%	9%	9%	10%	14%	7%	12%	10%	11%	12%	5%	11%	25%	13%
- Help Desk	0%	1%	1%	1%	1%	1%	0%	2%	2%	1%	0%	1%	1%	2%	11%	1%	1%
- IT Support Service	0%	6%	0%	1%	0%	19%	0%	1%	2%	1%	1%	4%	0%	0%	11%	1%	3%
- IT Admin and Management	0%	6%	0%	8%	11%	4%	2%	0%	2%	2%	13%	1%	0%	23%	0%	1%	3%
- IT Security/ Risk Mgmt	0%	2%	4%	4%	3%	0%	2%	6%	6%	5%	2%	9%	3%	16%	11%	9%	5%
-																	
- Strategic Servers	78%	70%	56%	54%	46%	60%	69%	66%	66%	67%	54%	53%	84%	31%	33%	61%	61%
- Non-Strategic Servers	22%	30%	44%	46%	54%	40%	31%	34%	34%	33%	46%	47%	16%	69%	67%	39%	39%
# of Physical Servers	1%	3%	1%	11%	4%	6%	6%	17%	2%	5%	2%	22%	10%	2%	0%	7%	100%

There is a lot of unused raised floor in the in scope data centers. Equipment shrinkage explains a lot of this excess.

Total Raised Floor = 229K Square Feet



Total Power Capacity = 7.2 MegaWatts (7,202 Kilowatts)



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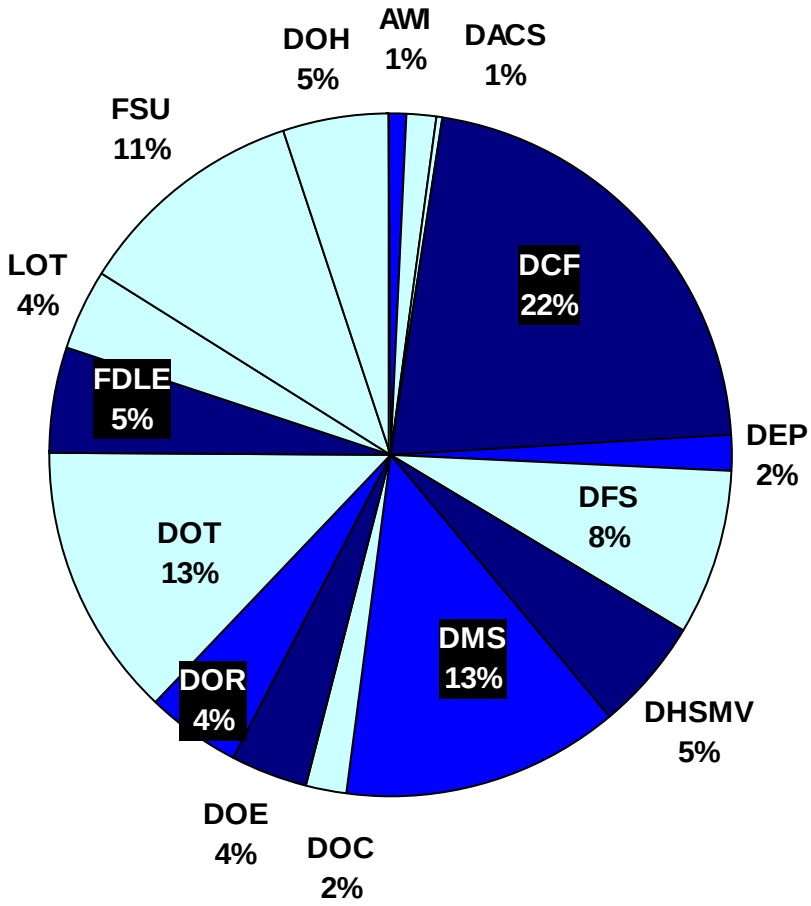
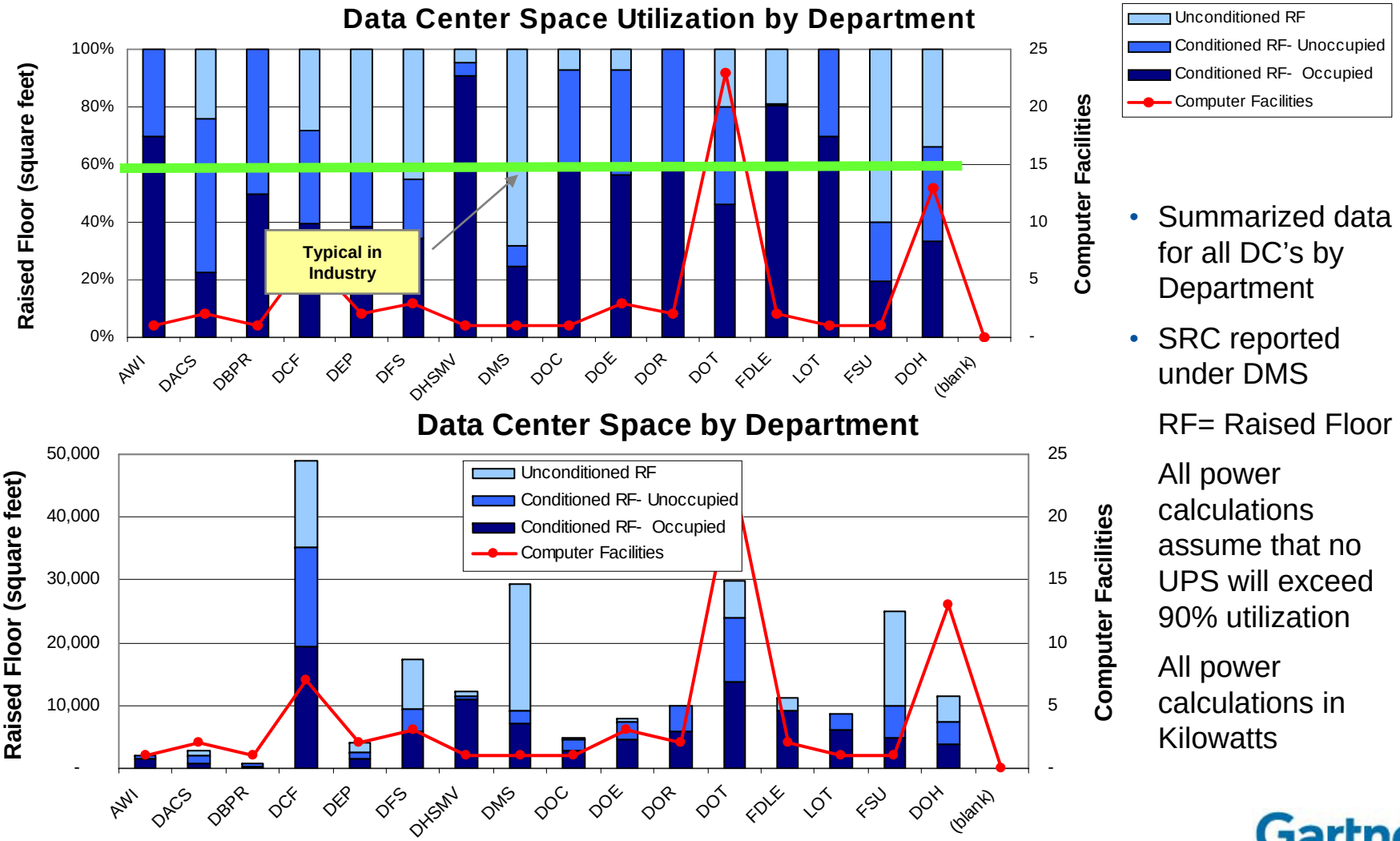


Most of the spare data center space is DCF and DMS. Excess DOT space is spread across 20+ facilities



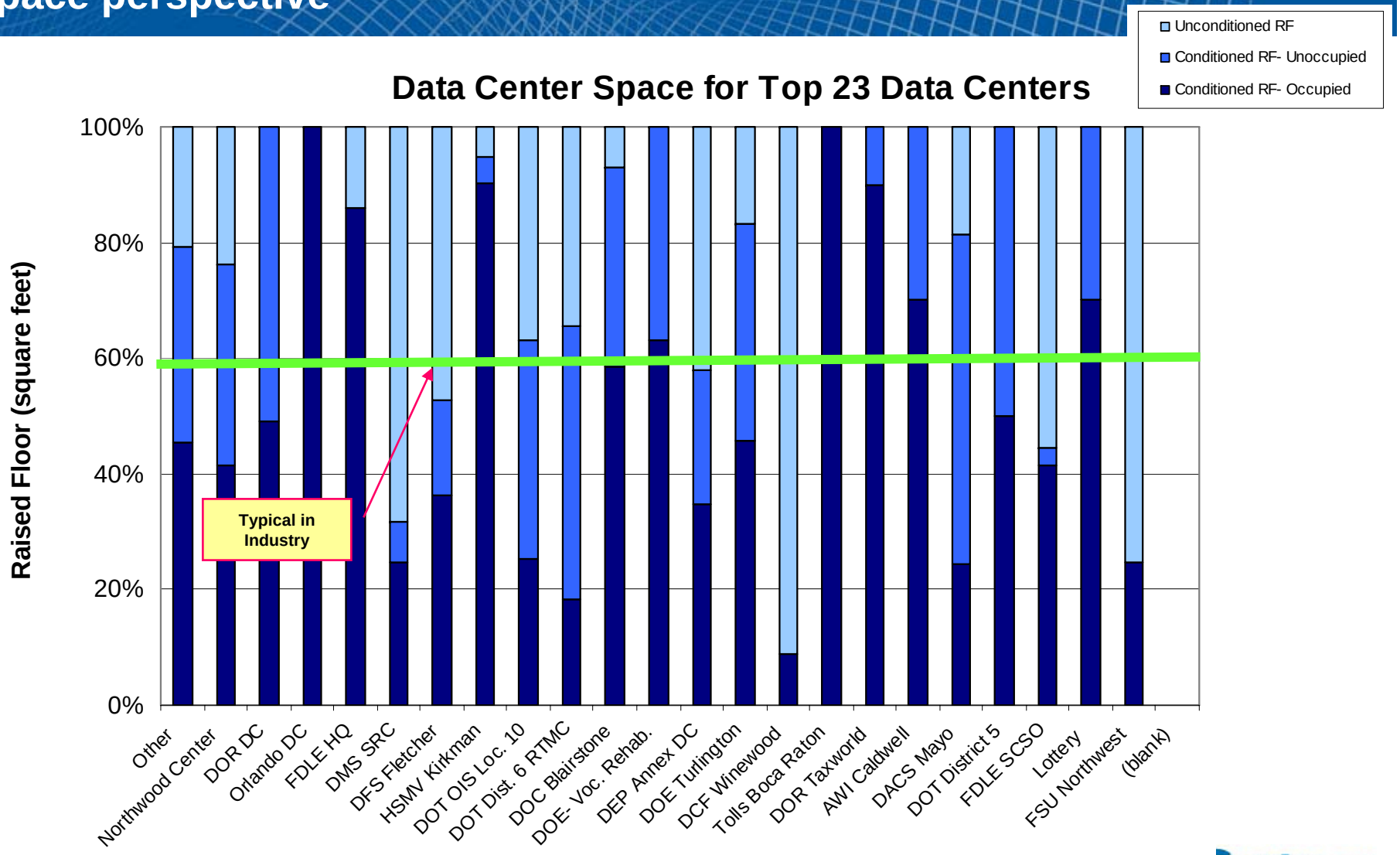
- Summarized data for all DC's by Department
- SRC reported under DMS

  RF= Raised Floor

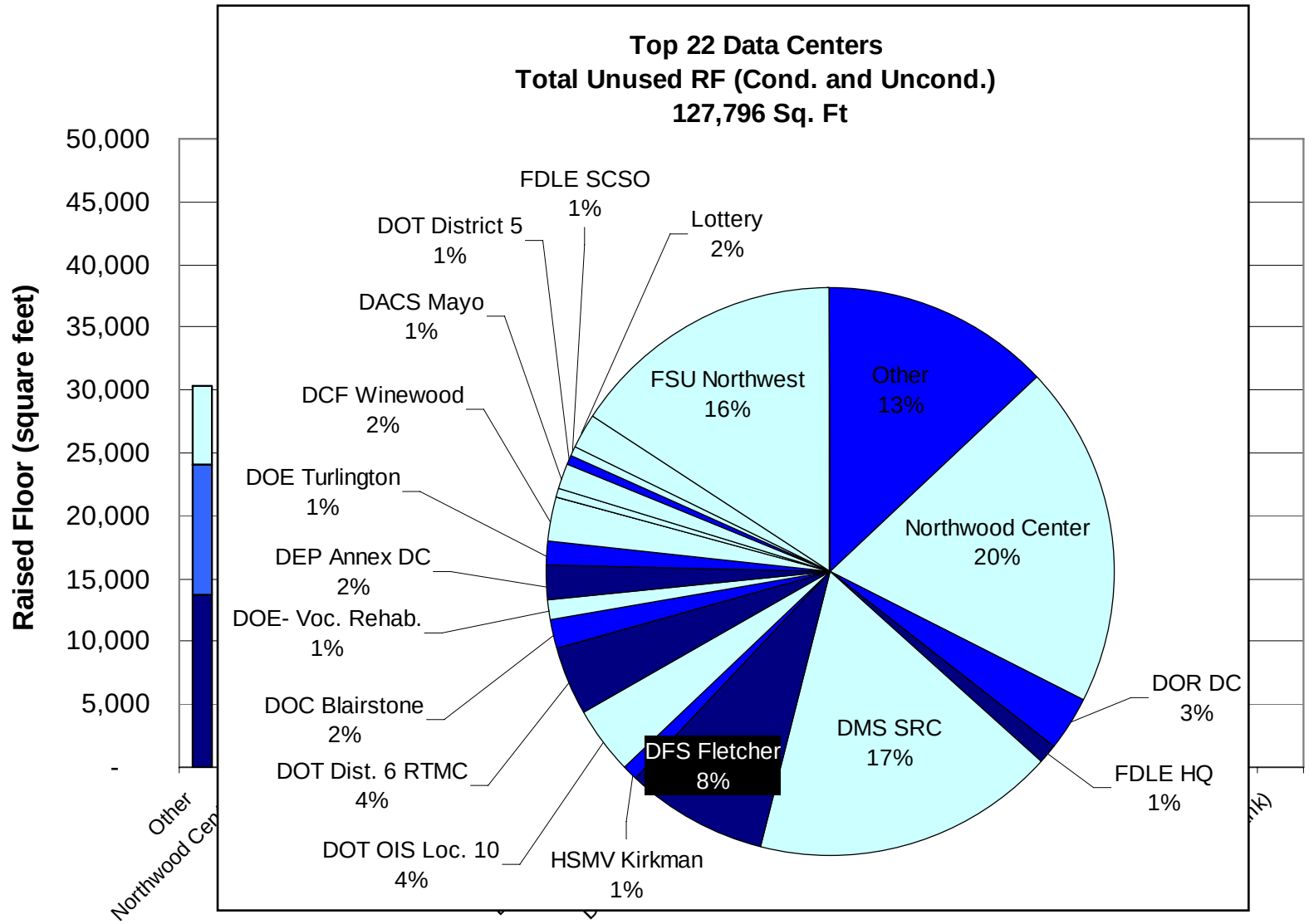
  All power calculations assume that no UPS will exceed 90% utilization

