

PILSSM Management Requirement *or* Option for "Best-in-Class"

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Information Systems Asset Management

There are many False Perceptions about Software Asset Management

Misperceptions

- Low software costs come primarily from:
 - Data center size
 - Good negotiators
 - Large percentage of costs under ELAs
 - “Best-in-class” contract Terms & Conditions
 - “Best-in-class” processes
- Software costs are rising

Reality

- Over 90% of a data center's costs are directly attributed to effective Product Image Licensing (PILSSM) management.



How good is "Best-in-Class"?

ISAM Research Facts

- Average mainframe software costs at \$5700 per MIPS.
- "Best-in-Class" (Top 10%) data center spends less than \$2500 per MIPS.
- "Best-in-Class" companies have 80% fewer software Vendors and Products than average.
- Over 25% of the products at an average data center can be replaced.
- Major ISVs have over 250 unique pricing tiers.
- Average annual software savings potential for 1000 MIPS data center is \$3.2 million!



How good is "Best-in-Class"?

- "Best-in-Class" data centers:
 - manage their IBM costs
 - spend less than \$1000 per mips on IBM software

IBM Pricing Research

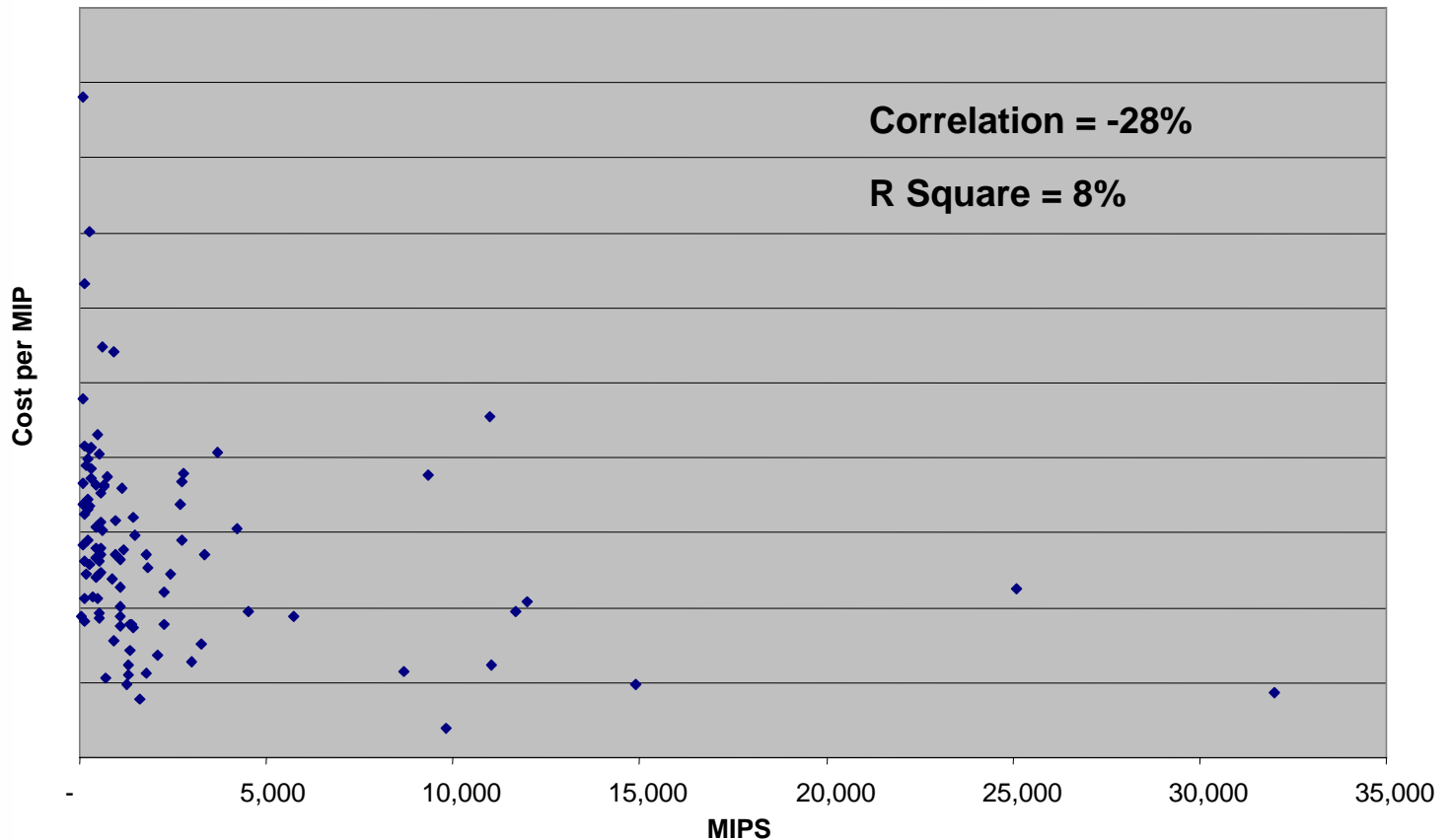
- z/OS 5694-A01 January 2004 price book has 1,671 pricing options and features.
- Top 15 IBM mainframe products have over 15,000 pricing options.
- Over 90% of data centers audited by ISAM are spending 10-20% in unnecessary fees to IBM.



