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Server Consolidation Services from IBM: Optimizing your IT infrastructure for greater savings, flexibility and resiliency

agenda

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Executive summary

In today's volatile business environment, forward-thinking organizations are striving to create innovative ways to stay competitive. They must be strongly positioned for growth with an IT infrastructure aligned with business goals and able to seamlessly introduce new functionality for smooth expansion into new marketplaces.

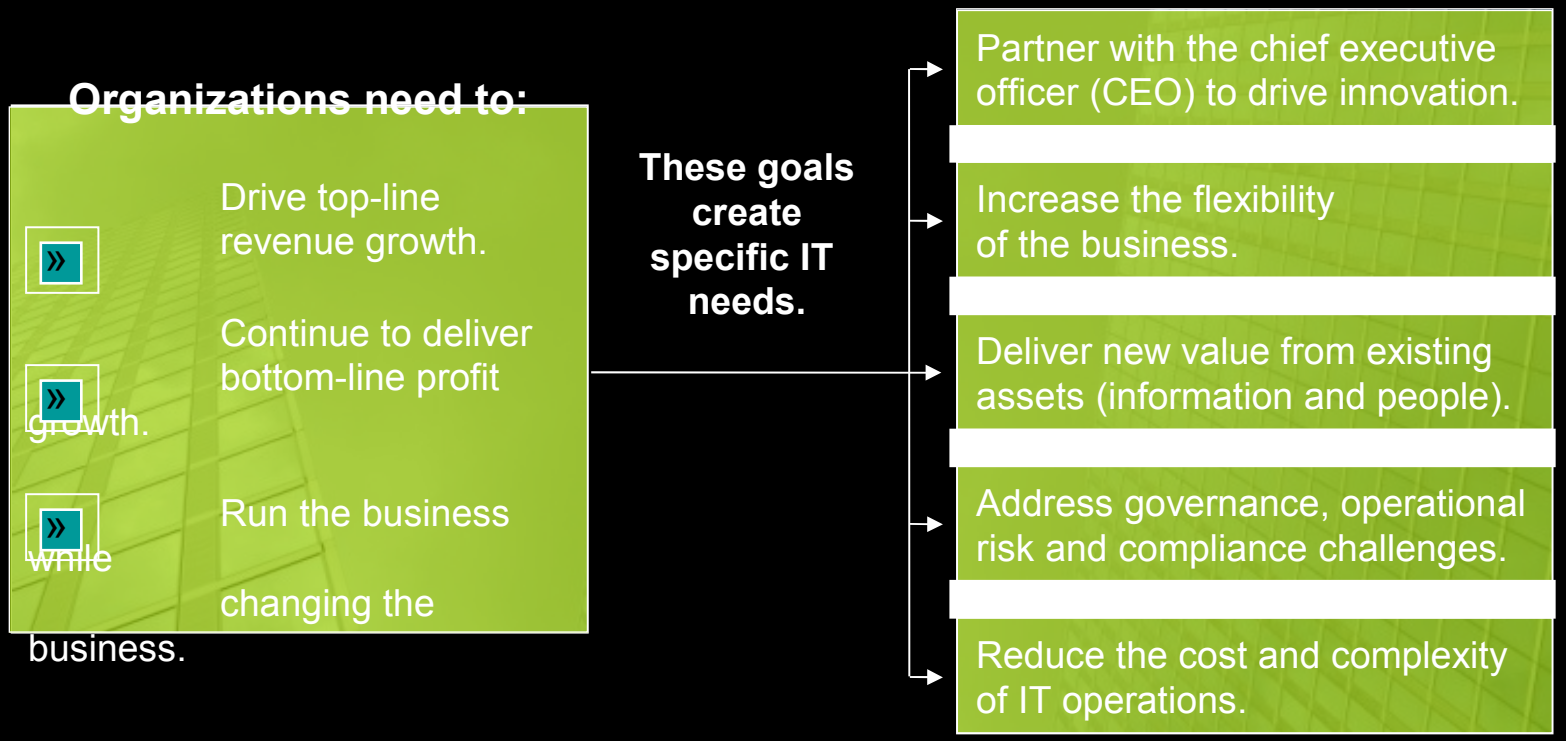
At the same time, with tighter budgets, organizations must increase efficiencies, reduce overall costs and complexities, and gain greater flexibility to meet the needs of an evolving business.

Server Consolidation Services from IBM can help you reduce IT infrastructure complexity to optimize performance, reduce operational management costs, and increase adaptability to facilitate business growth and change.