  All power calculations in Kilowatts

13 of the 20 largest data centers are less than 60% occupied from a space perspective

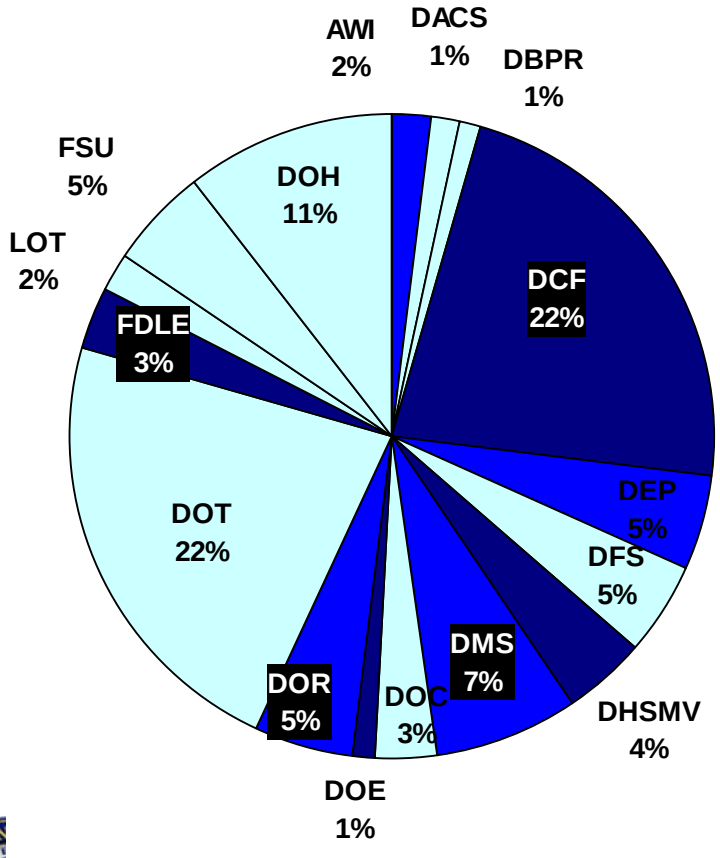


Almost 50% of the unused RF space is contained by 3 data centers: FSU NW, Northwood Center and the SRC

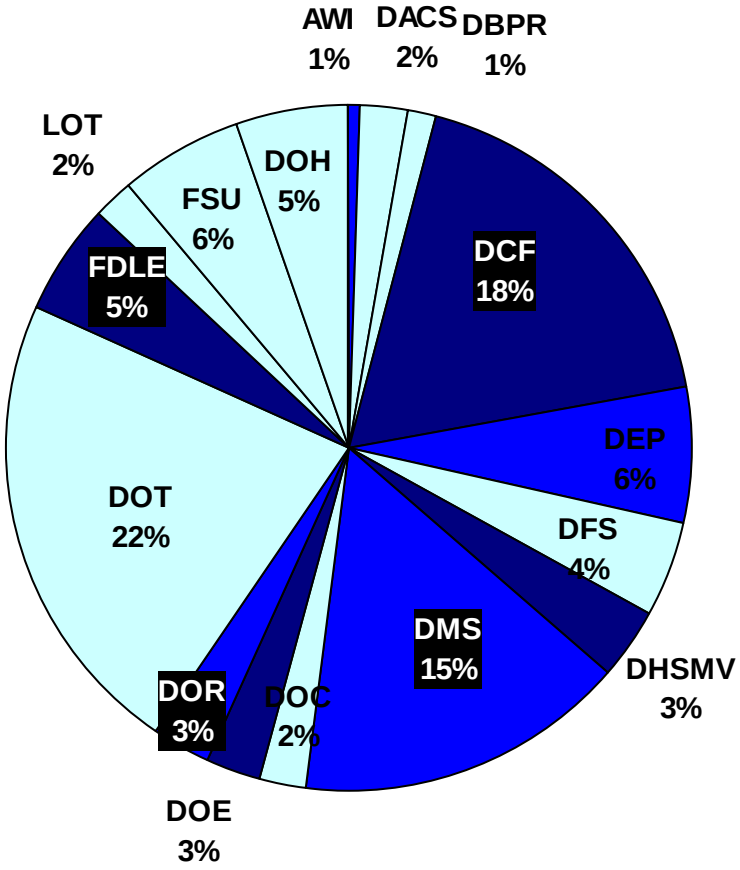


DCF, DOT and DMS together make up approximately 51% of the total power capacity. (45% of consumption)

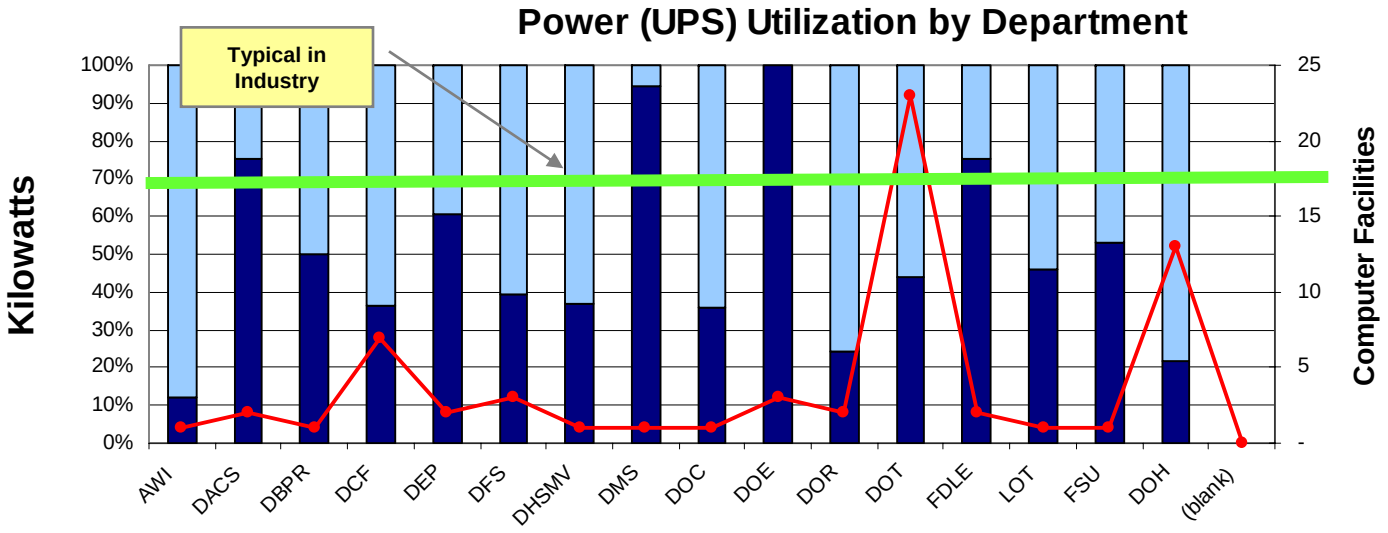
Total Power Capacity = 7.2 Megawatts (7,202 Kilowatts)

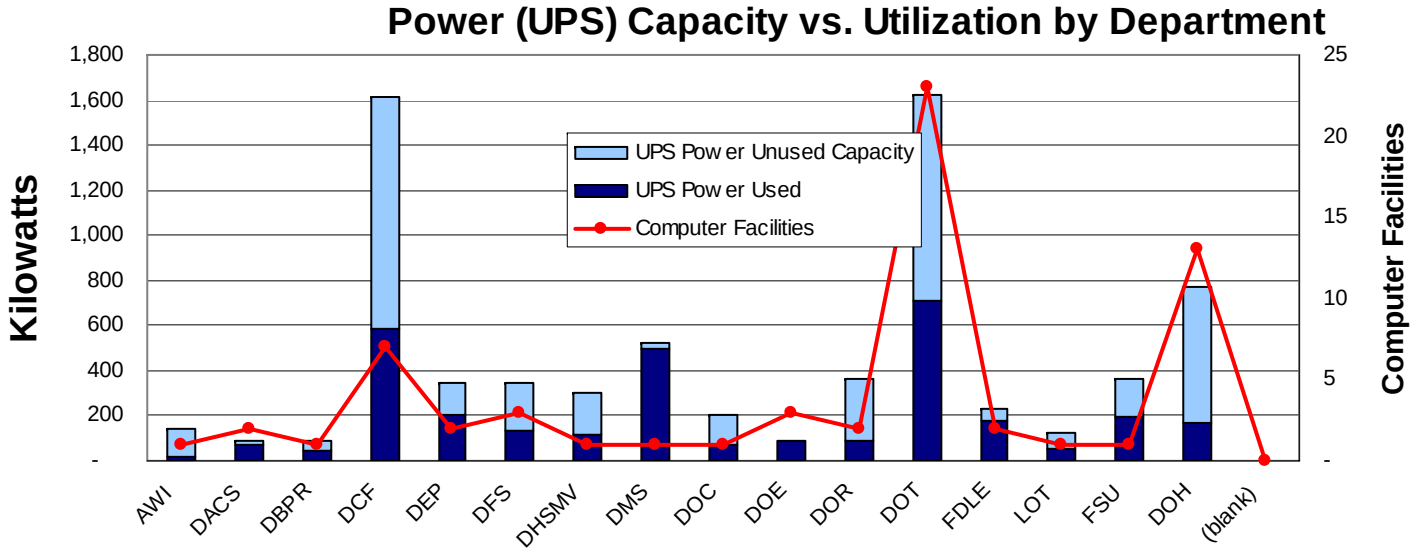


Total Power Consumption = 4 Megawatts (3,994 Kilowatts)



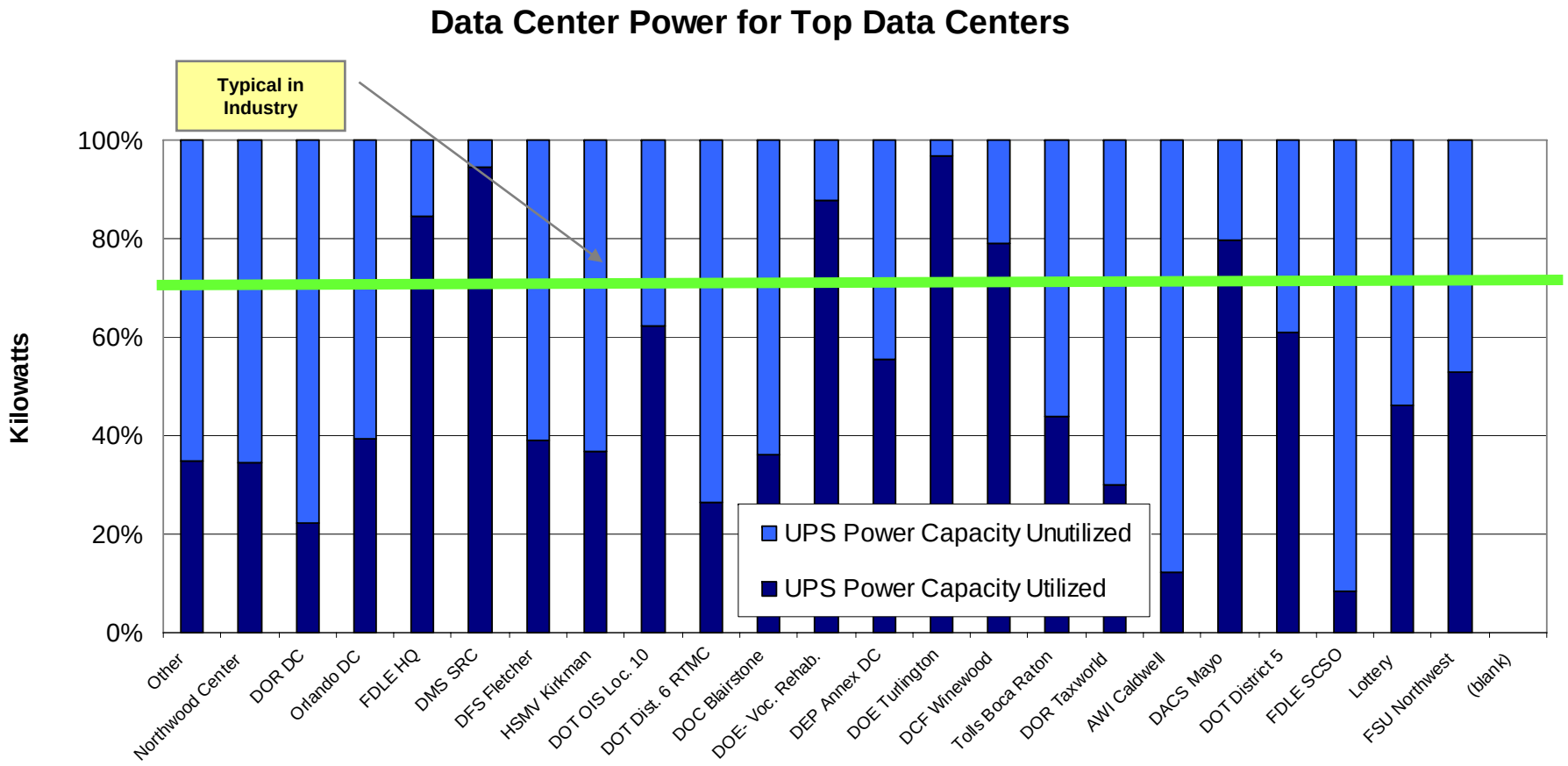
Most of the spare power capacity is at DCF. The spare DOT power is spread across more than 20 facilities.