Larger data centers do not always have lower unit costs.

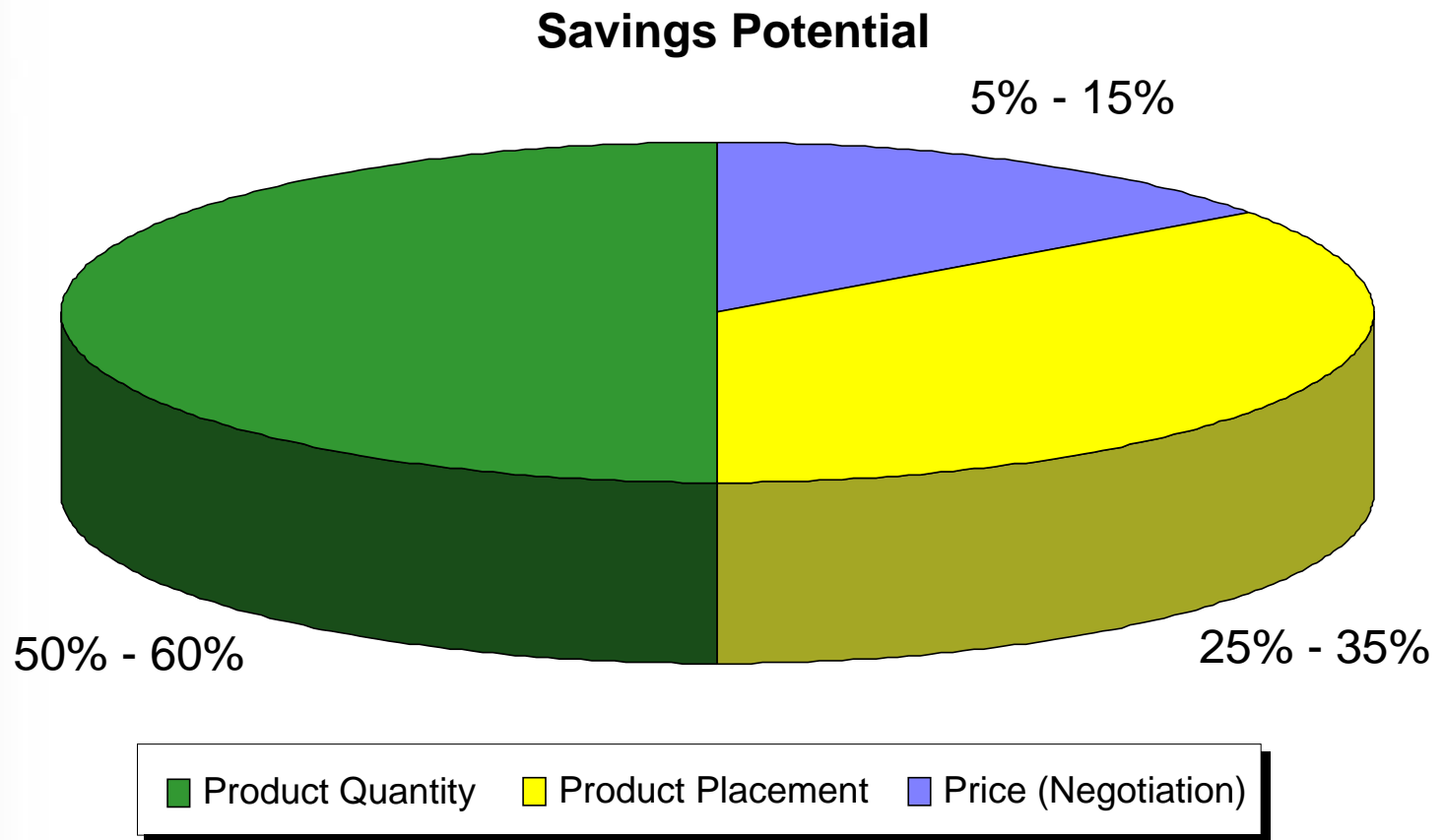
A data center's costs are determined by factors outside of data center size.

Data Center size vs. Unit Cost
Random sampling of 100 Companies



A data center's savings potential comes entirely from three activities -

Savings from negotiations generate only 5-15% of total savings opportunities!



