

Red Hat Solutions for System z

MISSION STATEMENT:

**TO BE THE CATALYST IN COMMUNITIES
OF CUSTOMERS, CONTRIBUTORS, AND PARTNERS
CREATING BETTER TECHNOLOGY
THE OPEN SOURCE WAY.**

Red Hat: Global View

- \$653 million dollars of revenue in FY09
- 25% revenue growth year-over-year
- 2900+ people in 29 countries, 67 offices (+25%)
- \$800+ million in cash & investments
- \$0 debt

Red Hat: System z View

- Red Hat Fiscal Years (global view)
 - 2005: +227%
 - 2006: +331%
 - 2007: +256%
 - 2008: +269%
 - 2009: Announcing 25-MAR

Red Hat's System z Mission

- Create & Expand Linux on System z Communities *who?*
- Innovate Linux on System z Technology
Embrace “Linux is Linux” *what workloads?*
- Demonstrate higher efficiencies (economical, technical, processes) when deploying on System z *why?*

Expand the Community

- Through Sales
 - North American Government is 30% of global installation base

-

Expand the Community

- Through Sales



Expand the Community

- Through Training & Academia
 - Undergraduate programs



MARIST

 **SAN DIEGO STATE UNIVERSITY**



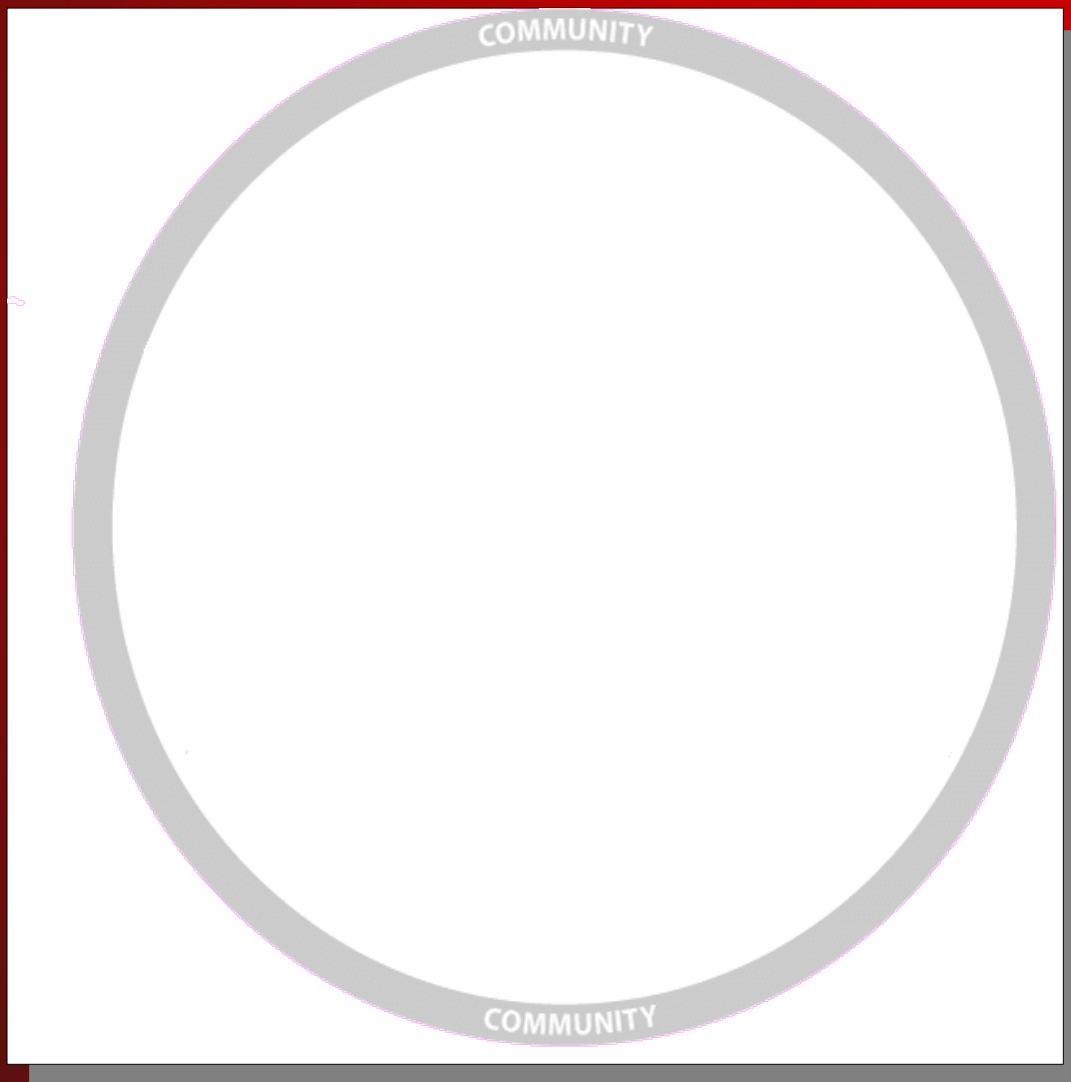
James E. Sheppard, President

BINGHAMTON
UNIVERSITY

State University of New York

 **REPUBLIC**
POLYTECHNIC
<http://www.rp.sg>

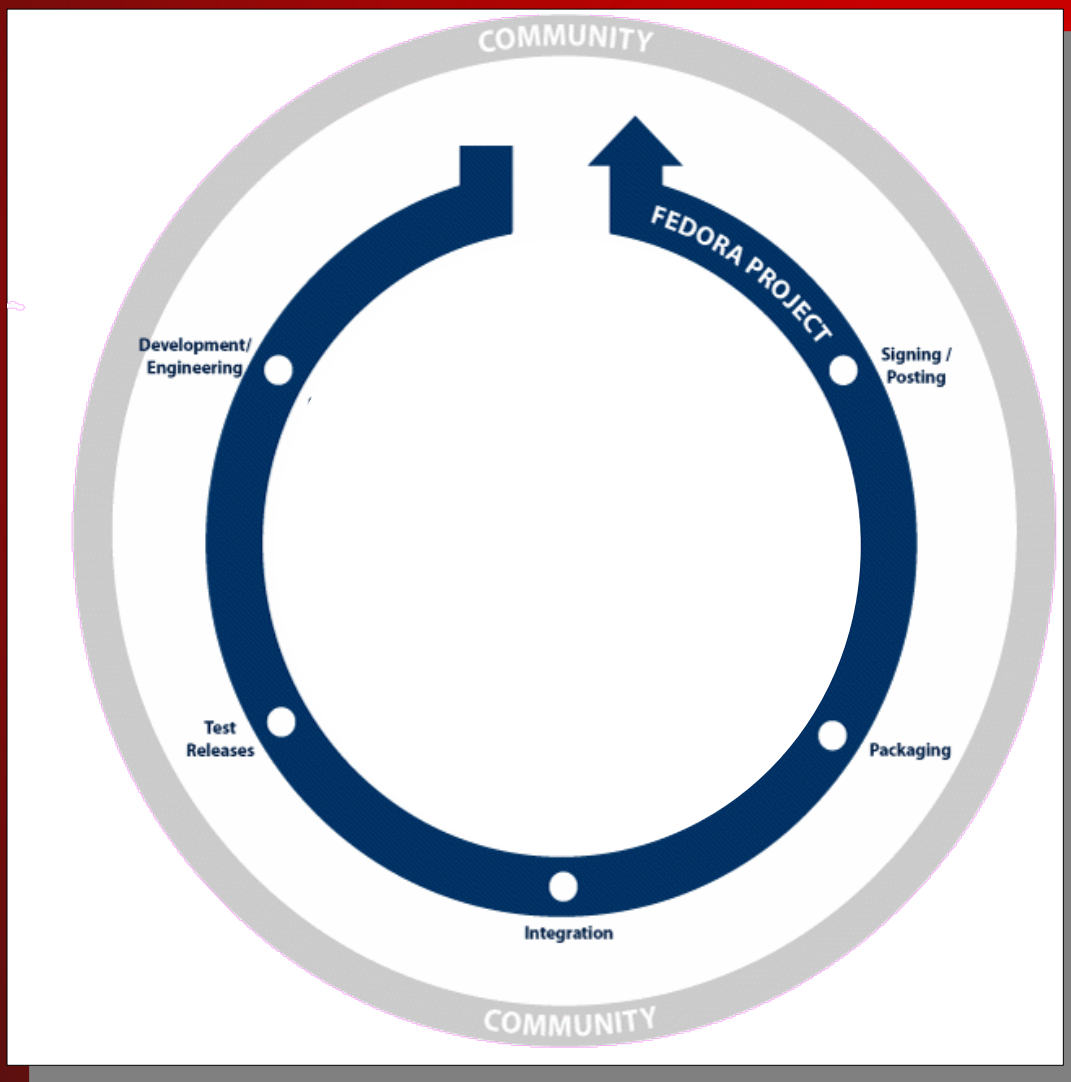
Innovate the Technology



COMMUNITY

- Development with “upstream communities”
- Kernel, glibc, Apache, etc
- Collaboration with open source community; individuals, business partners, customers