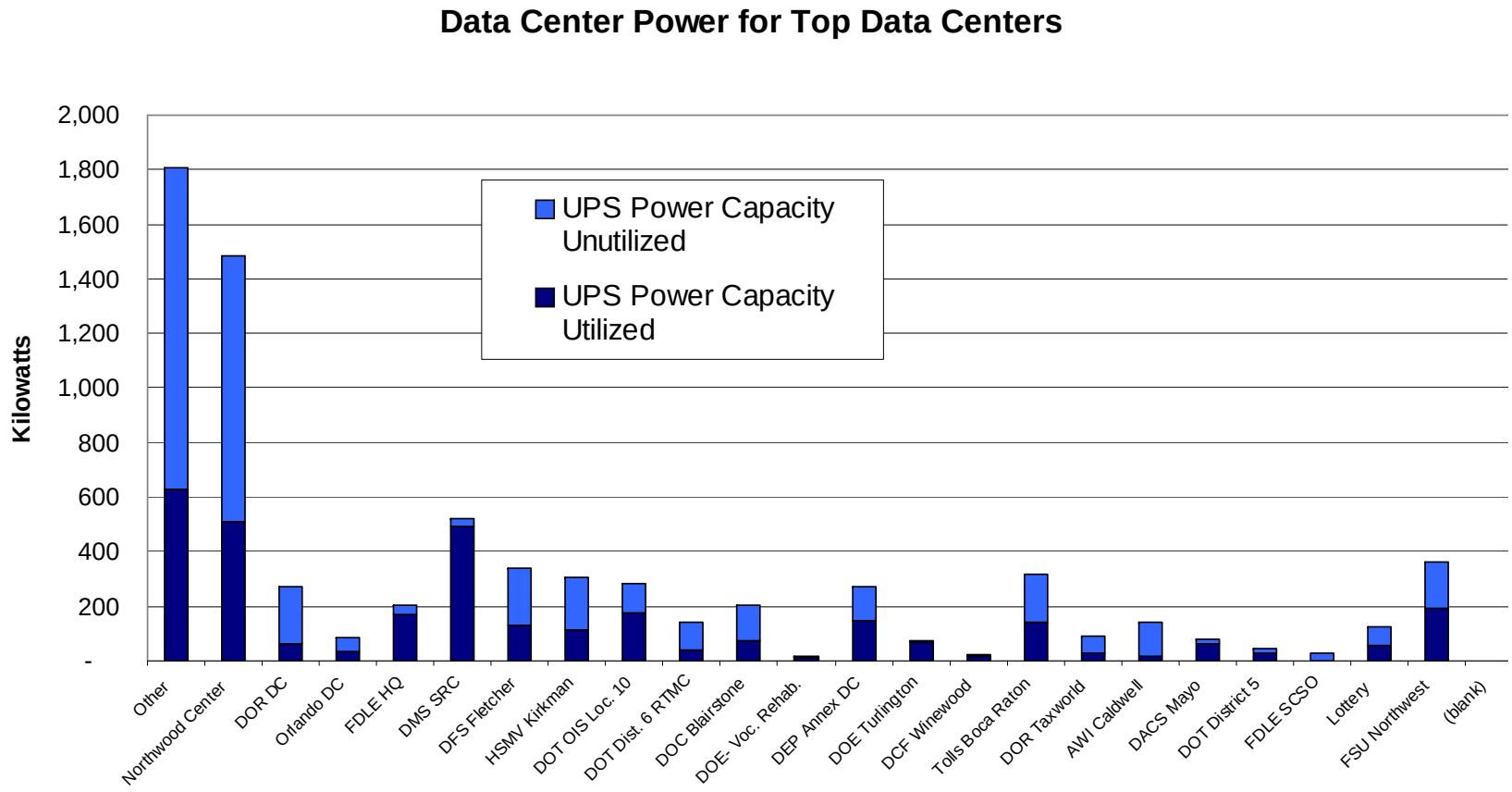


- Summarized data for all DC's by Department
- SRC (regardless of agency) reported under DMS
- UPS Capacity utilized as proxy for "Power"
- All calculations assume that no UPS will exceed 90% utilization
- Calculations are adjusted for "redundant UPS's"
- All calculations in Kilowatts

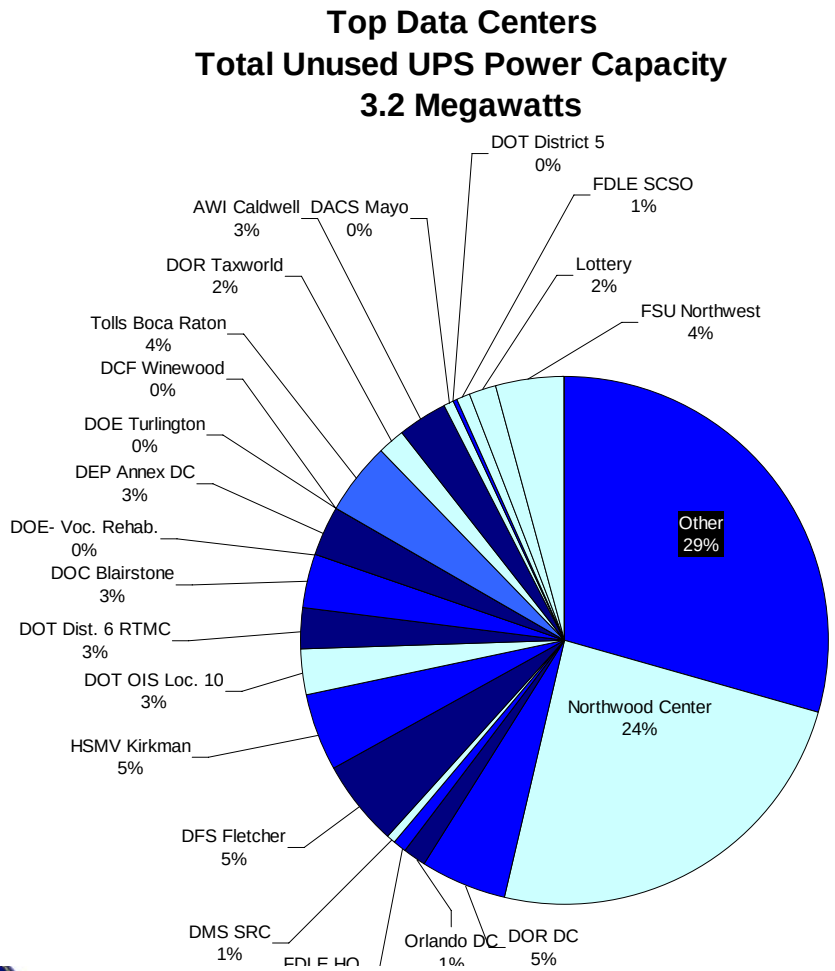
Nine of the largest centers are at or near 70% of power capacity. 11 of 23 are at 50% or more of current capacity



Northwood Center and the SRC are the largest data centers from a power capacity perspective.



Almost a quarter of the current unused UPS power capacity is at the Northwood Center



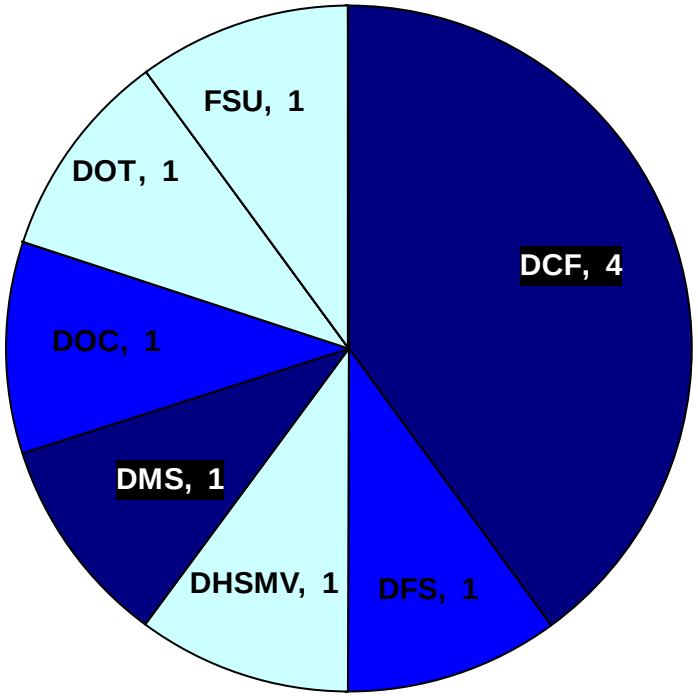
DOR has excess capacity because it is scheduled for shutdown in 2 years

- Workload is moving to SRC

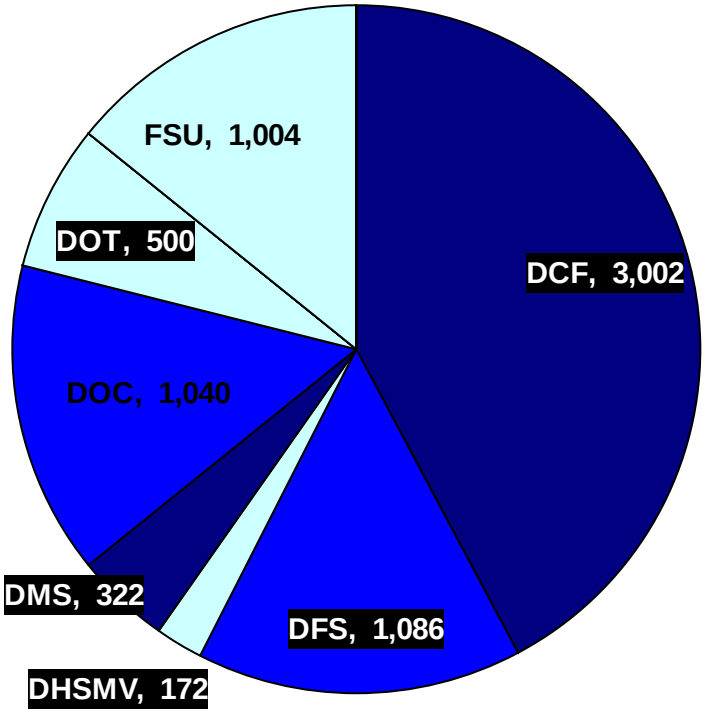
The SRC currently has little or no excess power capacity

There are 9 IBM Mainframes consuming 7124 MIPS. This is a comparatively small mainframe environment.