IBM's tested methodology and tools coupled with deep expertise, experience and leadership in server consolidation projects enables you to reduce IT complexity and operating costs, while allowing you to embrace change and seize new opportunities for growth.

Industry situation

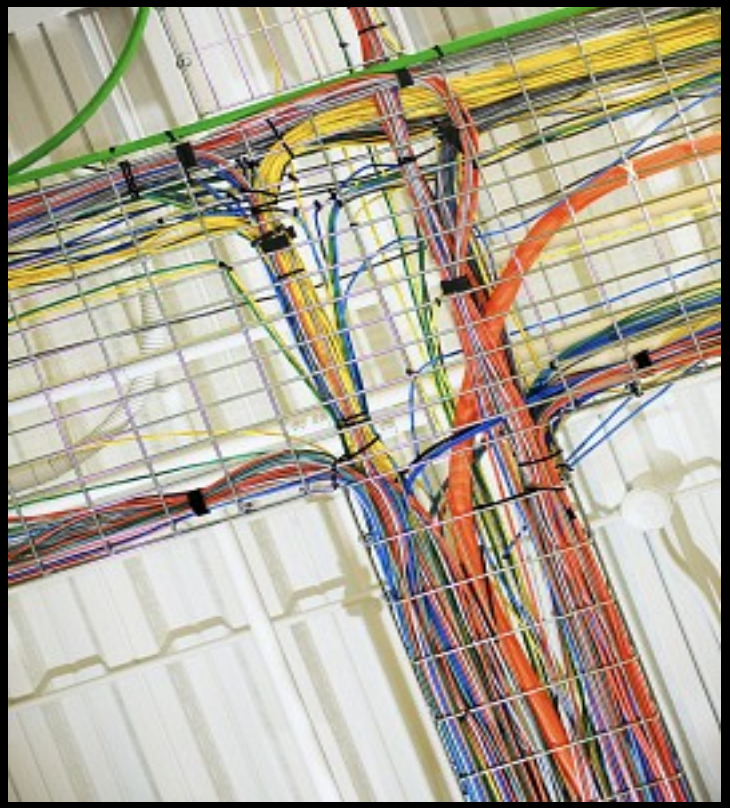
In today's environment, it is essential to create alignment between IT and your business goals.



Many organizations face increasing IT complexity—often the result of unchecked server sprawl.

Sprawl can have many causes, including:

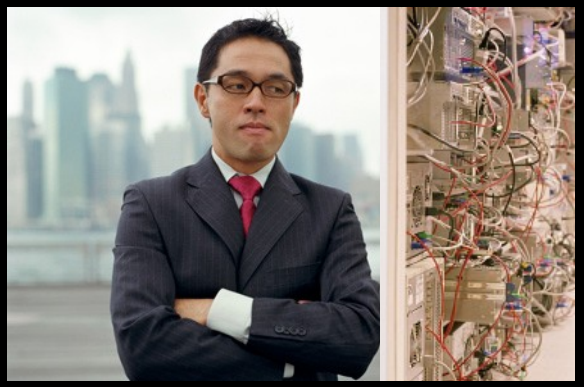
- Mergers and acquisitions
  - Integration of applications
  - Multiple locations
- New applications
- Multiple hardware platforms
- Multiple operating systems
- Demand or growth
  - New customers
  - New employees
  - Web traffic