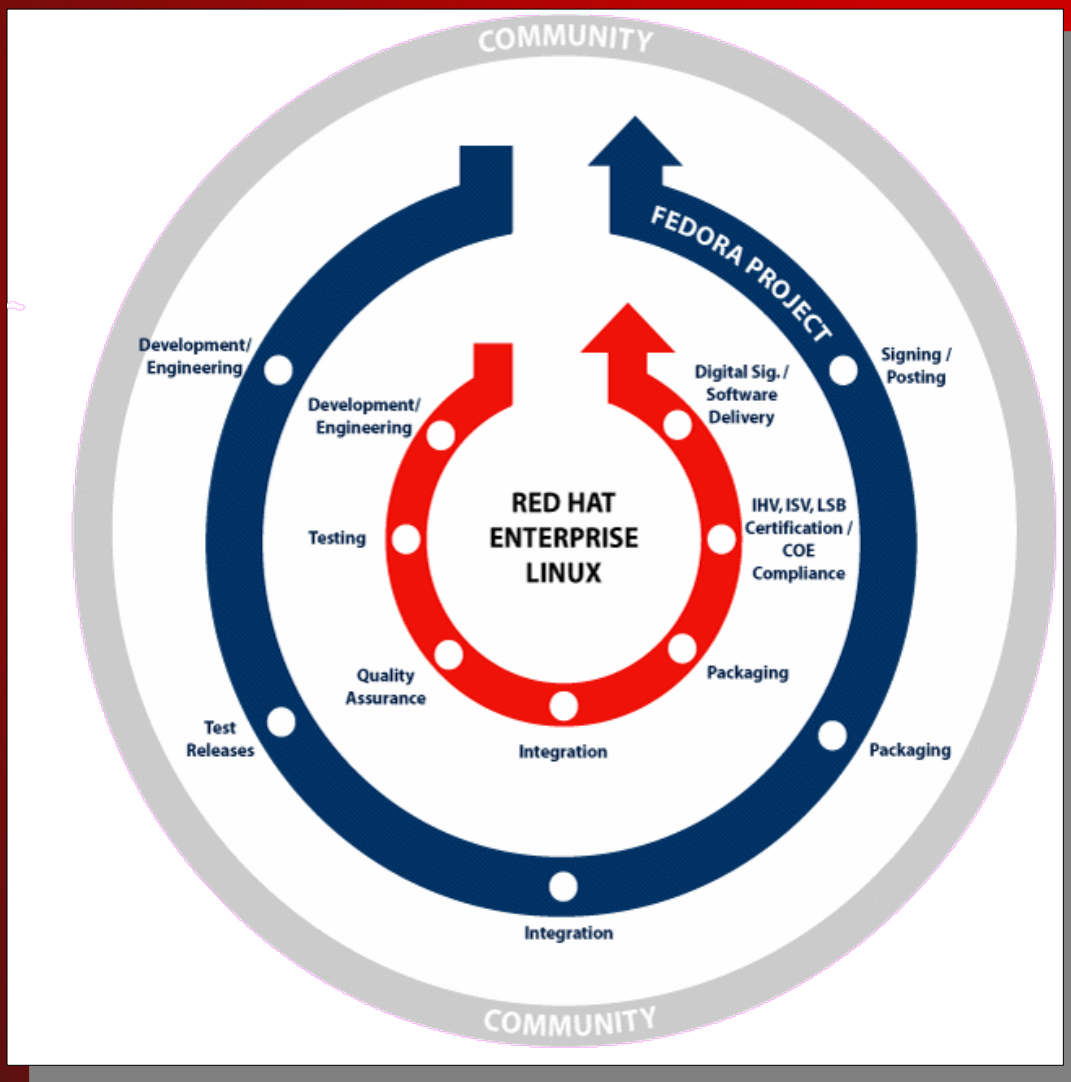
Innovate the Technology



FEDORA

- Bleeding edge
- Sets technology direction for RHEL
- Community supported
- Released ~6mo cycles
- Fedora 8,9,10 = RHEL6

Innovate the Technology



RHEL

- Stable, matured
- Q&A, testing
- H/W & S/W Certifications
- 7yr maintenance
- Core ABI compatibility
- Major releases 2-3yr cycle