"Best-in-Class" companies maintain low software costs by:

1) Managing costs across each category

"Best-in-Class" Average Cost Allocation by Category

Category	Industry Average	"Best-in-Class"
Database and File Management	23%	13%
Development Tools	23%	15%
End User Tools	1%	0%
Operating Systems	21%	30%
Production Management	13%	26%
Resource and Performance Management	18%	16%
Total Cost	100%	100%

Email mswanson@isamgroup.com for a sample list of vendors and products in each category.



"Best-in-Class" companies maintain low software costs by:

2) Having fewer products than average

"Best-in-Class" Average Product Allocation by Category

Category	Product Allocation by Category		Product Count Variance between Average and "Best-in-Class"
	Industry Average	"Best-in-Class"	
Database and File Management	20%	13%	-58%
Development Tools	31%	34%	-29%
End User Tools	5%	0%	-95%
Operating Systems	5%	8%	0%
Production Management	16%	20%	-23%
Resource and Performance Management	23%	26%	-30%
Total Products	100%	100%	-36%

"Best-in-Class" companies maintain
low software costs by:
3) Utilizing available product alternatives

Product Alternatives by Category
Top 5000 software products

Category	Products	Alternatives	%
Database and File Management	1,188	376	32%
Development Tools	1,483	383	26%
End User Tools	380	17	5%
Operating Systems	178	3	2%
Production Management	616	363	59%
Resource and Performance Management	1,155	618	53%
	5,000	1,760	35%



PILSSM management questions

- What is PILSSM management?
- Can PILSSM management save me money?
- How do I begin utilizing PILSSM management?
 - PILSSM management case study
- When can I realize the savings from PILSSM management?



Question: What is PILSSM management?

- PILSSM is the acronym for Product Image Licenses.
- 1 product on one image (LPAR or CPU) represents 1 PILSM.
- PILSSM management is the strategic management of a software portfolio to minimize the financial costs associated with inventory size and placement.



Question: What is PILSSM management? – cont.

- PILSSM analysis is done by:
 - Collect detail usage data:
 - by product
 - by CPU (or LPAR)
 - Identify and rank products, by software category, representing 80%, 90% and 100% of total cumulative usage by category.
 - Identify and rank CPUs, by product within a given category, representing 80%, 90% and 100% of total cumulative usage by product.
 - One product on one CPU represents one PILSM.



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Question: Can PILSSM management save me money?

PILSSM management can result in substantial savings across many vendors.

Anonymous Company – Real Data
(000)

Vendor	Budget Cost ¹	PILS SM Cost ²	Savings
Vendor 1	\$ 1,064	\$ 352	\$ 712
Vendor 2	460	168	292
Vendor 3	336	149	187
Vendor 4	80	15	65
Vendor 5	65	38	27
Vendor 6	52	9	43
Vendor 7	41	6	35
All Others	302	81	221
Totals	\$ 2,307	\$ 803	\$ 1,504

NOTE

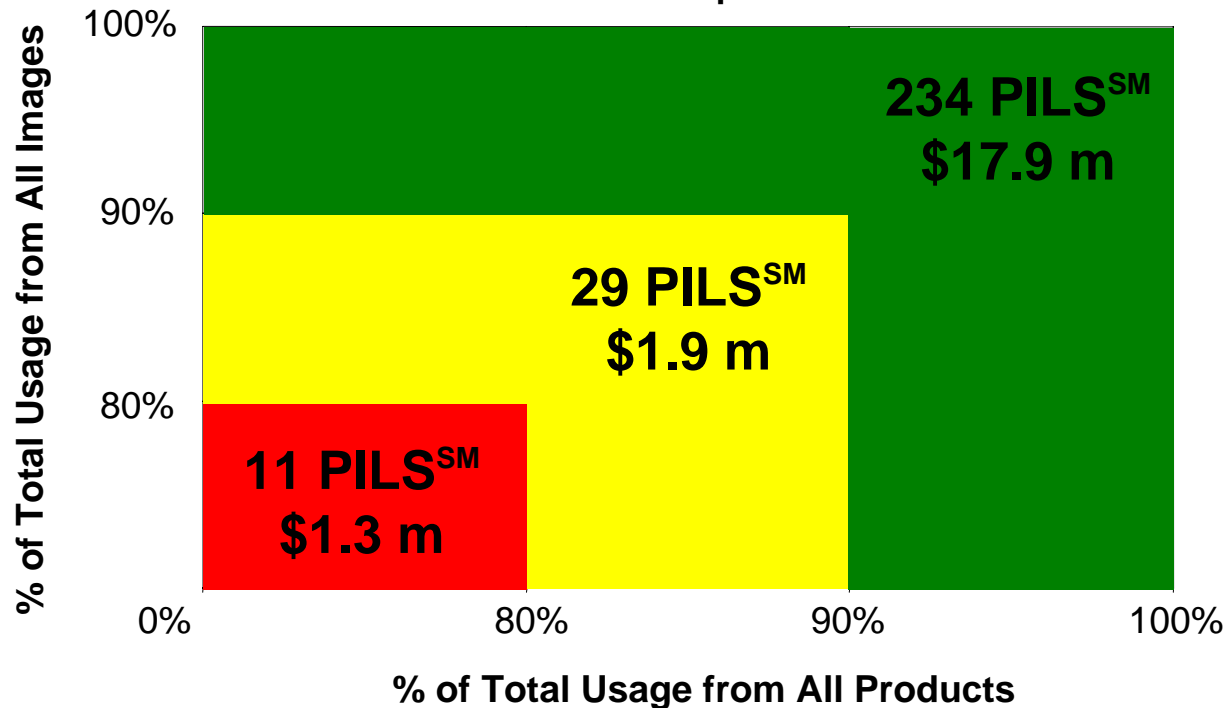
1. Actual 2003 budgeted cost.
2. Cost of software utilizing PILSSM management.