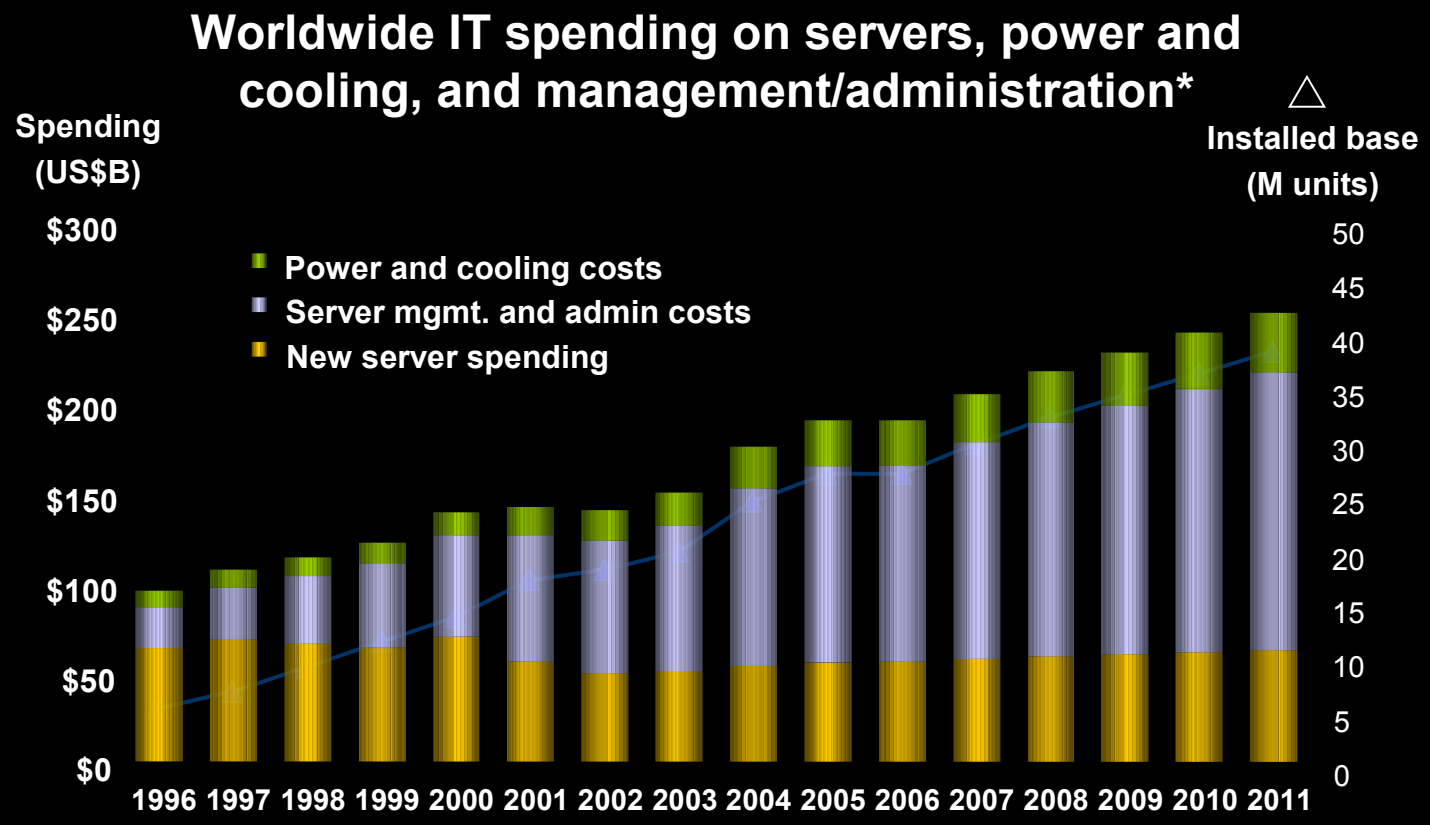
And IT complexity negatively impacts the bottom line.

When you add servers as a stopgap measure to address a short-term demand, it creates an immediate and lasting increase in cost including:

- Hardware costs
  - More servers, more racks, more storage systems
  - Distributed computing environments that mostly sit idle, with as little as eight percent of capacity utilized
- Software and application costs
  - More servers that require more licenses
  - Management tools required to maintain performance
- Management costs
  - IT staff
  - Ongoing training
- Site and facilities costs
  - Data center space, rack space
  - Power, cooling, security, monitoring



As server total cost of ownership continues to grow, you need to reduce the number of servers without sacrificing computing power



Many servers, much capacity, low utilization =
US$140B in unutilized server assets*

Source: IDC, Preparing for Change: Architecture and Infrastructure Considerations for the Data Center of the Future, Doc # DR2008_1MB, March 2008

Complex server environments also contribute to a lack of flexibility, hampering your ability to quickly respond to change.

With complexity, you limit IT flexibility.

- Increases difficulty of deploying new technologies and supporting advanced IT initiatives
- Requires disproportionate management resources to maintain appropriate levels of performance, security and availability

With complexity, you limit business flexibility.

- Saps budgetary and personnel resources
- Reduces capacity to rapidly respond to changing business conditions, due to unpredictable or poor application performance

Consolidation approaches

To help reduce costs and complexity, you need to start with consolidation.

Consolidation means you need to:

- Reduce the number of sites.
- Reduce the number of servers.
- Migrate to better performing, more expandable servers.
- Optimize the performance of remaining servers.
- Integrate new server investments with the broader infrastructure.

Consolidation is a foundation for other initiatives that can help your business become poised for rapid growth.

The ability to add new functionality and achieve further efficiencies from additional optimization solutions include:

- Virtualization
- Provisioning
- Service Oriented Architectures
- Streamline processes
- Energy efficient data centers

Consolidation can be achieved in several ways.

