

云计算与业务创新

王胜航

IBM全球科技服务事业部大中华区，云计算业务部总经理
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智能化的服务在各行各业日新月异

自动交换机，快速，准确，节省成本



自动化流水线，提高质量，降低成本



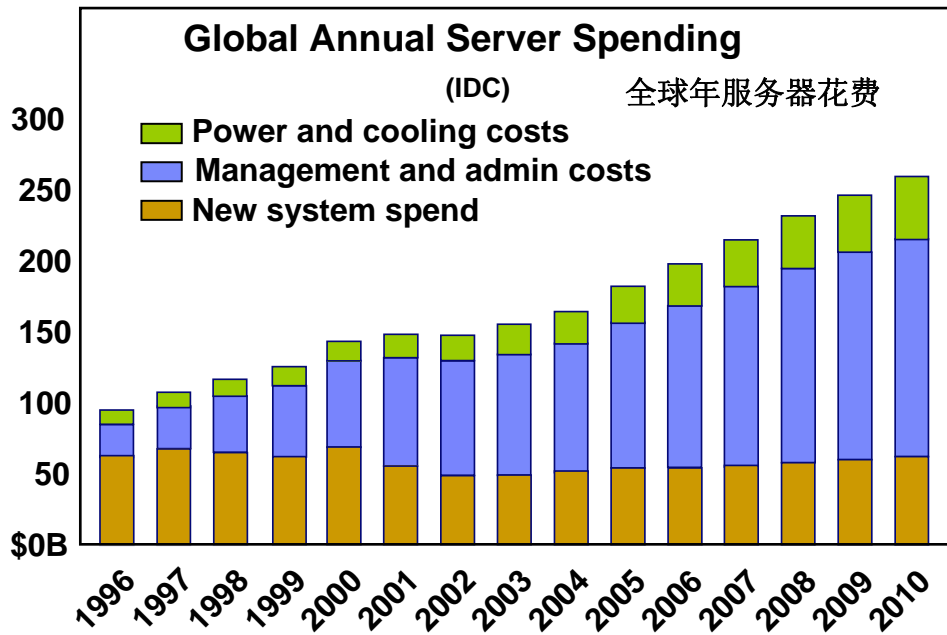
银行自助设备，提高服务，降低成本



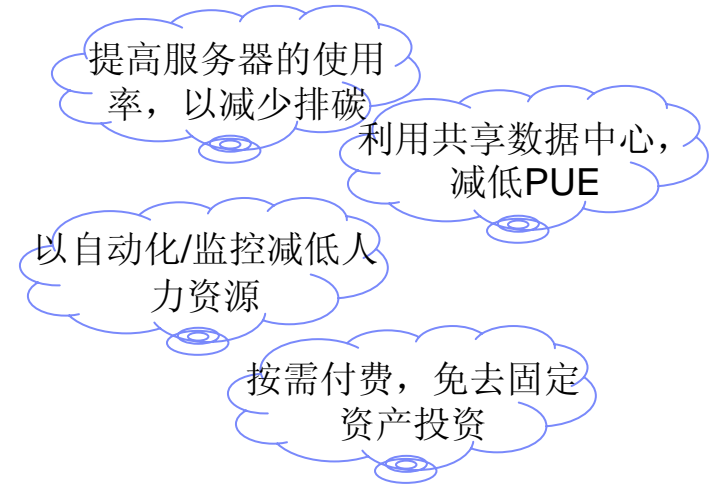