Question: Can PILSSM management save me money?

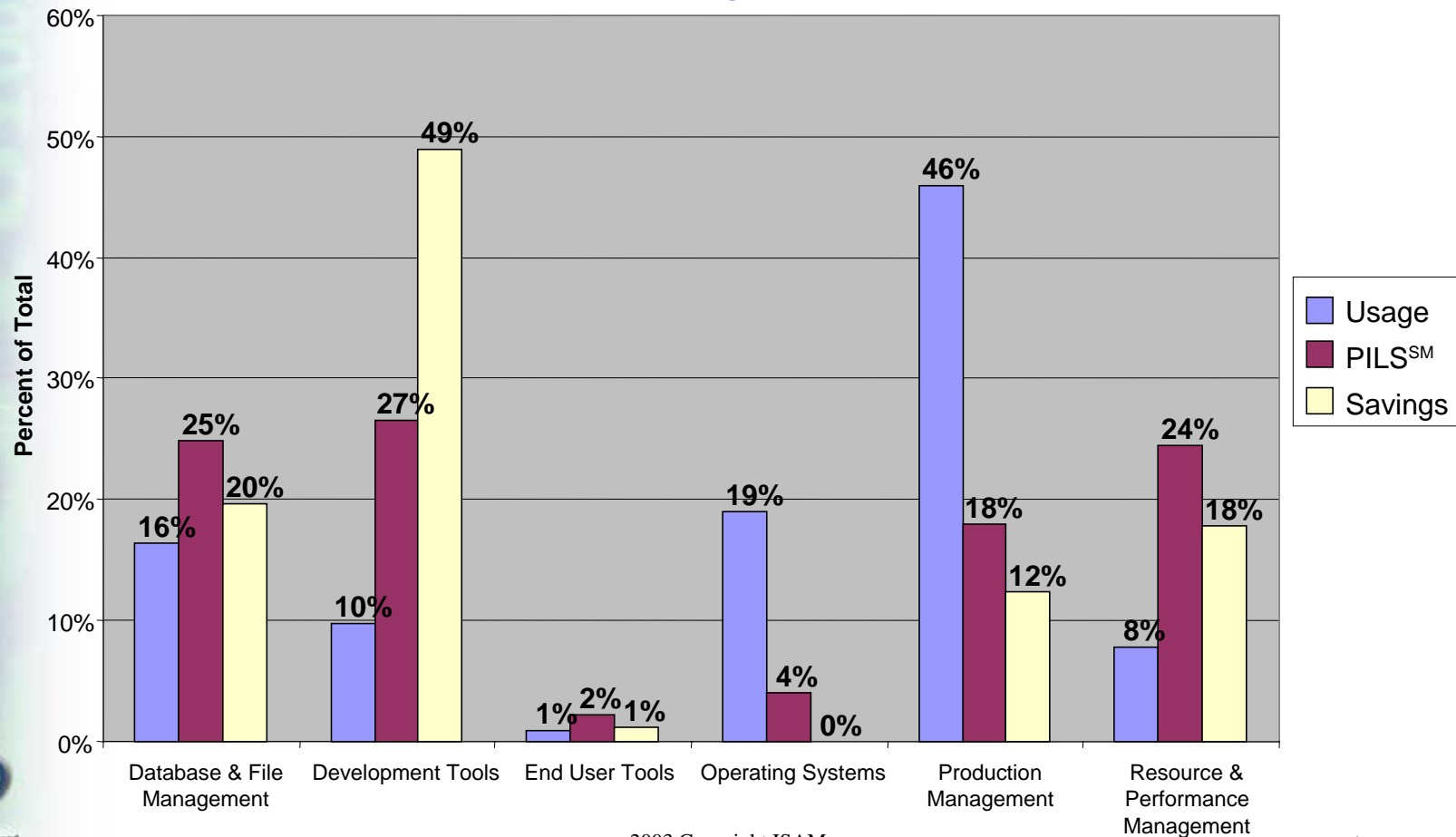
PILSSM management shows how \$16.3 million is spent on low usage products and capacity

Anonymous Company – Real Data
PILSSM Comparison



Question: Can PILSSM management save me money?