Server consolidation techniques include:

Centralization	Consolidating multiple servers within fewer sites
Physical consolidation	Reducing the actual number of servers by replacing many servers with fewer, more powerful servers or clustered systems
Application integration	Consolidating multiple applications into fewer servers and operating system instances, enabling business process integration and automation
Data integration	Combining data from different sources across the same or disparate data types and architectures into a central resource

Server Consolidation Services from IBM provides a solid foundation for optimization.

Delivers design, strategy, planning, implementation and testing services—For creating a consolidated environment from heterogeneous server infrastructures

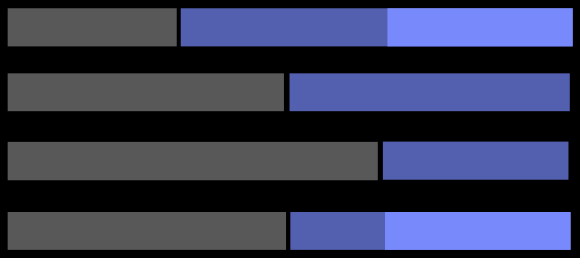
Provides access to consolidation methodologies and tools and a center of competency—To help you take advantage of the expertise of highly skilled IBM professionals

Creates a foundation for more advanced optimization initiatives —Including virtualization, Service Oriented Architecture (SOA), cloud computing and green data center initiatives

Savings

Server Consolidation Services from IBM enables you to take advantage of the benefits of a consolidated server environment.

Cost savings: Based on IBM's experience, the following represents the typical savings that organizations may realize*:



- Hardware costs: Reduced 33 to 70 percent
- Maintenance costs: Reduced up to 50 percent
- Support costs: Reduced by as much as 33 percent
- Floor space and facility costs: Reduced up to 33 to 50 percent

IBM can help you*:

- Realize return on investment in six months or less
- Reduce total cost of ownership by 30 percent to 70 percent
- Increase server utilization rates of up to 80 percent (compared with the typical 5 to 15 percent)
- Realize consolidation ratios ranging from 8 to 1 to 30 to 1
- Lower power and cooling costs because fewer servers are needed

* Source: Based on previous IBM sales engagements.

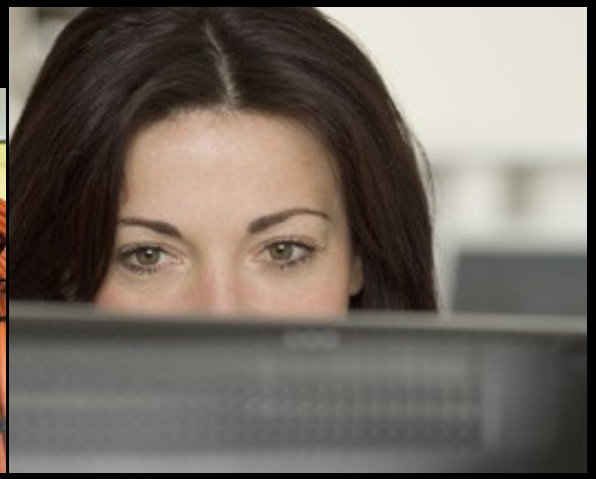
IBM enables you to take advantage of the benefits of a consolidated server environment. (continued)