提高服务，控制风险，降低成本

运营和固定资产的开销引起IT总体花费的增长

系统复杂性带来的危机导致对系统优化和成本优化的需求越来越迫切



如何可以做到

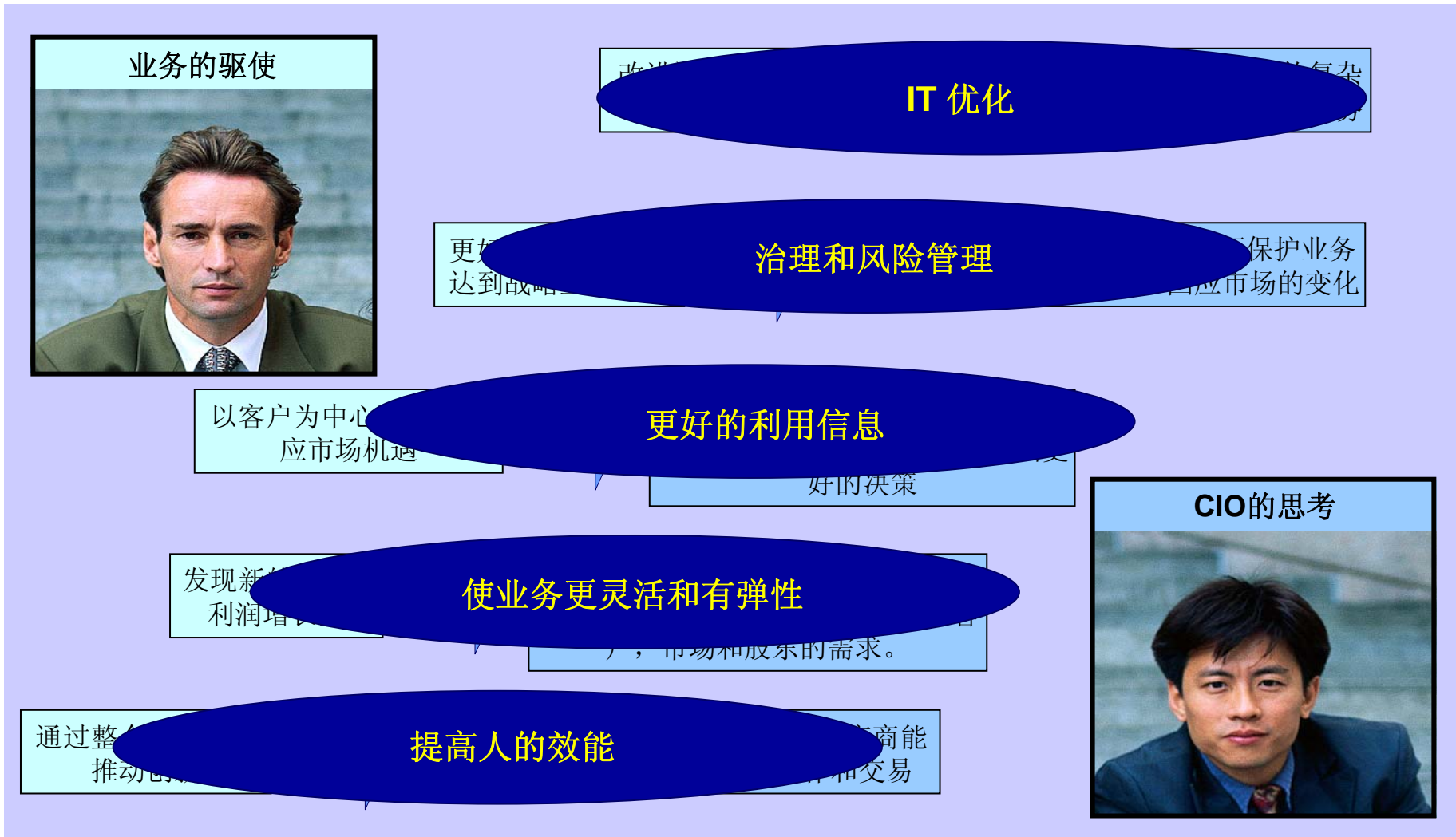


服务器、存储和网络运营成本的问题必须解决,不只是资本开支

Source: IBM Corporate Strategy analysis of IDC data

对云的期望

业务发展的要求驱使CIO对IT系统需求的改变. . .