Although Database & File Management and Development Tools represent only 26% of total usage, they represent 51% of total PILSSM and 69% of total savings opportunities.



PILSSM management questions

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Question: How do I begin utilizing PILSSM management?

Step 1

- Collect usage data on entire inventory.
 - Companies have collected usage data utilizing 3 different methods:
 - Fujitsu usage service
 - SoftAudit software license from Isogon
 - Internal (software and/or surveys)
 - Usage data needs to be at product level total by image (CPU or LPAR).



Question: How do I begin utilizing PILSSM management?

Step 2

- Perform financial analysis on usage data.
 - Products used with a financial obligation.
 - Products with pricing based on CPUs or MIPS.
 - Four product placement (PILSSM) scenarios:
 - 100% x 100% (100% Products x 100% Images)
 - 100% x 90%
 - 90% x 90%
 - 80% x 80%
 - Project costs utilizing existing ELA costs and list price.



Question: How do I begin utilizing PILSSM management?

Step 3

- Create product usage charts by:
 - Products sorted by category/activity.
 - Product usage identified on each CPU.
 - Products listed in order of usage.
 - highest usage to lowest usage
 - 1-10 column heading represents CPU with the greatest usage for each product (1=greatest ; 10=lowest).
 - Usage is cumulative usage for all CPUs.



Question: How do I begin utilizing PILSSM management?

Step 4

- Create Usage Charts to reflect:
 - Products in Red are "Core" products - products representing Top 80% of total usage.
 - Products in Blue are products which represent incremental 10% of total usage
 - Red + Blue products represent Top 90% of total usage
 - Products in Green are products which represent bottom 10% of total usage.
 - CPUs colored utilizing the same color metrics as products (Red = Core, Blue, Green)



Product Usage by CPU

Vendor	Product	Image #1	Image #2	Image #3	Image #4	Image #5	Image #6	Image #7	Image #8	Image #9	Image #10	Total
Vendor 2	Product 1	9%	7%	13%	4%	5%	33%	1%	10%	2%	16%	100%
Vendor 2	Product 2	9%	35%	0%	0%	3%	0%	0%	0%	0%	53%	100%
Vendor 1	Product 3	3%	61%	0%		0%	0%	0%	0%	0%	35%	100%
Vendor 4	Product 4	11%	11%	20%	5%	6%	20%	2%	8%	1%	16%	100%
Vendor 1	Product 5	11%	18%	5%	4%	19%	4%	1%	10%	1%	27%	100%
Vendor 3	Product 6	8%	13%	9%	13%	6%	11%	2%	10%	2%	24%	100%
Vendor 5	Product 7	9%	16%	20%	3%	5%	16%		8%		23%	100%
Vendor 1	Product 8	2%	7%	13%	0%	1%	19%	13%	3%	13%	28%	100%
Vendor 2	Product 9	1%	0%	18%	16%	2%	20%	13%	12%	14%	4%	100%
Vendor 3	Product 10	13%	6%	4%	19%	12%	2%	2%	30%	3%	9%	100%
Vendor 3	Product 11	14%	6%	5%	20%	9%	2%	3%	30%	3%	10%	100%
Vendor 3	Product 12	14%	6%	5%	18%	9%	2%	3%	29%	3%	10%	100%
Vendor 1	Product 13	0%		99%		0%			1%			100%
Vendor 8	Product 14	17%		0%		0%			83%			100%
Vendor 2	Product 15	11%			54%	11%			25%			100%
Vendor 2	Product 16	1%	2%	1%	0%	0%	5%	0%	68%	0%	24%	100%
Vendor 3	Product 17	10%	12%	3%	6%	10%	5%	0%	40%		15%	100%
Vendor 3	Product 18	19%	8%	4%	8%	5%	1%	4%	34%	3%	16%	100%
Vendor 6	Product 19	5%	6%	15%		0%		10%	54%	7%	2%	100%
Vendor 2	Product 20	0%				0%			100%			100%
Vendor 2	Product 21	36%	15%	0%		20%	0%	0%	20%	0%	9%	100%
Vendor 2	Product 22			38%		11%		35%	17%	0%		100%
Vendor 2	Product 23	3%	33%	9%		0%			5%	16%	35%	100%
Vendor 1	Product 24	1%	25%	0%		0%	0%	0%	1%	0%	73%	100%
Vendor 4	Product 25	0%	0%	92%	3%	0%	3%		0%		1%	100%
Vendor 4	Product 26		0%	100%			0%		0%			100%
Vendor 3	Product 27	16%			25%	1%			58%			100%
Vendor 7	Product 28	0%			39%	49%		1%	11%			100%
Vendor 3	Product 29	11%			2%	42%			45%			100%
Vendor 3	Product 30	19%	0%	2%	9%	11%	0%		58%	0%	0%	100%
Vendor 2	Product 97					100%						100%
Vendor 4	Product 98					100%						100%
Vendor 3	Product 99	100%										100%