Higher utilization rates and improved performance from existing investments

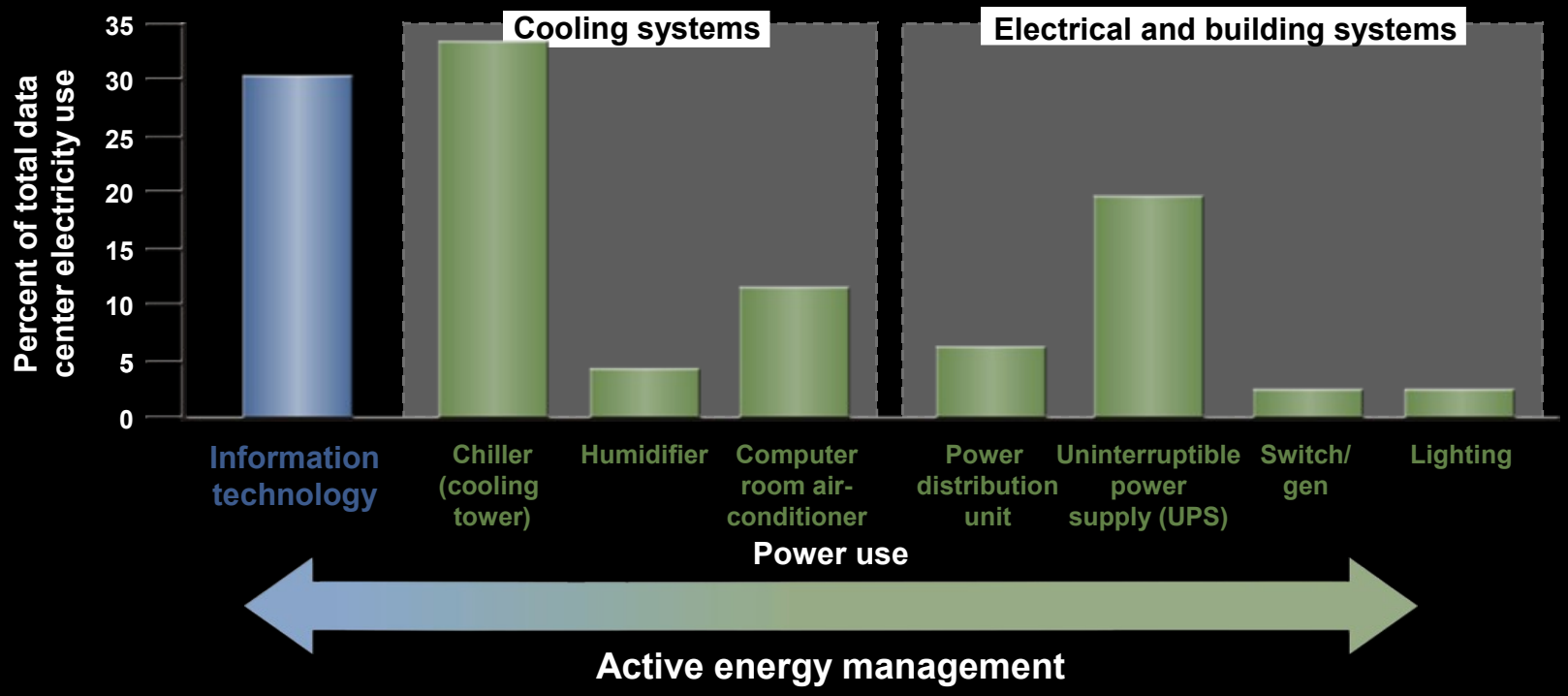
- Extended return on investment for existing servers

The ability to add new functionality and achieve further efficiencies from additional optimization investments

- Virtualization
- Provisioning
- Service Oriented Architectures
- Cloud computing



A consolidated server environment can optimize your IT infrastructure energy efficiency.



Before consolidation (based on IBM's experience)

- Servers account for 50 to 75 percent of the data center's total floor space
- Server sprawl is a challenge, resulting in high maintenance and support costs
- Server utilization is only 5 to 15 percent on average

After consolidation (based on IBM's experience)

- Servers typically account for 20 to 50 percent of the data center's total floor space
- Consolidation ratios from 6:1 to 20:1
- Typical total cost of ownership (TCO) savings from 30 to 70 percent
- Server utilization rates up to 80 percent

Data source: American Power Conversion Corporation (APC) white paper, Implementing Energy Efficient Data Centers, #114, by Neil Rasmussen, 2006.

Plus, IBM can help with financing, so that you can make needed investments

Actions to take:

Manage liquidity and risk while making investments necessary to drive business success

How IBM Global Financing can help:

Economic Uncertainty? IBM funds IT.

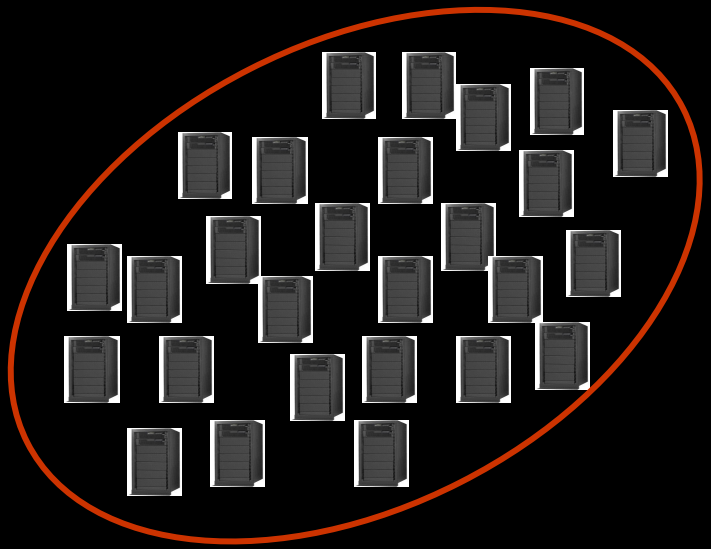
Don't let the economic downturn and dwindling credit options stop clients from getting the capital they still need to operate and improve their businesses. While many lenders have drastically curtailed credit availability, IBM Global Financing remains well positioned to support clients' technology investment needs and help them mitigate financial risk.