Management Services

JBoss

Network Srvcs

Exchange

Red Hat

Red Hat

Windows

**Virtual
Environment**

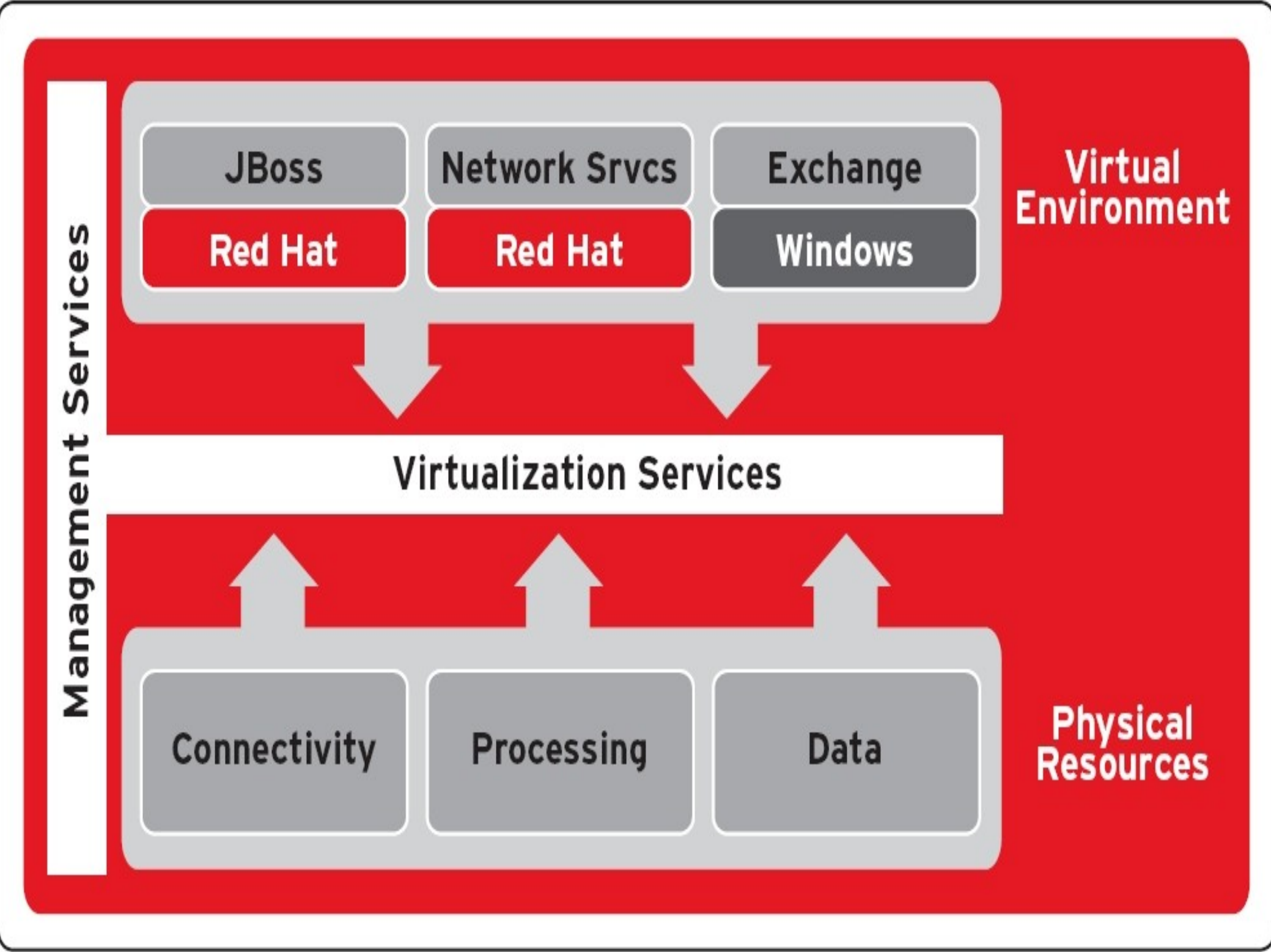
Virtualization Services

Connectivity

Processing

Data

**Physical
Resources**



Management Application

CIM Provider

C

Python

Perl

OCaml

libvirt

xen

kvm

qemu

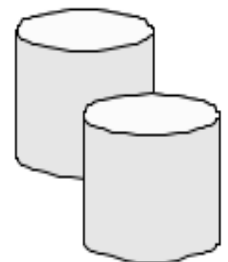
OpenVZ

LXC

LDoms

Storage

hypervisor



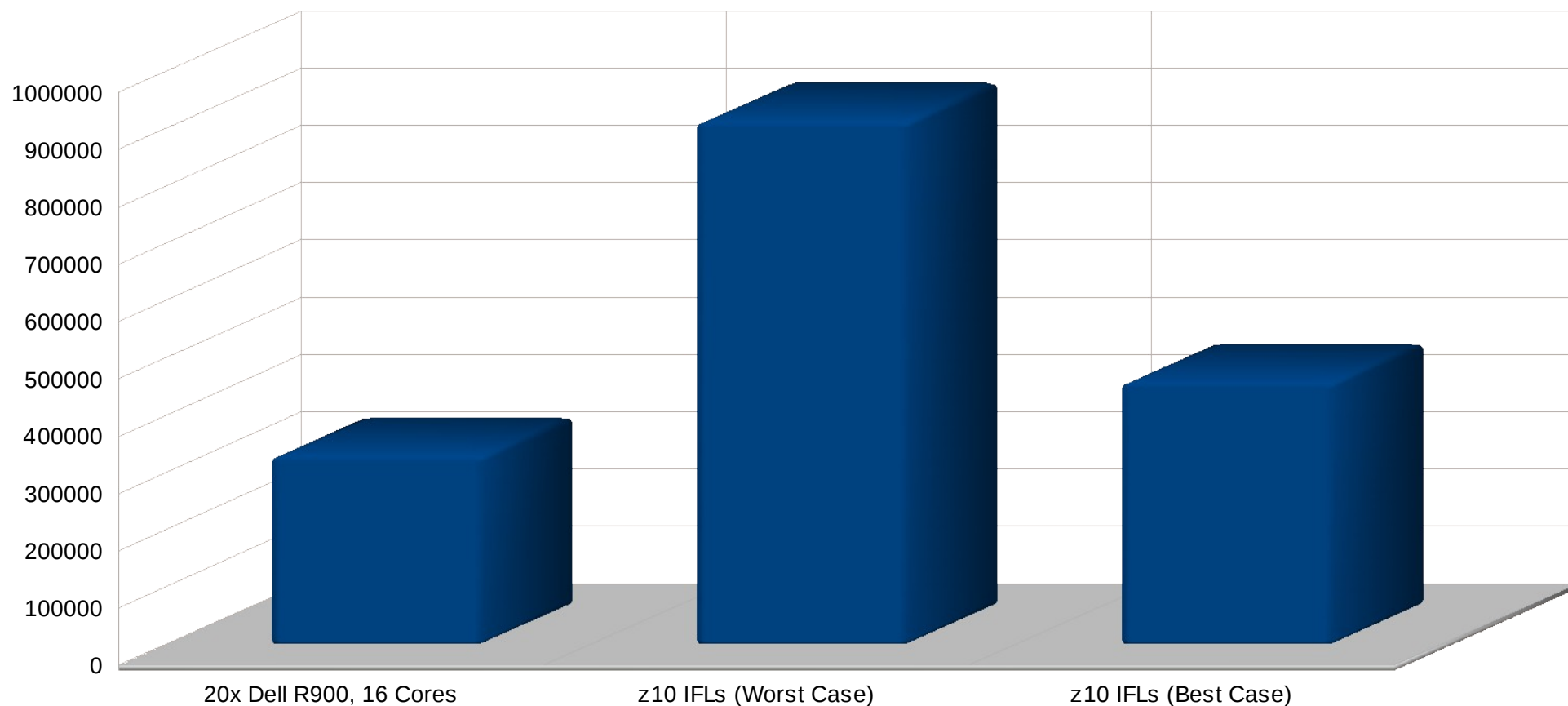
Demonstrate Efficiencies

- DC Government Agency was evaluating future Virtualization strategy:
 - Dell & VMWare & RHEL
 - Dell & Red Hat Virtualization
 - System z & Red Hat