Product Usage Ranking

Vendor	Product	1	2	3	4	5	6	7	8	9	10	Total	TOTAL
Vendor 2	Product 1	33%	49%	62%	71%	81%	87%	92%	96%	99%	100%	3,270,211	36%
Vendor 2	Product 2	53%	88%	97%	100%	100%	100%	100%	100%	100%	100%	1,677,735	54%
Vendor 1	Product 3	61%	96%	99%	100%	100%	100%	100%	100%	100%		1,076,677	65%
Vendor 4	Product 4	20%	41%	57%	67%	78%	86%	92%	97%	99%	100%	712,199	73%
Vendor 1	Product 5	27%	46%	63%	74%	85%	90%	94%	98%	99%	100%	444,132	78%
Vendor 3	Product 6	24%	38%	51%	62%	72%	81%	89%	96%	98%	100%	285,735	81%
Vendor 5	Product 7	23%	43%	59%	75%	84%	92%	97%	100%			242,762	84%
Vendor 1	Product 8	28%	47%	61%	74%	87%	94%	97%	99%	100%	100%	221,100	86%
Vendor 2	Product 9	20%	39%	55%	69%	82%	94%	98%	99%	100%	100%	147,176	88%
Vendor 3	Product 10	30%	49%	62%	74%	83%	89%	93%	96%	98%	100%	146,616	89%
Vendor 3	Product 11	30%	50%	63%	73%	82%	88%	92%	95%	98%	100%	135,241	91%
Vendor 3	Product 12	29%	47%	61%	72%	81%	87%	92%	95%	98%	100%	122,556	92%
Vendor 1	Product 13	99%	100%	100%	100%							98,763	93%
Vendor 8	Product 14	83%	100%	100%	100%							89,740	94%
Vendor 2	Product 15	54%	79%	89%	100%							65,881	95%
Vendor 2	Product 16	68%	92%	97%	98%	99%	100%	100%	100%	100%	100%	43,922	95%
Vendor 3	Product 17	40%	54%	66%	76%	86%	92%	97%	100%	100%		39,199	96%
Vendor 3	Product 18	34%	53%	68%	76%	84%	88%	92%	96%	99%	100%	37,323	96%
Vendor 6	Product 19	54%	69%	79%	86%	93%	98%	100%	100%			35,531	97%
Vendor 2	Product 20	100%	100%	100%								28,392	97%
Vendor 2	Product 21	36%	56%	75%	90%	99%	100%	100%	100%	100%		28,103	97%
Vendor 2	Product 22	38%	73%	89%	100%	100%						24,382	98%
Vendor 2	Product 23	35%	68%	84%	93%	97%	100%	100%				22,299	98%
Vendor 1	Product 24	73%	98%	99%	100%	100%	100%	100%	100%	100%		17,564	98%
Vendor 4	Product 25	92%	95%	98%	99%	100%	100%	100%				17,231	98%
Vendor 4	Product 26	100%	100%	100%	100%							15,961	98%
Vendor 3	Product 27	58%	83%	99%	100%							15,020	99%
Vendor 7	Product 28	49%	88%	99%	100%	100%						13,385	99%
Vendor 3	Product 29	45%	87%	98%	100%							13,071	99%
Vendor 3	Product 30	58%	77%	88%	97%	99%	100%	100%	100%	100%		12,844	99%
Vendor 2	Product 97	100%										1	100%
Vendor 4	Product 98	100%										1	100%
Vendor 3	Product 99	100%										1	100%



PILSSM Usage by Category

Category	100% x 100%	100% x 90%	90% x 90%	80% x 80%
Database & File Management	451	293	35	18
Development Tools	482	295	318	278
End User Tools	39	26	9	3
Operating Systems	72	41	18	10
Production Management	325	178	36	17
Resource & Performance Management	443	293	24	13
<u>TOTAL</u>	<u>1,812</u>	<u>1,126</u>	<u>440</u>	<u>339</u>

****NOTE****

Data reflects total PILSSM under each scenario.



PILSSM Summary

- Using 297 products.
- Running 10 images.
- Managing 1,812 PILSSM.
- 2003 software expense \$16,609,314.