Business case

Case Study (based on real client case)

Initial Situation

27 Physical Servers



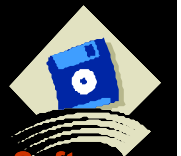
Final Situation

2 Physical Servers

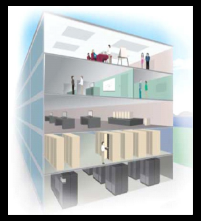
Costs Elements

Recurrent Costs

Operations Costs



Software



Facilities

Maintenance

Staff

Capital Expanditure

Servers Growth & Refreshment

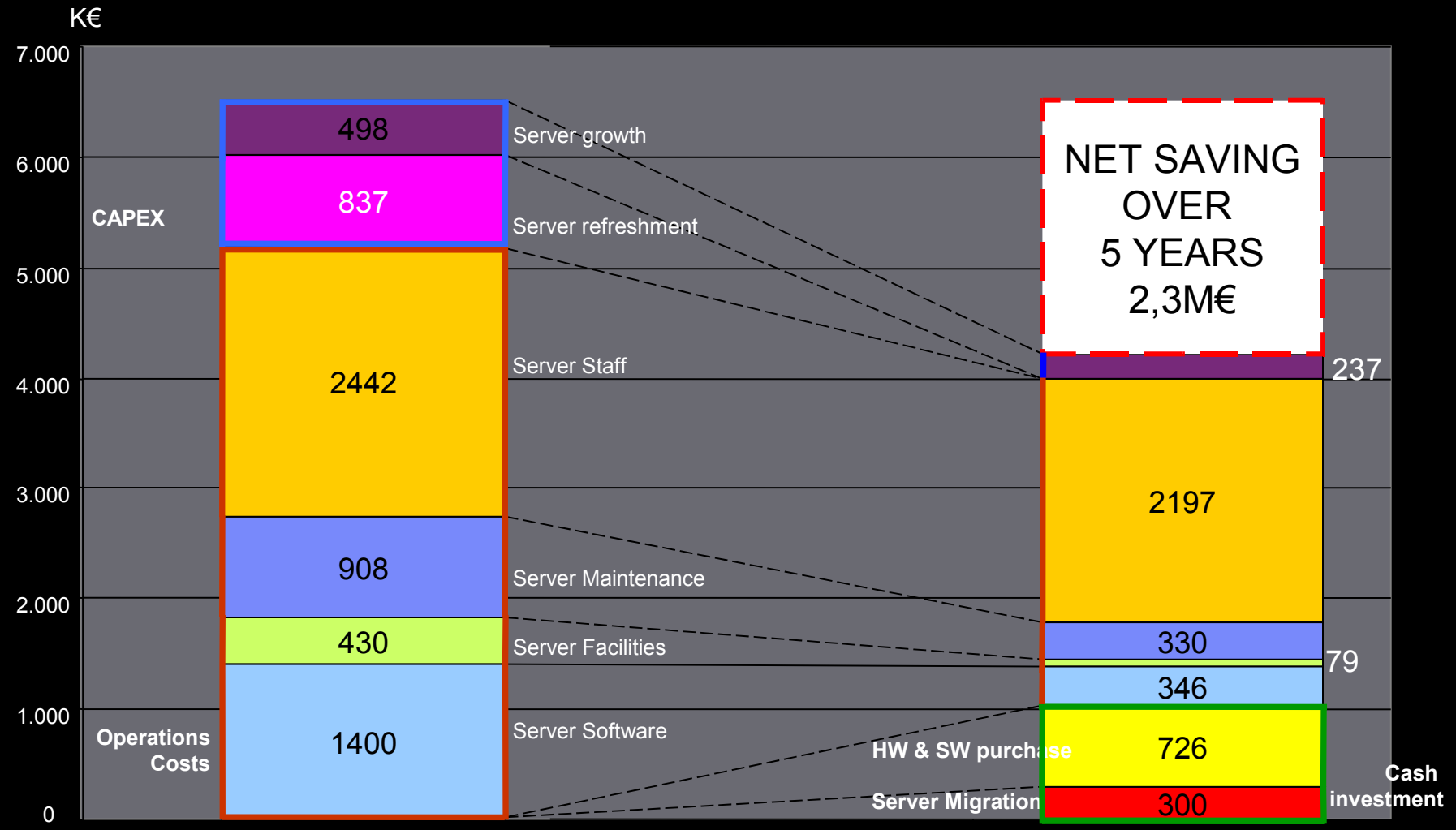
One Time Costs

Migration Costs
+
HW & SW purchase

BASED on REAL CUSTOMER CASE

5 year cost scenarios

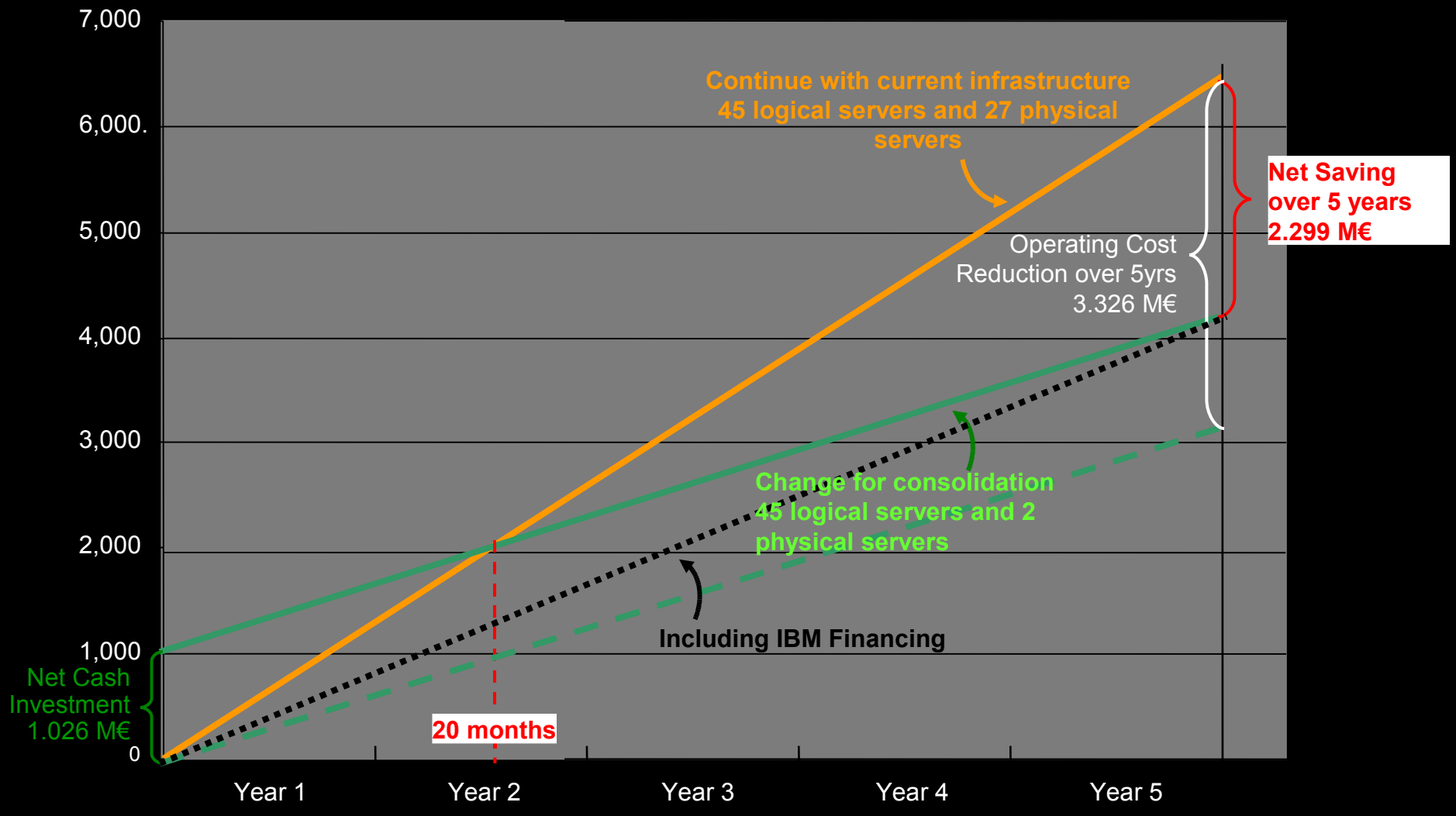
Net Cash Investment	1.026
Operating Cost Reduction over 5yrs	3.326
Net Saving over 5yrs	2.299
Payback Period	20 months