Total IBM Mainframes = 10

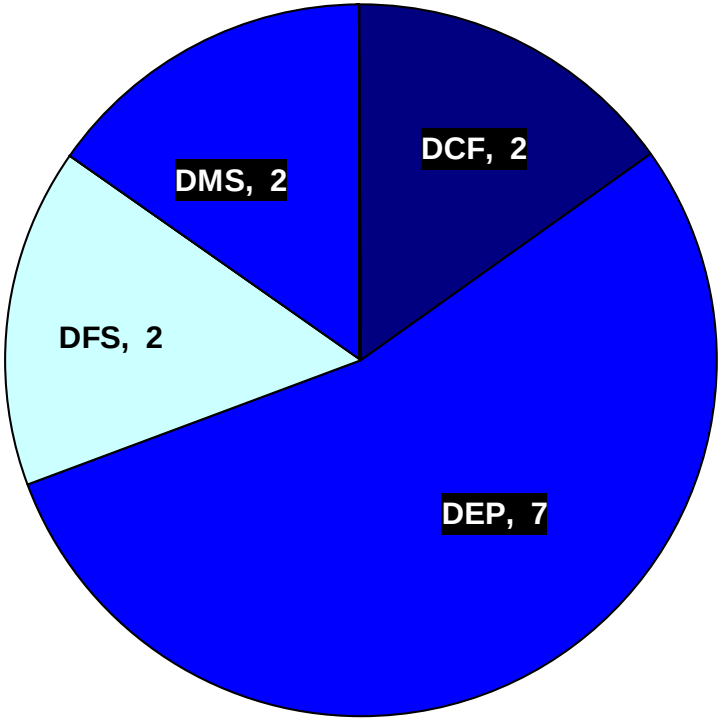


Total IBM Mainframe MIPS = 7124

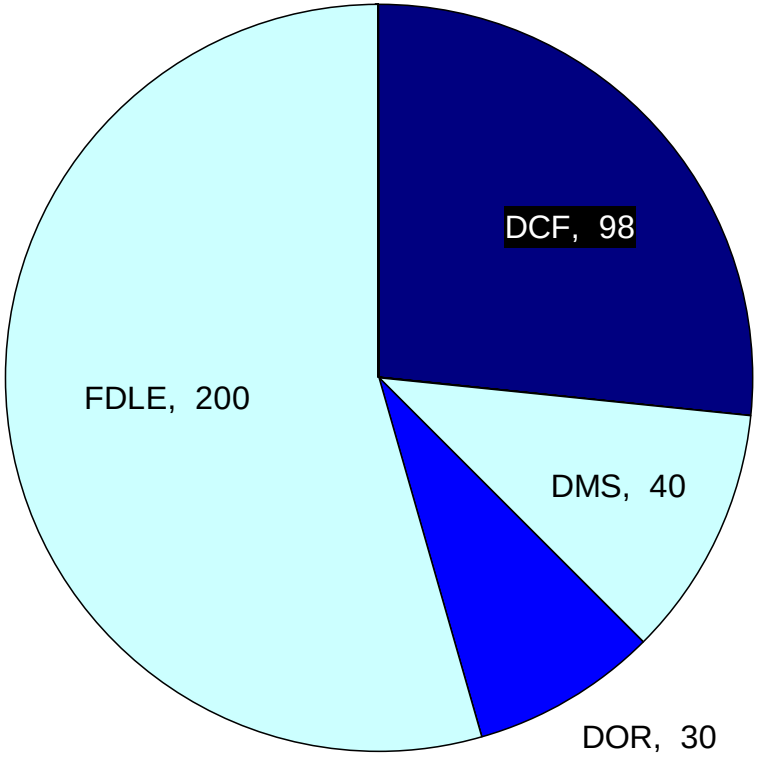


There are 13 AS400's and 4 Unisys Mainframes. These are both very small environments.

Total AS400 (iSeries) = 13

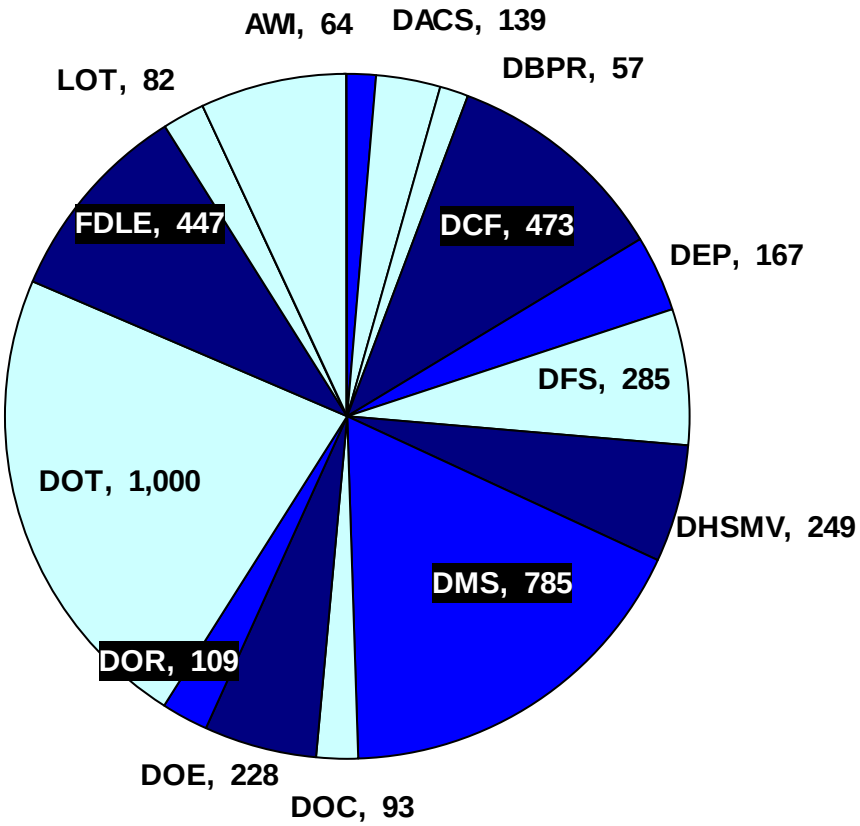


Total Unisys Mainframe MIPS = 368
4 Machines



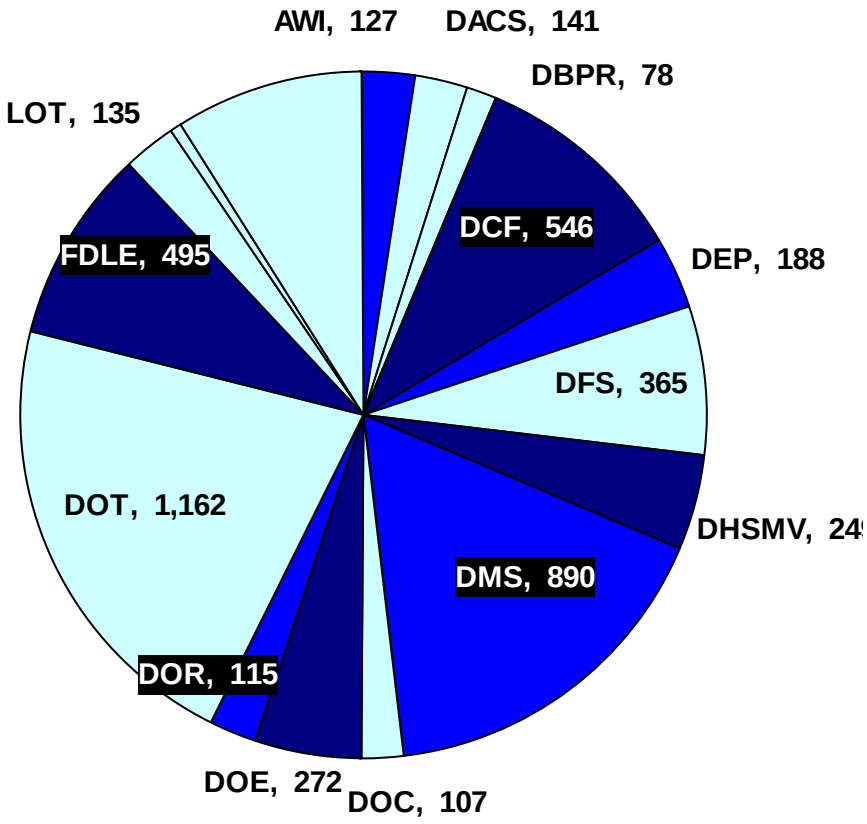
There are almost 4,500 Physical Servers (X86, Unix, Other) in the environment analyzed

Total Physical Servers = 4491
(X86, Unix and Other)

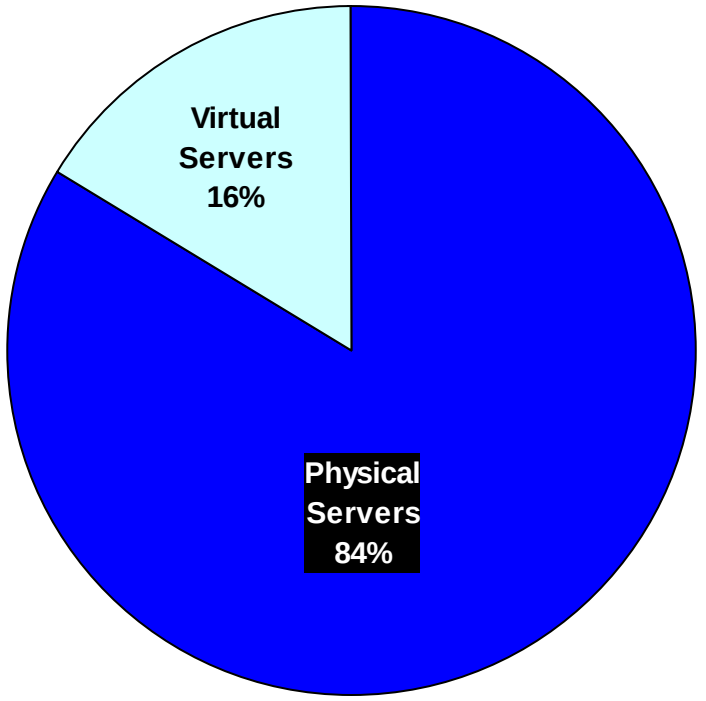


There are almost 5,400 Logical Servers (X86, Unix, Other) in the environment analyzed. 16% of these servers are "virtual" servers.

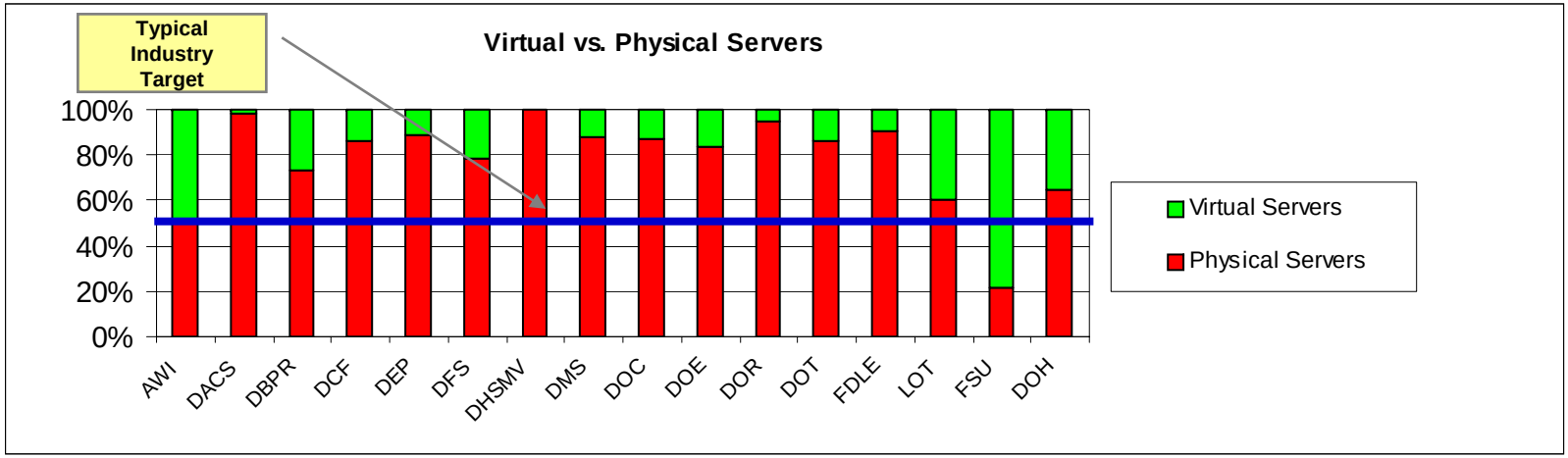
Total Logical Servers = 5,374 (X86, Unix and Other)

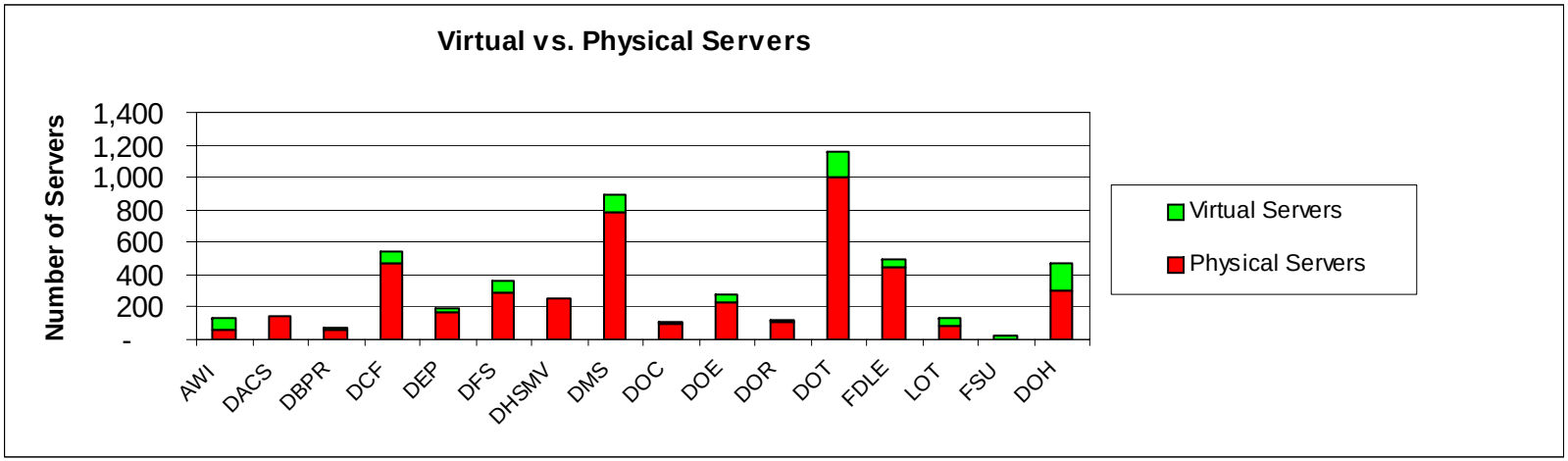


Physical vs. Virtual Servers (X86, Unix and Other)