TOTAL					
Products	Usage	Products	Images	PILS	5 yr \$
100%	100%	297	10	1,812	84,370,352
100%	90%	297	10	1,126	53,454,313
90%	90%	46	10	440	9,859,781
80%	80%	33	10	339	4,077,894

****NOTE****

Financial costs are five year projections based on various PILSSM scenarios. Costs from 100%x100% scenario are based on either existing multi-year contract obligations or 2003 budget amounts carried forward for five years.

PILSSM Financial Summary

5 year Cost Projections

	100% 100%	100% 90%	90% 90%	80% 80%
Database & File Management	\$ 17,294,451	\$ 11,224,648	\$ 832,205	\$ 185,701
Development Tools	\$ 39,586,799	\$ 24,442,192	\$ 7,112,537	\$ 3,286,113
End User Tools	\$ 986,573	\$ 629,133	\$ 199,396	\$ 141,276
Operating Systems	\$ -	\$ -	\$ -	\$ -
Production Management	\$ 8,734,872	\$ 4,921,734	\$ 1,343,797	\$ 326,776
Resource & Performance Management	\$ 17,767,657	\$ 12,236,607	\$ 371,845	\$ 138,028
TOTAL	\$ 84,370,352	\$ 53,454,313	\$ 9,859,781	\$ 4,077,894
Savings Potential	na	\$ 30,916,040	\$ 74,510,572	\$ 80,292,459
Savings Variance	na	-37%	-88%	-95%

****NOTE****

- Financial costs are five year projections based on various PILSSM scenarios.
- Costs are based on either existing multi-year contract obligations or 2003 budget amounts carried forward for five years.
- Costs are for selected ISVs and do not include IBM software costs.
- Assumes 5% p.a. capacity growth.
- Assumes no vendor price increase.
- Savings potential figures do not take into account committed future vendor payment streams.



Database & File Management

- Using 67 products.
- Running on 10 images.
- Managing 451 PILSSM.
- 2003 budget \$ 3,002,463.

Database & File Management

Products	Usage	Products	Images	PILS	5 yr \$
100%	100%	67	10	451	17,294,451
100%	90%	67	10	293	11,224,648
90%	90%	6	9	35	832,205
80%	80%	4	8	18	185,701

Development Tools

- Using 99 products.
- Running on 10 images.
- Managing 482 PILSSM.
- 2003 budget \$ 7,884,935.

Development Tools					
Products	Usage	Products	Images	PILS	5 yr \$
100%	100%	99	10	482	39,586,799
100%	90%	99	10	295	24,442,192
90%	90%	23	21	318	7,112,537
80%	80%	18	21	278	3,286,113

Production Management

- Using 46 products.
- Running on 10 images.
- Managing 325 PILSSM.
- 2003 budget \$ 1,764,337.

Production Management					
Products	Usage	Products	Images	PILS	5 yr \$
100%	100%	46	10	325	8,734,872
100%	90%	46	10	178	4,921,734
90%	90%	7	9	36	1,343,797
80%	80%	4	6	17	326,776

Resource & Performance Management

- Using 65 products.
- Running on 10 images.
- Managing 443 PILSSM.
- 2003 budget \$ 3,704,211.

Resource & Performance Management					
Products	Usage	Products	Images	PILS	5 yr \$
100%	100%	65	10	443	17,767,657
100%	90%	65	10	293	12,236,607
90%	90%	5	8	24	371,845
80%	80%	4	8	13	138,028



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PILSSM Savings can be immediate and carry forward