1 Continue with current infrastructure
45 logical servers and 27 physical servers

2 Change for consolidation
45 logical servers and 2 physical servers

5 year cost scenario



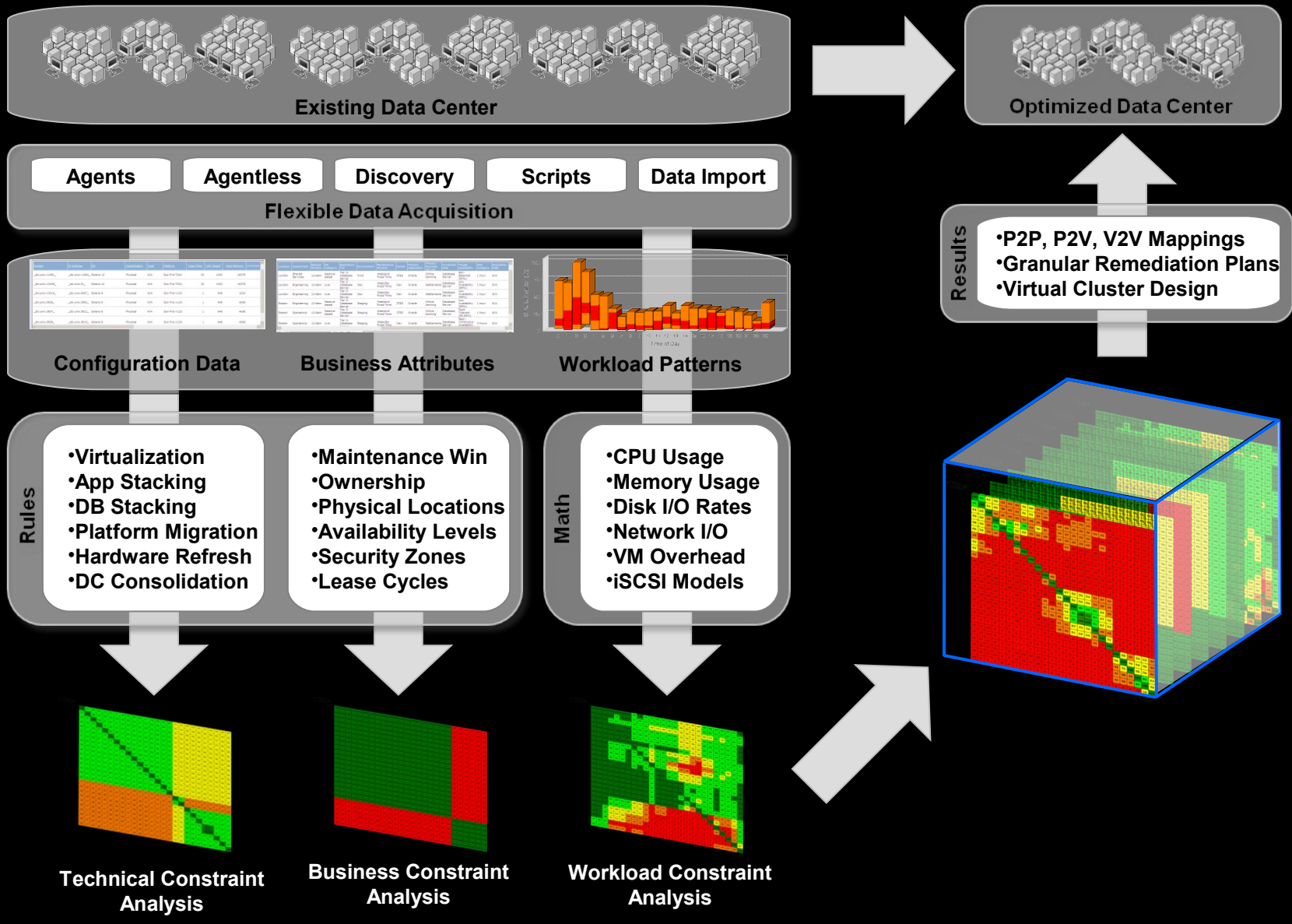
How do we deliver?

Based on extensive experience, IBM has developed a consolidation methodology that comprises three distinct phases.

Consolidation projects comprise three stages:

Solution Framing	▪ Assessment ▪ Strategy ▪ Solution approach
Plan and Design	▪ Detailed client environment analysis ▪ Business case ▪ Macro design ▪ Micro design ▪ Detailed assessment ▪ Detailed transition plan
Implement	▪ Solution build ▪ Testing ▪ Deploy

Standard tool: Cirba



Thank you for your time today.

For more information: Please visit:

Server Consolidation Services from IBM

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Trademarks and notes