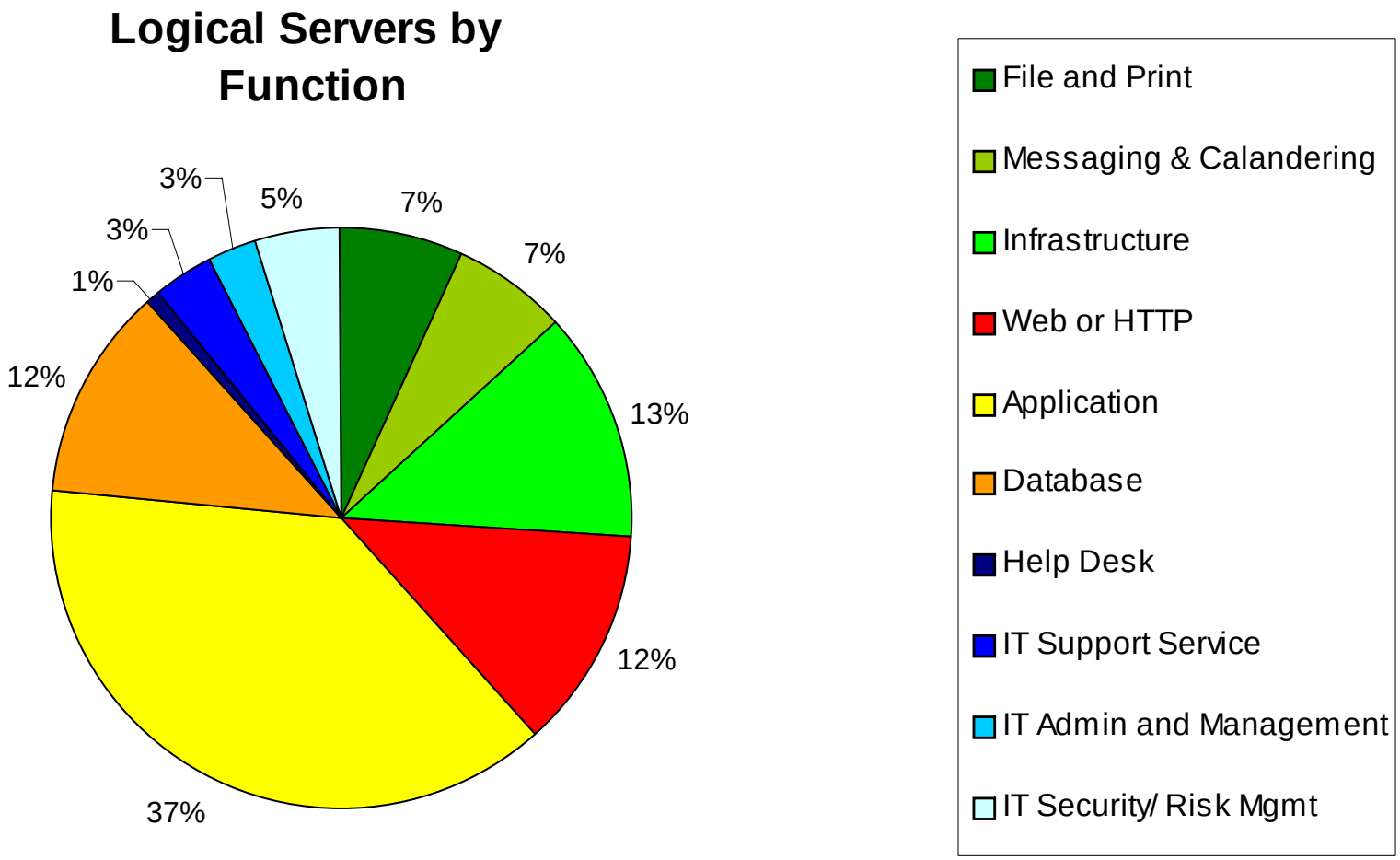


Most agencies seem to be in the early stage of virtualization. The more the agencies virtualize the less are the power and space requirements



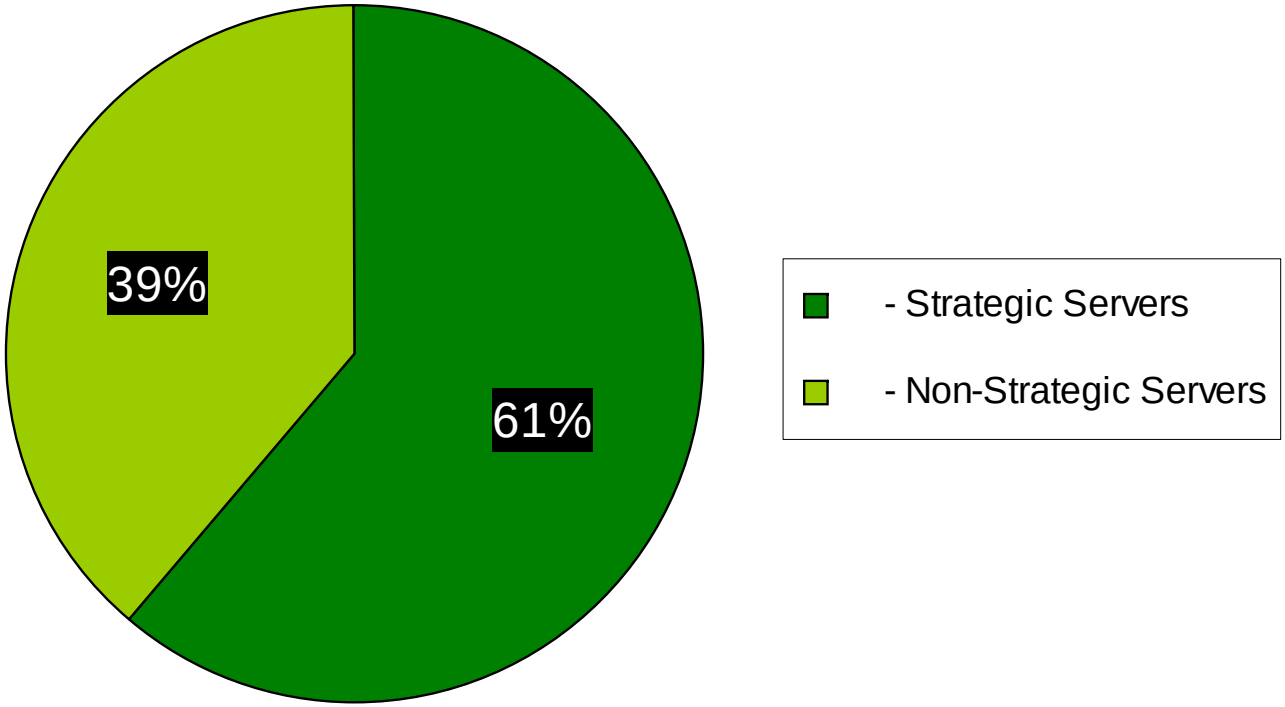


About 40% of servers are used to provide infrastructure and related services.

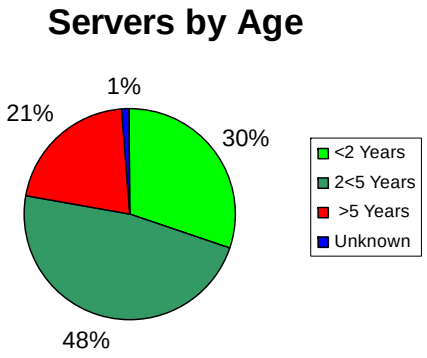


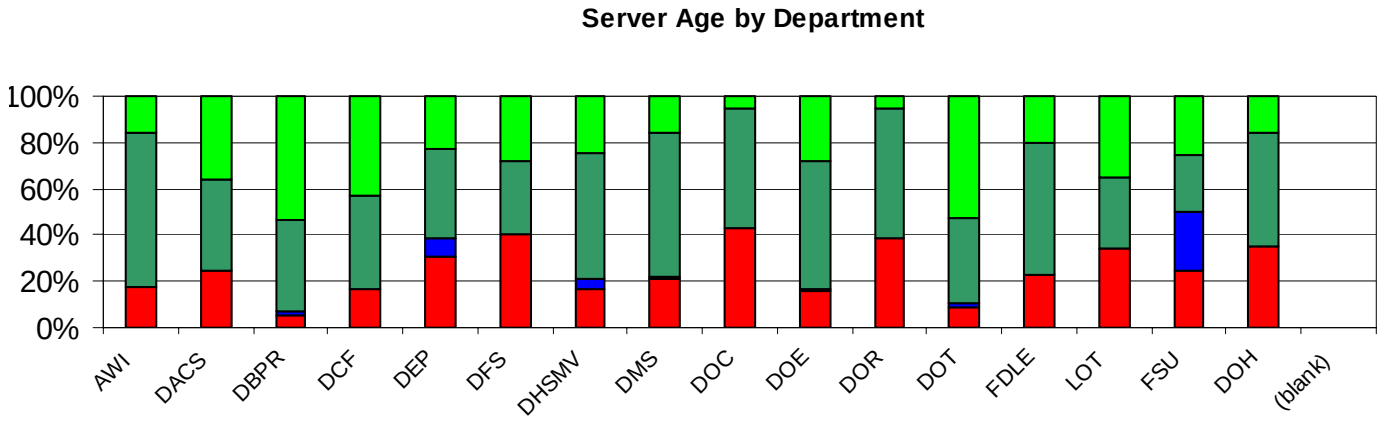
About 40% of servers are used to provide infrastructure and related services.

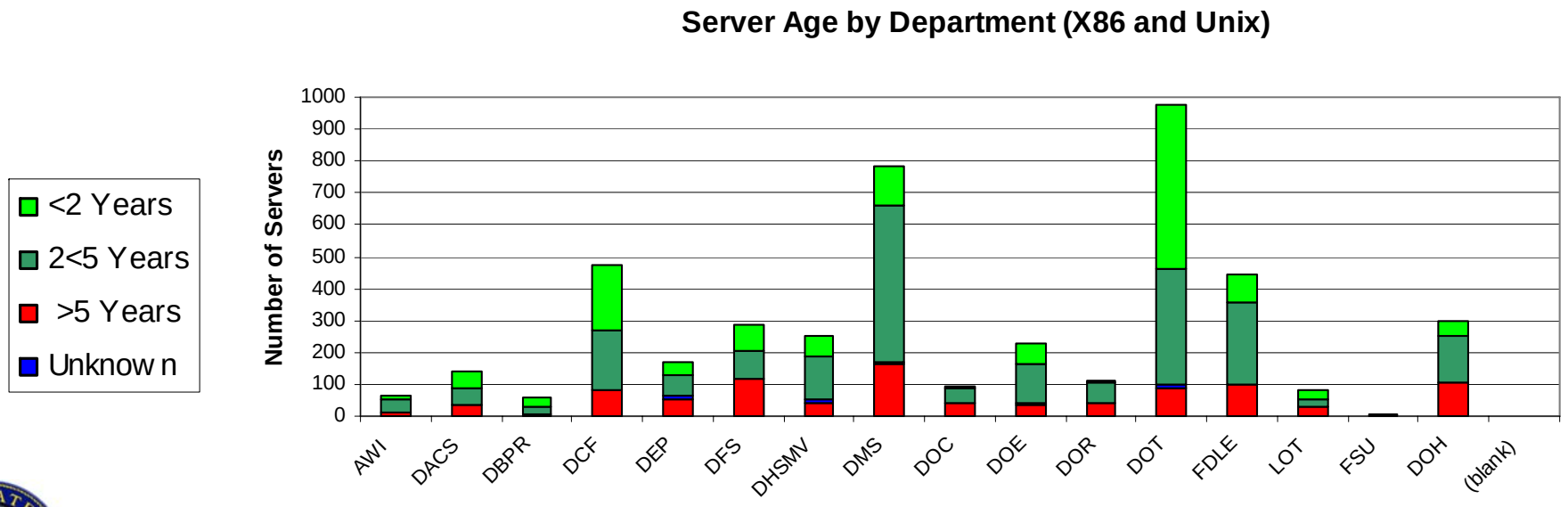
Strategic vs. Non-Strategic



The age of the server population is not out of line with other public sector agencies.