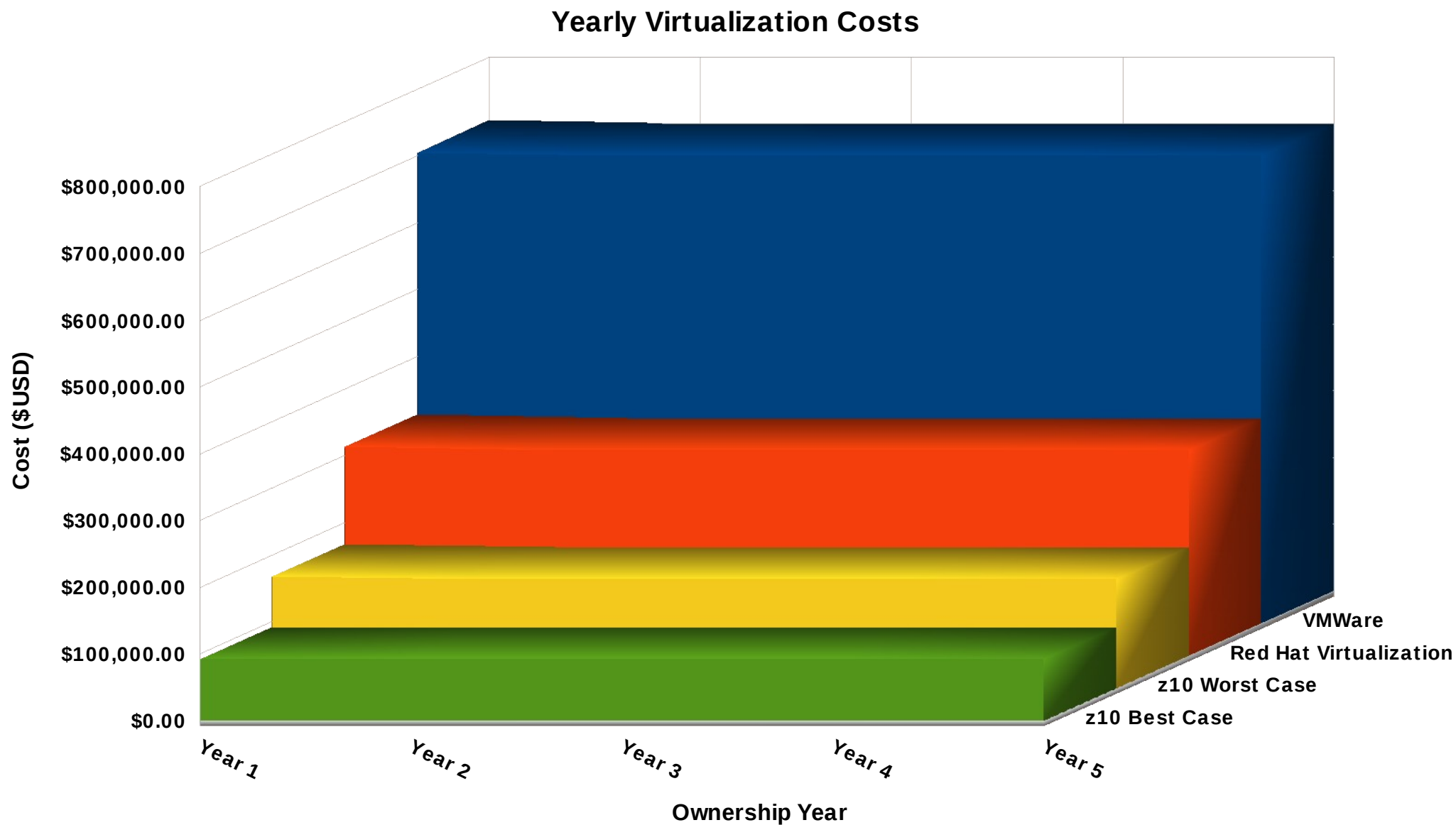
Demonstrate Efficiencies

Hardware Virtualization Platforms

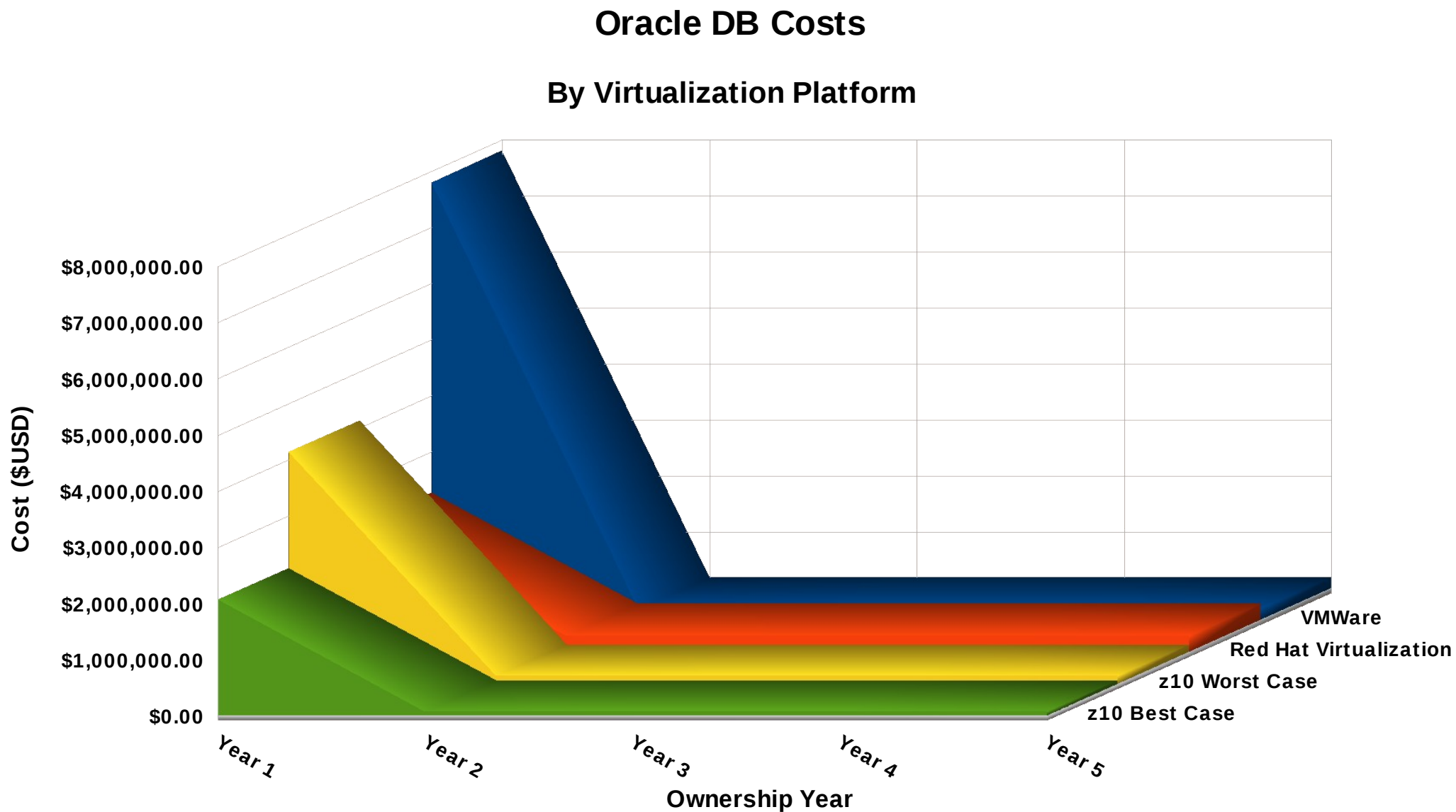
Estimated Acquisition Cost (TCA)