场景 1：自动化部署

业务面临的挑战

- 新业务投放市场的时间受IT部署能力和灵活性的影响和制约
- 高人工介入的IT流程和管理导致高人工费用
- 未充分使用的IT资源和复杂的IT架构导致过多的IT成本投入

场景 2：工作负荷管理

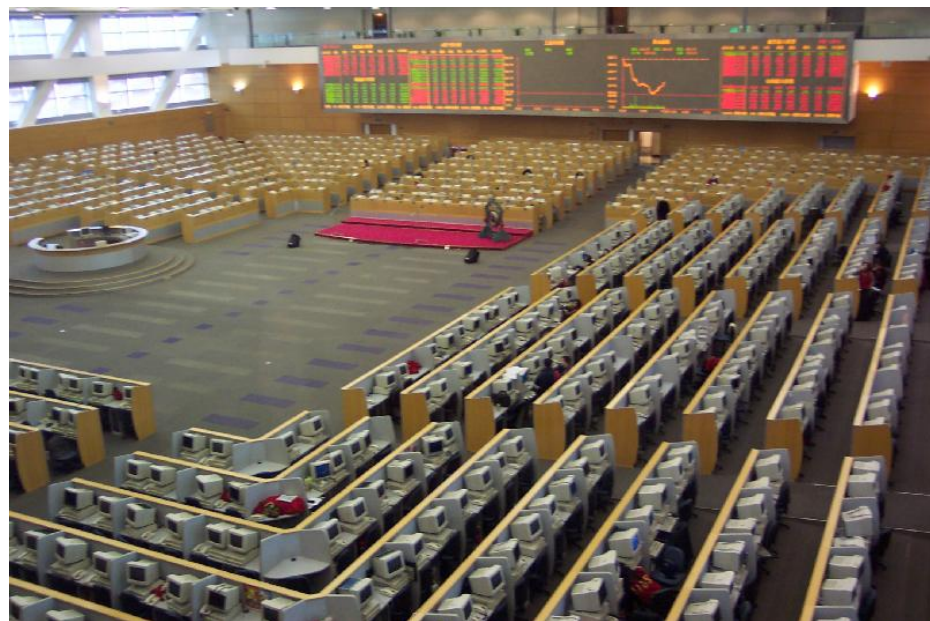
业务面临的挑战

- 不断增长的业务和工作量导致IT资源成为制约新业务成长和业务灵活转型的瓶颈
- 无法应对峰值和不断变化的市场需求。
- 新业务投产的时间收到IT资源可协调能力的限制

场景 3：服务交付平台

业务面临的挑战

- 新业务/新应用的上线/开发周期长
- 新客户的接入时间长
- 快速响应市场的需求变化非常困难
- 没有灵活的付费方式



云计算：一种新的突破性的技术和创新商业模式

“Clouds will transform the information technology (IT) industry... profoundly change the way people work and companies operate.”

The Economist

从云服务的提供者角度看

- Virtualised resources (虚拟化资源)
- Highly automated (高自动化)
- Simplified and standardised (简化和标准化)
- Elastically scalable (up/down) (动态调整)
- Low incremental costs (低成本增长)

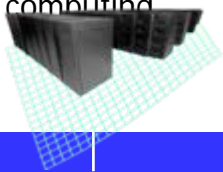
从云服务的用户角度看

- Easy to consume (简单到实用)
- Pay per use (单位付费)
- CapEX becomes OpEx (资产变成费用)
- Standardised offerings (标准化服务)
- Rapidly delivered (灵活快速的交付)

1990

Grid Computing

- Solving large problems with parallel computing



Utility Computing

- Offering computing resources as a metered service



Software as a Service

- Network-based subscriptions to applications



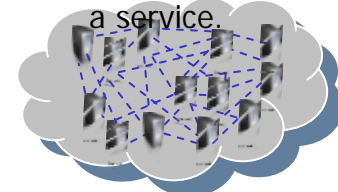
Autonomic Computing

- Computer systems capable of self-manage. Reduce the



Cloud Computing

- Anytime, anywhere access to IT resources delivered dynamically as a service.