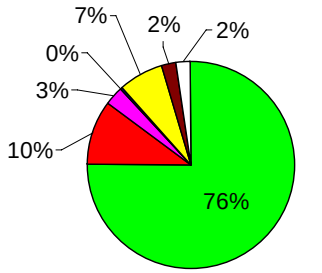


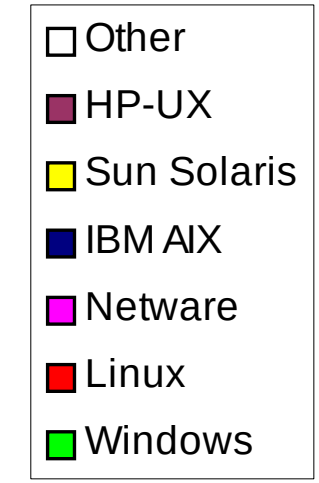




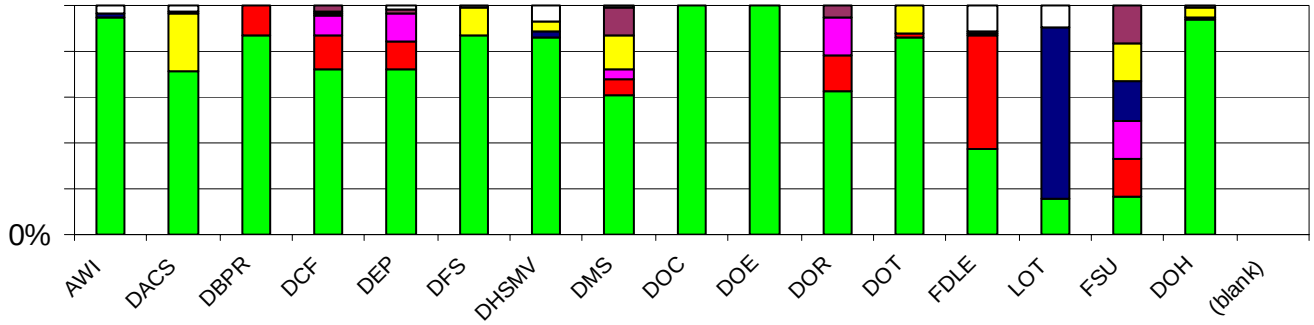
Three quarters of the servers run some version of Windows. Another 10% run Linux. Less than 15% of the environment is Unix

Servers by Operating System

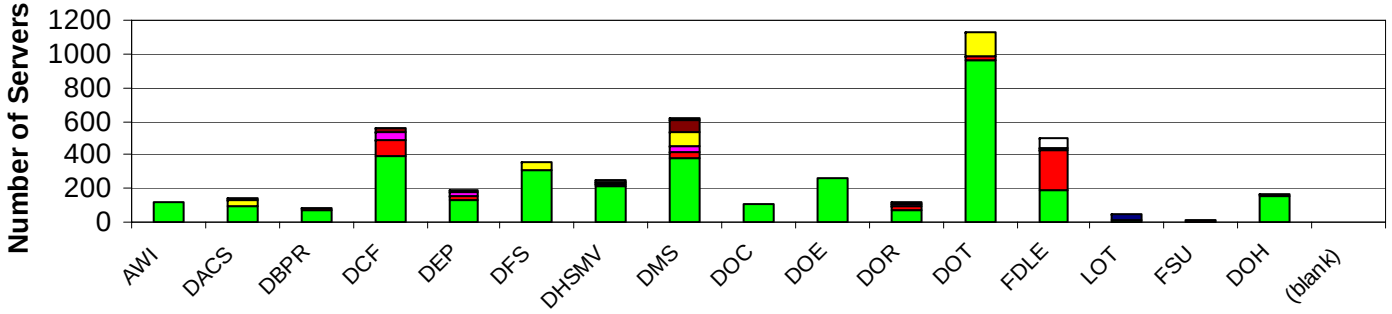




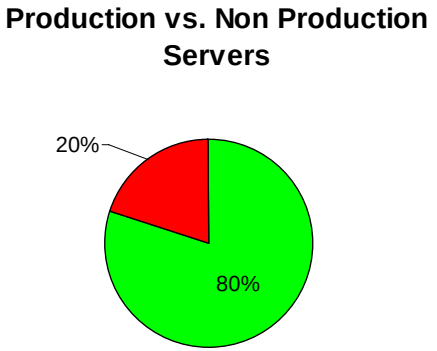
Server Operating System Distribution by Department

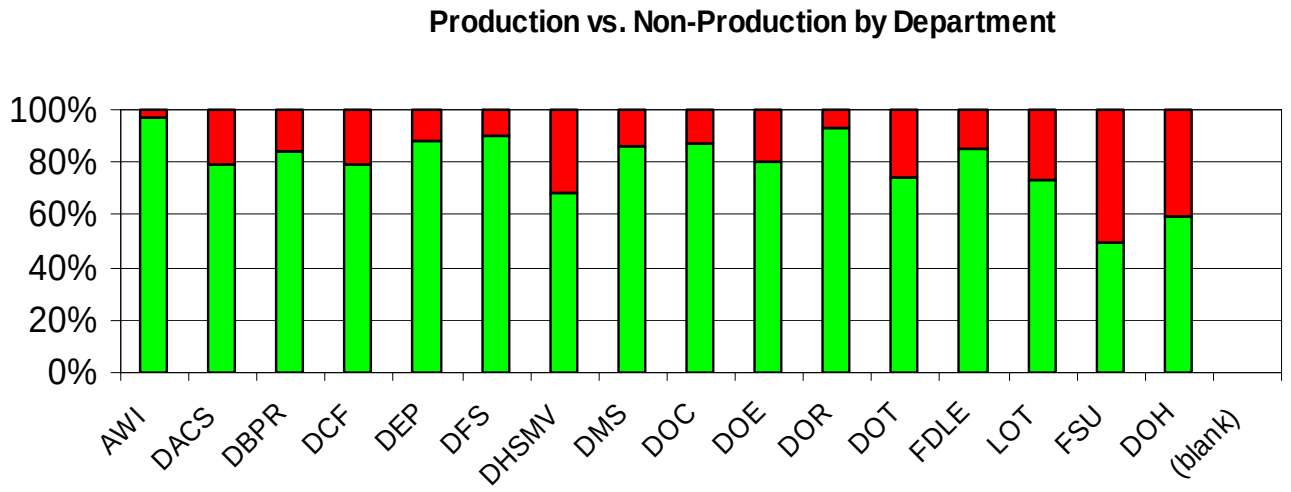


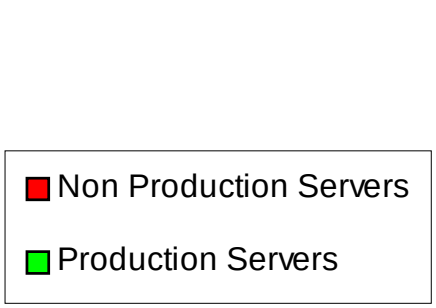
Server Operating System Distribution by Department

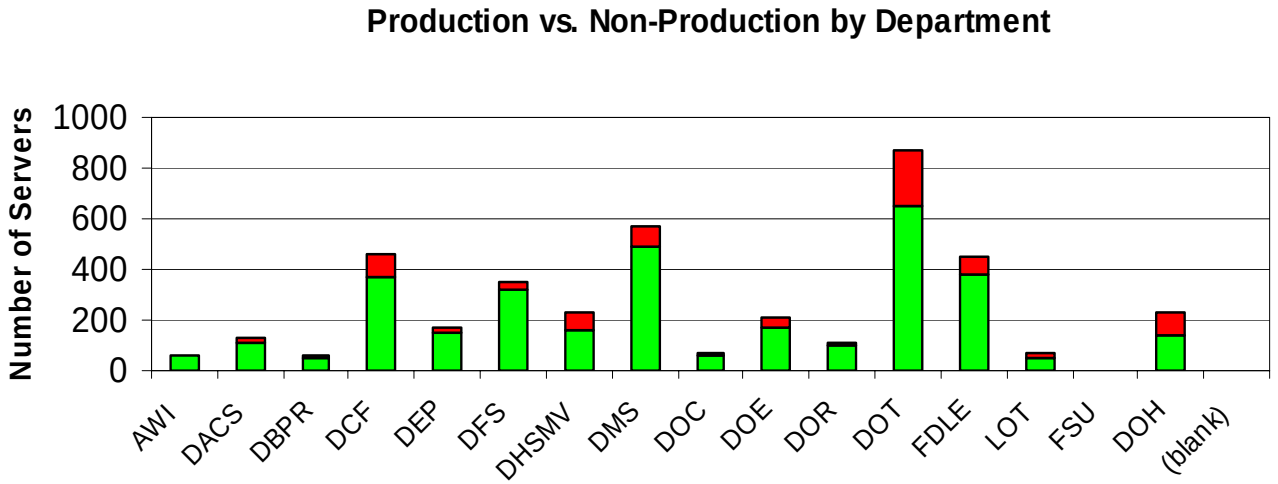


A full 20% of the total server population is dedicated to development and testing (non-production servers)