Demonstrate Efficiencies

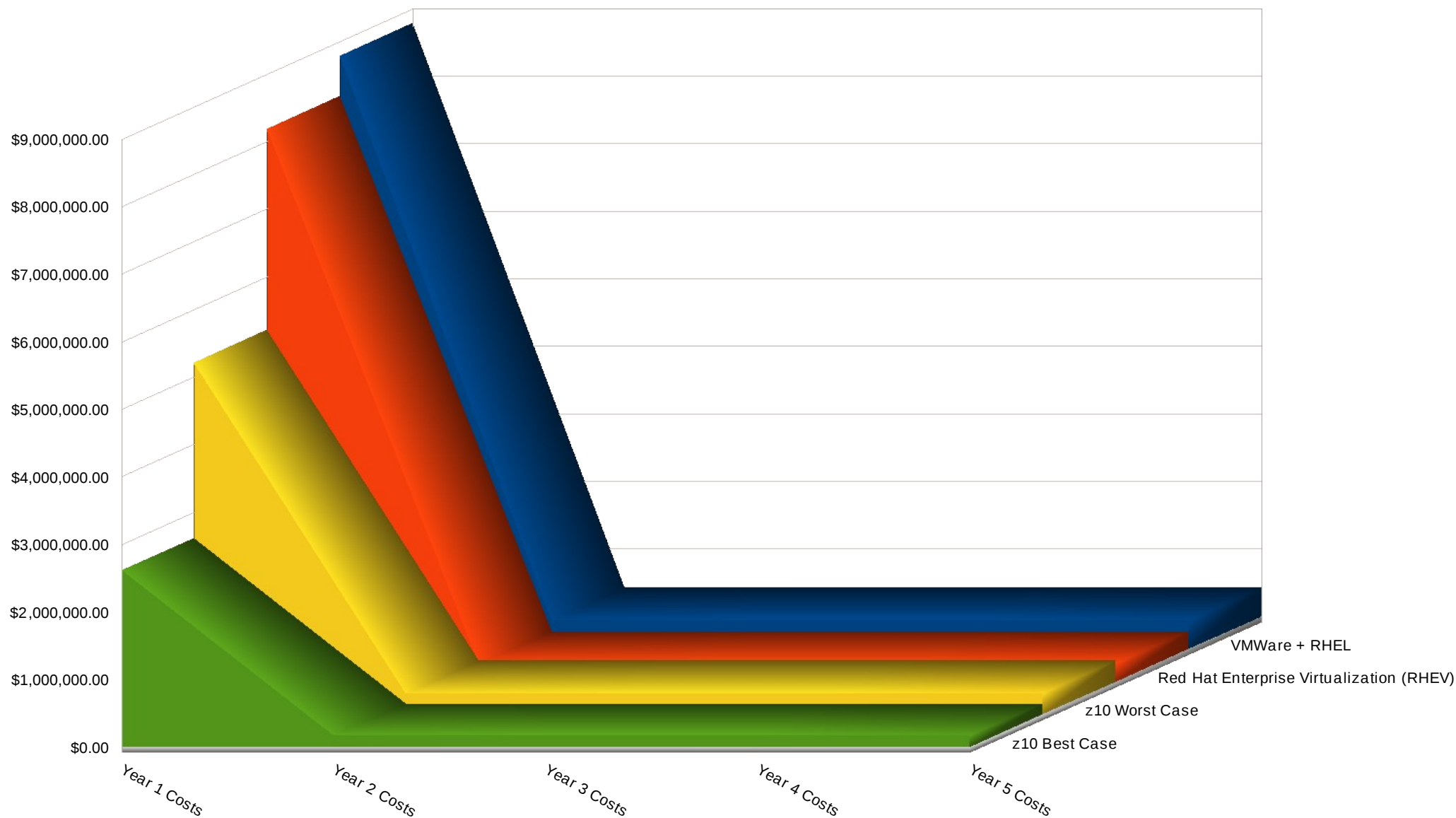


Demonstrate Efficiencies

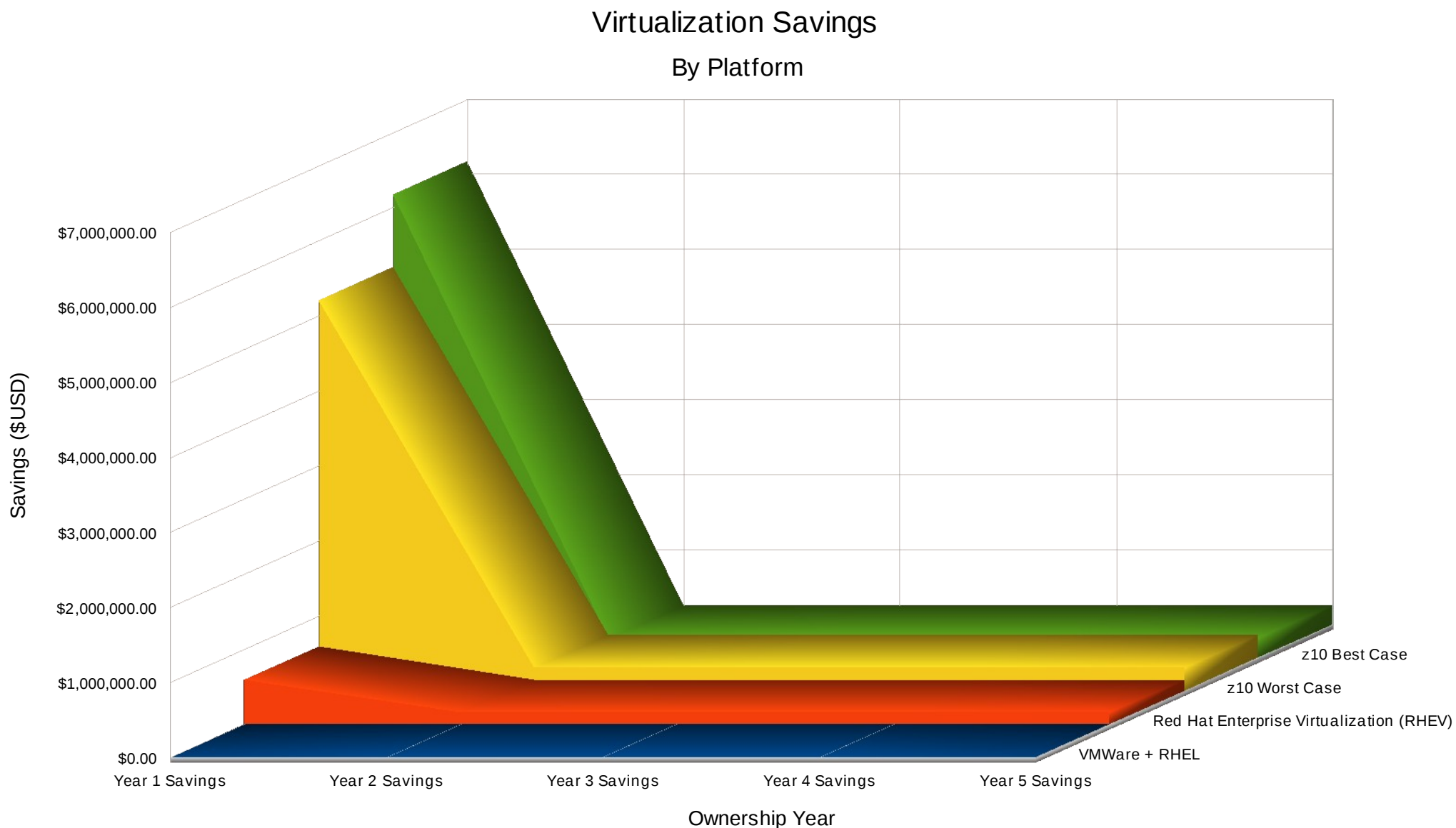




Demonstrate Efficiencies: 1-5 year cost schedule



Demonstrate Efficiencies



Appendix

Customer Story: **The Bank of New Zealand**

Bank of New Zealand

- Employs 5000 staff
- Acquired by NAB group in 1992
- >2 million accounts
- 700k customers
- ~100 retail banking products
- 185 Branch Sites
- 300 IT Staff
- First Computer 1966 (an IBM 360/30 with 16k memory)



Our Key IT Challenges

Data Centre's

- Power – Cant get enough power (now monitoring watts)
- Space – One server in -> One server out
- Moving out of our Wellington Data Centre (Production)

Focus on IT Costs

- Challenged with keeping IT costs flat
- Less appetite for IT spend during a downturn

Corporate Values

- Carbon Neutral as an organisation by 2010
- Aligning our IT infrastructure with our corporate 'green' values

The Amazing Race Programme

**THE AMAZING
RACE**
CHANGE PORTFOLIO

WHEN: 30 SEPTEMBER, 2008

024

DAYS

12

HOURS

40

MINUTES

28

SECONDS

RACE HOME

STRATEGY

DIRECTION

REPORTING & COMMUNICATIONS

GOVERNANCE

THE AMAZING RACE

The Business Technology Services (BTS) mission is to deliver an optimal technology environment, which has embraced the Kaizen philosophy and removed waste and unwarranted cost.

The Amazing Race Programme is time-bound focused. It is divided into 9 concurrent sub-programmes, each with multiple projects. Every project is required to deliver a financial return within this financial year. The portfolio of projects must realise their benefits across this year to achieve the desired results.

VIEW

Applications
Doug Jacobs

VIEW

Middleware
Kim Arnold

VIEW

Dev & Testing Environments
Jerry Newman

VIEW

Information management
Andrew Mori

VIEW

Distributed Systems
Kim Arnold

VIEW

NZ Infrastructure
Mike Whang

VIEW

Telecommunications
Aaron Toddlegese

VIEW

Client Hardware
Aaron Toddlegese

VIEW

Process
Murray Coulter

Learn more about our smaller costs savings scheme, [Amazing Race Passports](#).