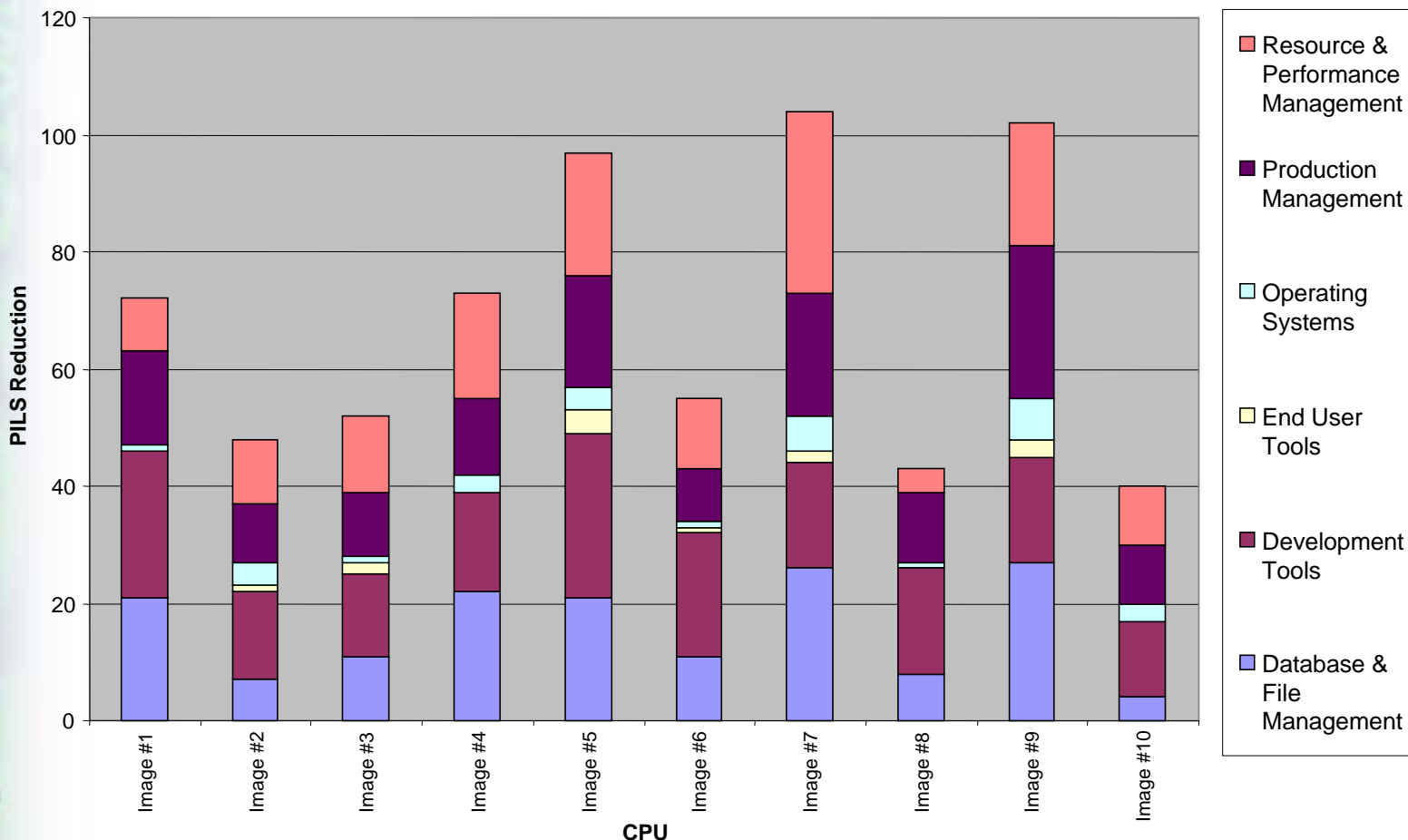
Reducing CPUs from 100%x100% to 100%x90%

<u>Category</u>	<	I N C R E M E N T A L S A V I N G S					>	TOTAL
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>		<u>5 Year</u>	
Database & File Management	\$ 1,082,454	\$ 922,032	\$ 1,073,575	\$ 1,317,068	\$ 1,674,674		\$ 6,069,803	
Development Tools	\$ 3,060,531	\$ 3,211,391	\$ 3,214,208	\$ 2,750,647	\$ 2,907,830		\$ 15,144,607	
End User Tools	\$ 90,953	\$ 71,779	\$ 69,270	\$ 64,282	\$ 61,157		\$ 357,441	
Operating Systems	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	
Production Management	\$ 770,990	\$ 689,569	\$ 726,789	\$ 759,467	\$ 866,323		\$ 3,813,138	
Resource & Performance Mgmt.	\$ 1,160,711	\$ 1,058,902	\$ 1,081,132	\$ 1,103,500	\$ 1,126,806		\$ 5,531,051	
TOTAL	\$ 6,165,640	\$ 5,953,672	\$ 6,164,974	\$ 5,994,964	\$ 6,636,790		\$ 30,916,040	



Case Study **Product Reduction varies by CPU when reducing PILSSM from 100% x 100% to 100% x 90%**

**PILSSM Reduction
Eliminated Products at 100% x 90%**



Conclusions

- PILSSM management can create immediate savings from both IBM and ISV vendors.
- Case Study showed:
 - First year savings from PILSSM management is \$6.2 million by going to 100% x 90% usage.
 - \$30.9 million in PILSSM savings (five-year) by reducing footprints on existing products to where they have 90% of total usage.
- PILSSM management requires having usage data.
- PILSSM management requires performing accurate financial forecasting on multiple hardware configurations.
- PILSSM management requires executive support.
 - Start with financial benchmark of savings potential to identify specific savings targets and where the savings is to be realized.



PILSSM Management - Requirement *or* Option for "Best-in-Class"

Empirical research indicate that you can not get to "Best-in-Class" without implementing effective PILSSM management.



*“Knowledge maximizes value....
Create Savings through Knowledge”*

For further information
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