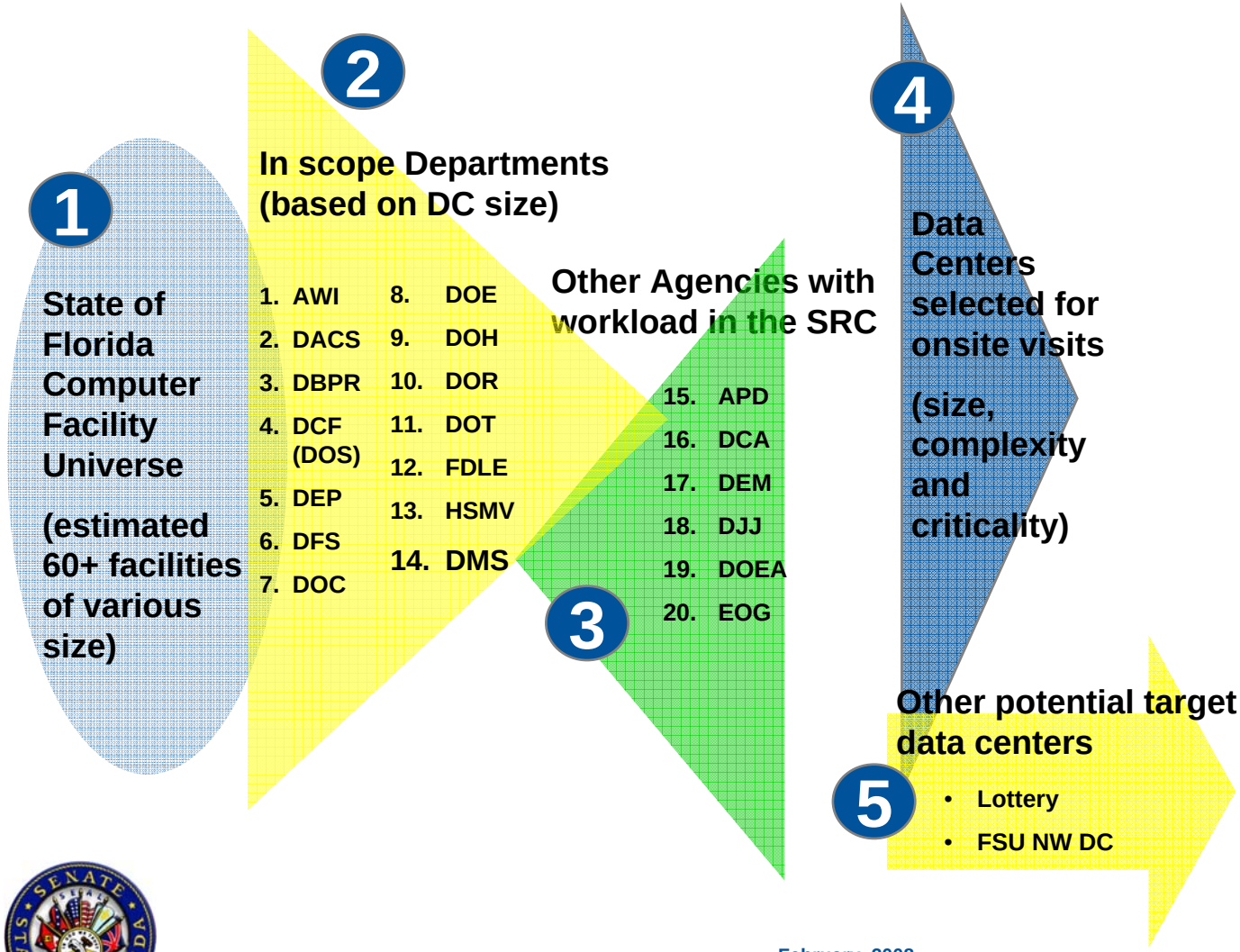






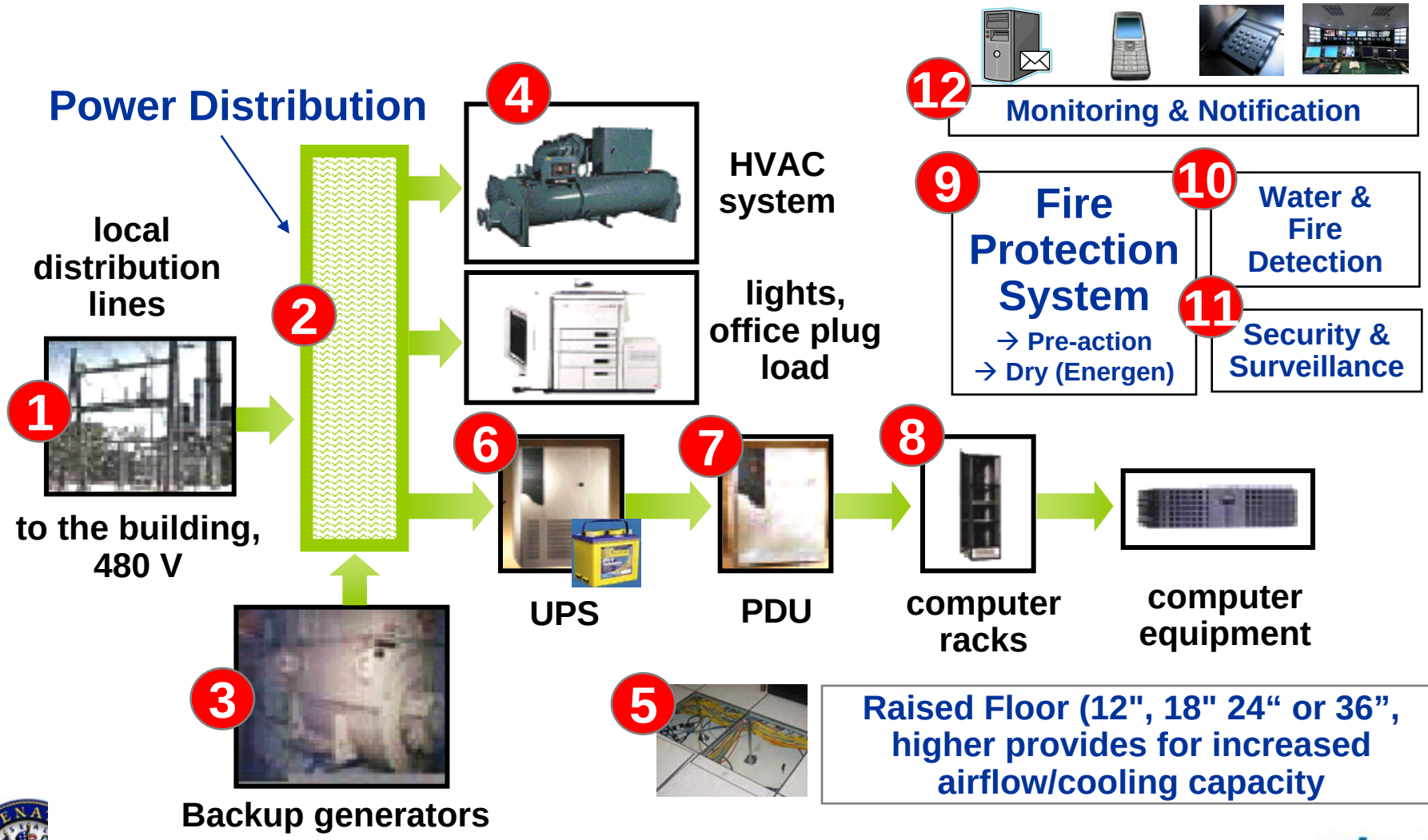
Analysis of Potential "Target" Data Centers

We screened data centers based on size and location to determine potential "targets". We tried to visit all the potential targets



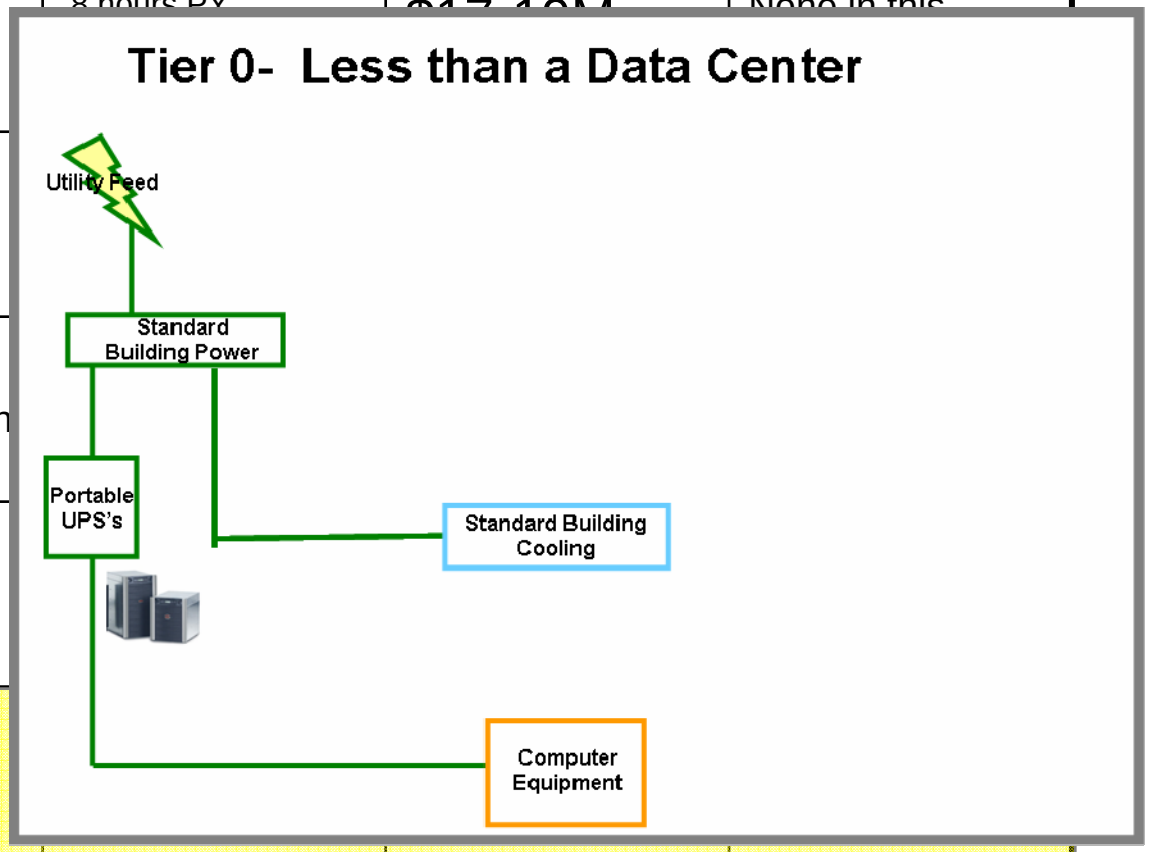
1. Fletcher Building (DFS)
2. Larson Building (DFS)
3. Shared Resource Center (DMS)
4. Northwood (DCF, DOS, DOE)
5. Suwanee (DOT)
6. Turnpike- Boca Raton (DOT)
7. Turnpike- Turkey Lake (DOT)
8. Blair Stone Road (DOC)
9. Phillips Rd (FDLE)
10. Apalachee Pkwy (HSMV)
11. Twin Towers (DEP)
12. Annex Building (DEP)
13. Turlington (DOE)
14. Mayo (DACS)
15. Carlton (DOR)
16. Tax World (DOR)
17. Northwest Data Center (FSU)
18. Lottery DC

Gartner's analysis focused on 12 critical data center systems that directly impact the reliability of the facility



The Uptime Institute has established a four "tier" system for evaluating data center reliability.

Description	Redundancy	Downtime	Cost*	Florida DC's
Tier 4 Fault Tolerant	"N+2" for all components	8 hours PY	$17.1M	None in this
Tier 3 Concurrently Maintainable	"N+1" capacity and distribution paths			
Tier 2 Redundant Capacity	"N+1" capacity Single distribution path			
Tier 1 Basic Site Infrastructure	No redundant components			
Tier 0 Less than a Data Center	No generator, Limited UPS, "building" cooling			



17,000 sq ft raised floor, 700 KW – Approximately the same as the SRC

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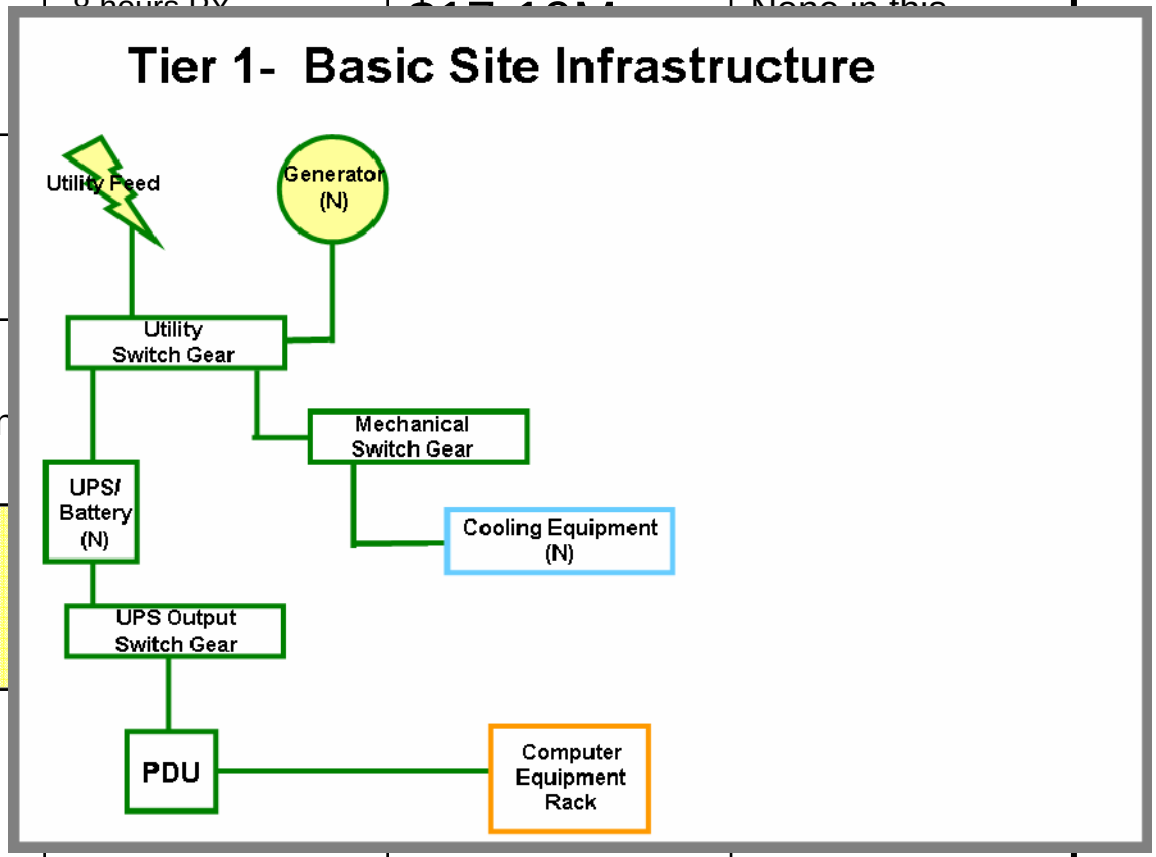

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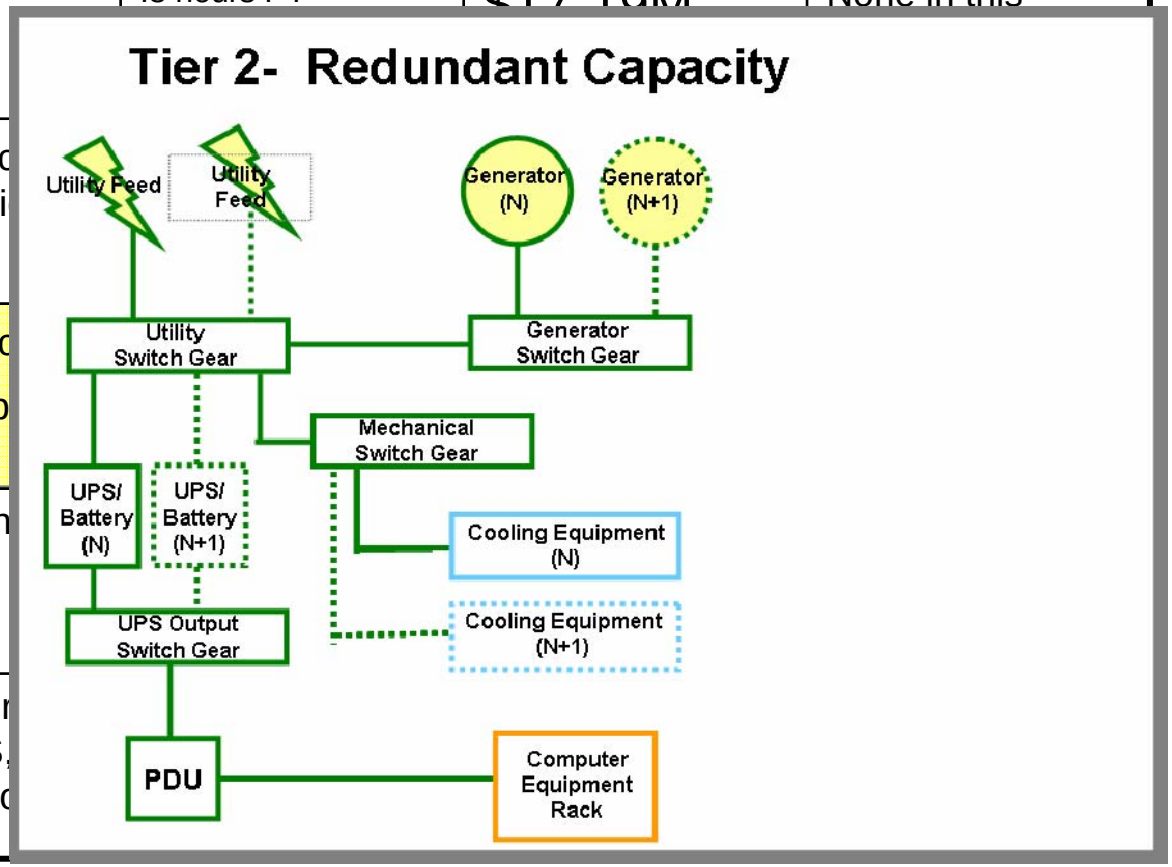
Description	Redundancy	Downtime	Cost*	Florida DC's
Tier 4 Fault Tolerant	"N+2" for all components	.8 hours PY	$17.19M	None in this
Tier 3 Concurrently Maintainable	"N+1" capac and distributi paths			
Tier 2 Redundant Capacity	"N+1" capac Single distrib path			
Tier 1 Basic Site Infrastructure	No redundan components			
Tier 0 Less than a Data Center	No generator Limited UPS, "building" coo			