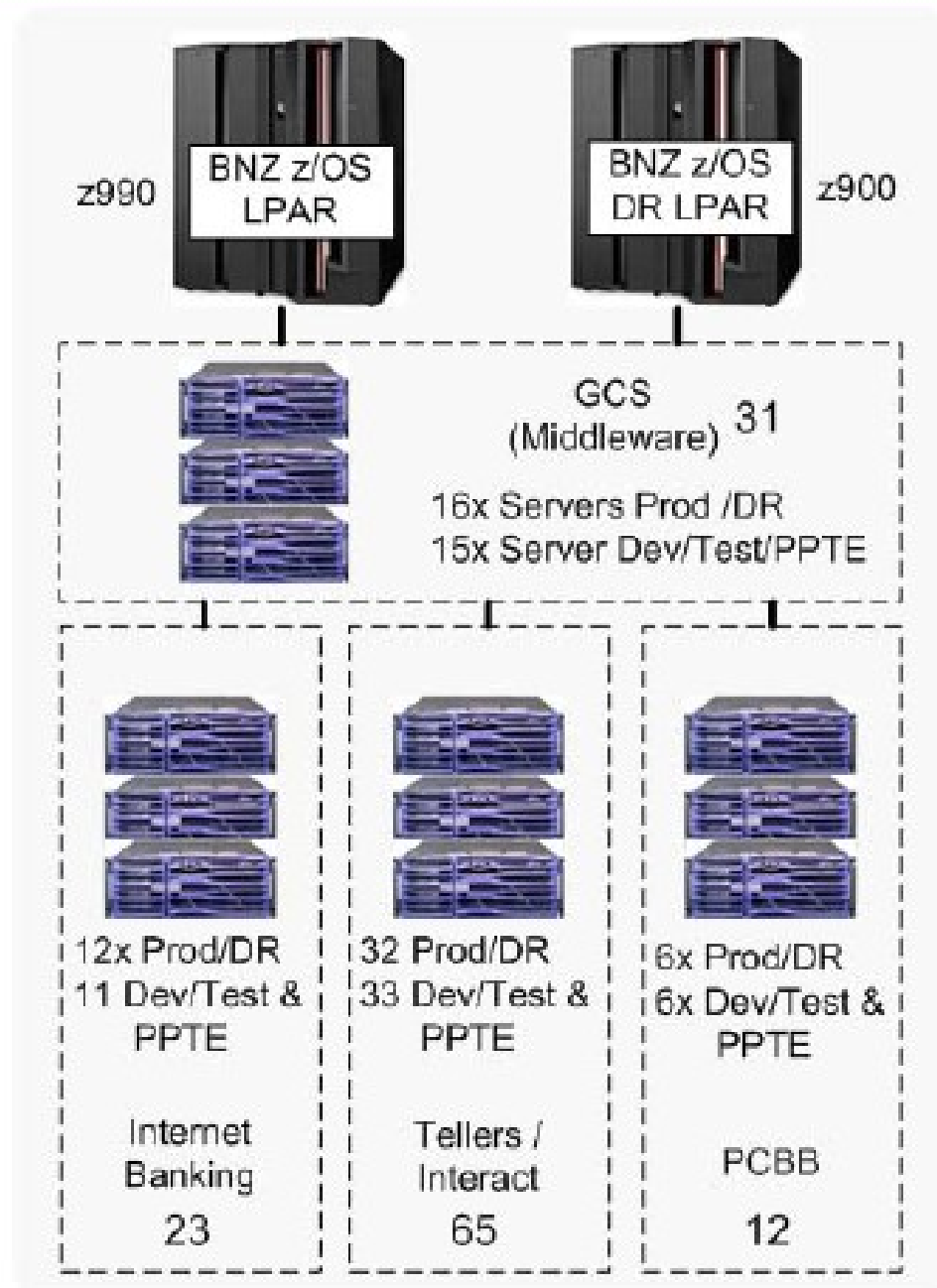
z/Linux Project – Front End Systems

- Repatriate back to NZ (reduce support costs)
- Consolidate the physical footprint
- Reduce power consumption
- Reduce carbon footprint
- Look to simplify where possible

BNZ z/Linux History

Aug 07	<ul style="list-style-type: none">- Proof of Concept of Process Server as replacement to ROMA middleware- IBM Forum conference in Wellington
Oct 07	<ul style="list-style-type: none">- Initial Due diligence carried out for a move to the z/Linux platform
Dec 07	<ul style="list-style-type: none">- Websphere Process Server software stack verified for performance- Purchased Z9-EC + DS Enterprise Storage DS8100
Jan 08	<ul style="list-style-type: none">- z/Linux Project Officially launched
Feb 08	<ul style="list-style-type: none">- Held joint IBM / BNZ design workshops- Purchased Z10-EC + DS Enterprise Storage DS8100
Mar 08	<ul style="list-style-type: none">- GCS Team (Middleware) run Proof of Concept on the z Platform
Apr 08	<ul style="list-style-type: none">- Application teams start to build Dev, Test & Pre-Prod Lpars on the z9
Jun 08	<ul style="list-style-type: none">- Staff training for the Enterprise Storage / replication
Jul 08	<ul style="list-style-type: none">- GCS went into production on the z10 for a couple of non tier-1 apps
Dec 08	<ul style="list-style-type: none">- z Platform standup complete. (Ready for tier-1 applications)
Mar 09	<ul style="list-style-type: none">- Tellers and Interact applications in Production
May 09	<ul style="list-style-type: none">- Internet Banking applications in Production
Oct 09	<ul style="list-style-type: none">- PCBB application in Production?

Front End Systems – Hardware View



- Total of 131 Servers
- Mix of Small, Medium and Large Sun Servers - e10K, v440, 280R
- Not a large consolidation but is high value, high visibility.
- Various version's of Solaris.

z/Linux Environmentals

	Distributed Model	Z based Platform	
Power (kWhr)	36	22	38% less
Heat (kBTUs /hr)	110	74	33% less
Space (Racks)	6.5	4.5	31% less
Co2 (Tonnes)	66	40	39% less*