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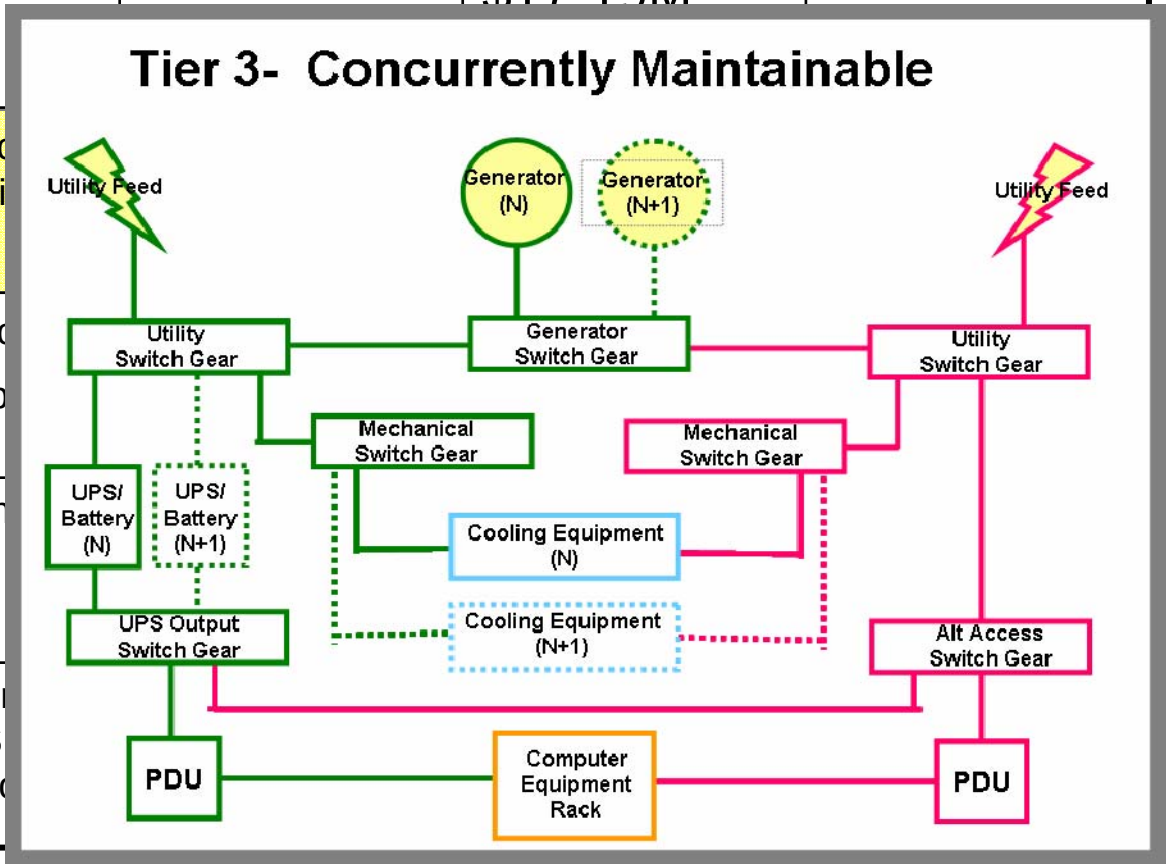


17,000 sq ft raised floor, 700 KW – Approximately the same as the SRC

The Uptime Institute has established a four "tier" system for evaluating data center reliability.

Description	Redundancy	Downtime	Cost*	Florida DC's
Tier 4 Fault Tolerant	"N+2" for all components	.8 hours PY 1 unplanned even per 5 years (HE)	$17-19M	**None in this Category**
Tier 3 Concurrently Maintainable	"N+1" capacity and distribution paths	1.6 hours PY 1 unplanned per 2.5 years	$15-17M	**SRC is close**
Tier 2 Redundant Capacity	"N+1" capacity Single distribution path	20 hours PY .5 planned and 1 unplanned	$9.5-11M	**DFS Fletcher, DCF Northwood, Northwestern Boca Raton**
Tier 1 Basic Site Infrastructure	No redundant components	30 hours PY 2 planned and 1.2 unplanned	$8.5-10M	**Most other FL data centers**
Tier 0 Less than a Data Center	No generator, Limited UPS, "building" cooling	40+ hours PY Many unplanned outages	N/A	**Field offices, server rooms**

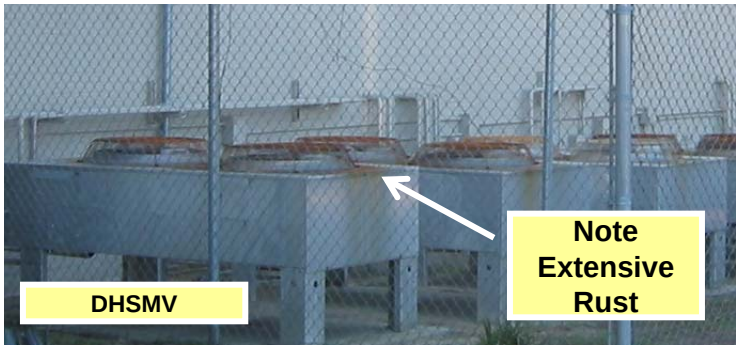
17,000 sq ft raised floor, 700 KW – Approximately the same as the SRC

Other key factors that we considered in our analysis

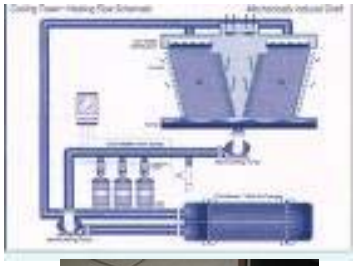
Security and Safety of Facility

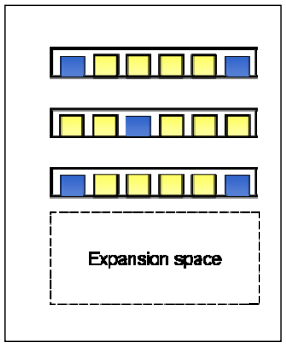
Power Capacity and Density

Age and Condition of Facility and Key Systems



Cooling Capacity





Current Layout and Available Capacity

Facility Expansion Potential

State of Florida Senate

Gartner

To identify potential "consolidation target" facilities, Gartner considers 4 high level evaluation factors.

1. Risk and Location
   - Risk factors in inherent in the facility or location (e.g. proximity to potential disaster, design flaws, suitability of structure and infrastructure)
2. Quality and Reliability
   - Quality and age of data center infrastructure (power, cooling, network and other critical systems). Age and expected life of infrastructure can also be a factor.
   - Level of Redundancy and fault built into the facility and its supporting systems
3. Current Capacity
   - Unutilized capacity (absolute, not percentage) available for growth or consolidation of other departments. Considers raised floor, power and cooling utilization.
4. Expansion Potential
   - Potential (absolute, not percentage) to cost-effectively and efficiently expand capacity power/cooling, as well as raised floor)

Gartner has completed an appraisal of the ability of the 20 largest facilities to serve as "consolidation targets"

Agency	Data Center	City	Square Ft.	Risk and Location	Quality and Reliability	Current Capacity	Expansion Potential	Overall
DFS	Fletcher Building	Tallahassee	16,328					Some Potential
DFS	Larson Building	Tallahassee	2,300					No Potential
DMS	Shared Resource Center	Tallahassee	29,232					High Potential
DCF	Northwood Center	Tallahassee	42,579					High Potential- Northwood
DOT	Suwanee	Tallahassee	6,440					Limited Potential
DOT	Turnpike- Boca Raton	Boca Raton	2,280					Limited Potential
DOT	Turnpike- Turkey Lake	Occee	1,200					Very Limited Potential
DOC	Blair Stone Road	Tallahassee	4,836					Some Potential
FDLE	2331 Phillips Rd	Tallahassee	9,900					Some Potential
HSMV	2900 Apalachee Pkwy	Tallahassee	11,562					Very Limited Potential
DOS	Northwood Center	Tallahassee	See above					High Potential-- Northwood
DEP	Twin Towers Lab	Tallahassee	3,268					No potential
DEP	Annex Building	Tallahassee	3,800					High Potential with Investment
DOE	Northwood Center	Tallahassee	See above					High Potential-- Northwood
DOE	Turlington	Tallahassee	3,360					Limited Potential
DACS	Mayo	Tallahassee	3,685					No Potential
DOR	Carlton	Tallahassee	7,738					No Potential
DOR	Tax World	Tallahassee	2,184					No Potential
FSU	Northwest Data Center	Tallahassee	20,000					High Potential
Lottery	Lottery DC	Tallahassee	5,000					High Potential with Investment
	Total for 20 Facilities		**175,692**					

	Reliability	Risk and Location	Capacity	Expansion
	Tier 3	No critical risk identified	Not used	Significant potential with light investment
	Tier 2+, little or no investment	Risks mitigated by moderate investment	Significant available capacity	Significant potential with moderate
	Tier 2, moderate investment	Requires acceptance of moderate risks	Some available capacity	Significant potential with heavy investment
	Tier 1, heavy investment required	Requires acceptance of significant risks	Little available capacity	Limited potential with moderate investment
	Tier 1, cost effective upgrade	Unacceptable risks	No available capaciity	Little or no potential

Based on our preliminary analysis of the 20 largest facilities that we have visited, we have grouped facilities into 3 categories

Ability of the DC to server as consolidation "target"

Yes	Maybe	No
• SRC • FSU Northwest Regional DC • Northwood Center • *DCF, DOE & DOS*	• DEP- Annex • Lottery • DOC- Blairstone • FDLE- Phillips • DFS- Fletcher	• DOT- Suwanee • DOT- Boca Raton • DOT- Turkey Lake • DFS- Larson • DACS- Mayo • HSMV- Kirkman • DEP Twin Towers • DOR Carlton • DOR TaxWorld • DOE Turlington

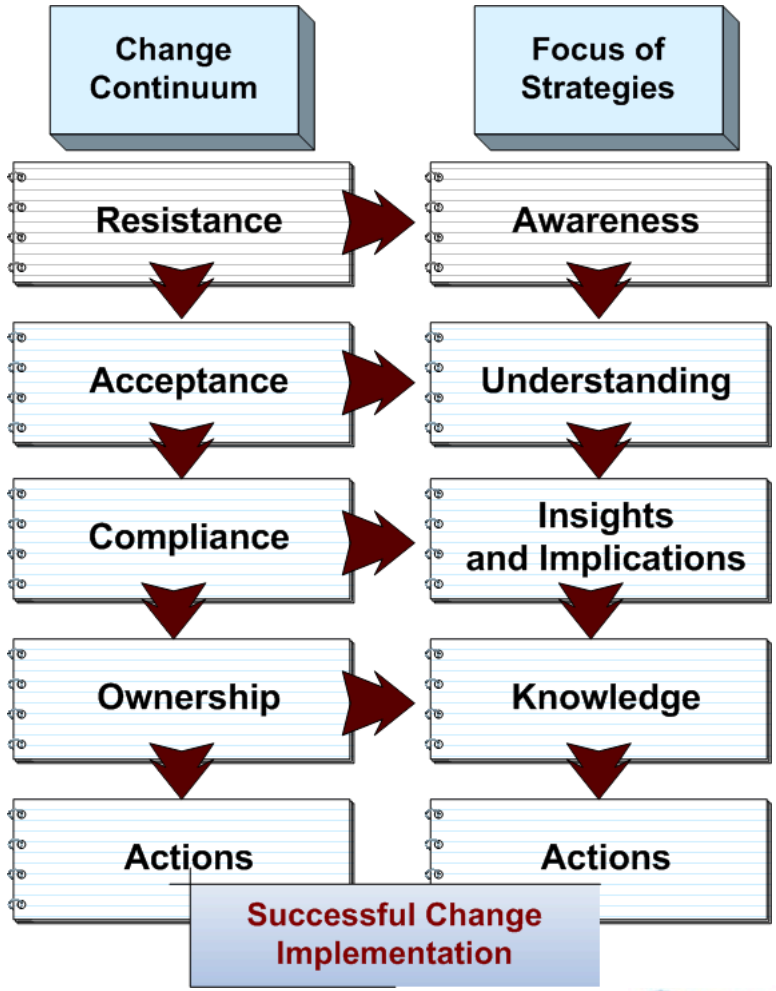
Critical Success Factors

Critical Success Factors

- **Meets the Unique Needs of Florida** - Tailored to the context, strengths and constraints of the State
- **Planning and Ownership** - Investment in a participatory planning effort focusing on strengthening a Statewide IT infrastructure that meets the needs of the client agencies
- **Standards** - Establishment and adherence to Statewide standards
- **Effective Governance Structure** –
  - Includes Business and IT Stakeholders
  - Built Upon Clear Understanding of the Business Objectives and Needs
  - Accountability at all levels
  - Service Level Agreements (SLA) Aligned with Business Objectives and Needs
- **Realistic Action Plan** - Detailed migration plan that is "doable" within the State's budget constraints – including clear guidelines for future budget requests and procurements

Change Management Activities

- **Awareness** – Transparency of the initiative and individual and collective roles and responsibilities
- **Understanding** – Providing timely and accurate information to support success
- **Ownership** – Knowledge of the reasons and benefits for the envisioned change
- **Participatory Actions for Success** – *Teaming for success*



Discussion