2010

X-as-a-Service的模式，其中SaaS更衍变成一种新的商业模式

市场案例



IBM 案例



Google NetApp Engine



测试云
桌面云



按需计算

云的不同分类

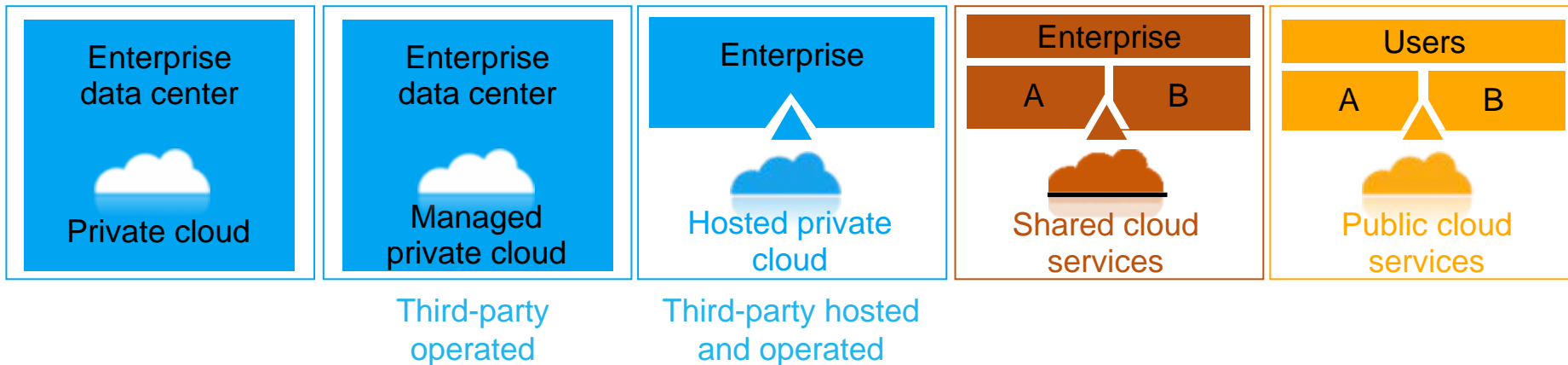


私有云/Private

IT capabilities are provided “as a service,” over an intranet, within the enterprise and behind the firewall

公有云/Public

IT activities / functions are provided “as a service,” over the Internet

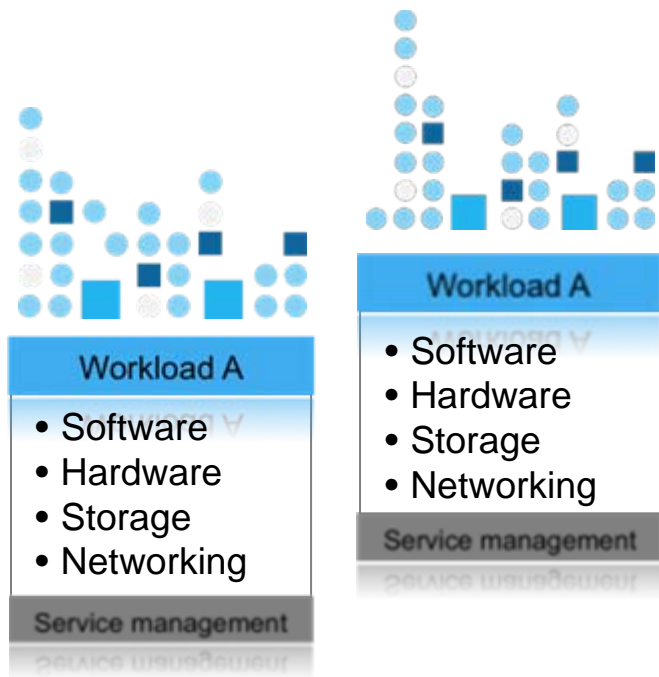


Hybrid

Internal and external service delivery methods are integrated

用不用云计算有什么不同?

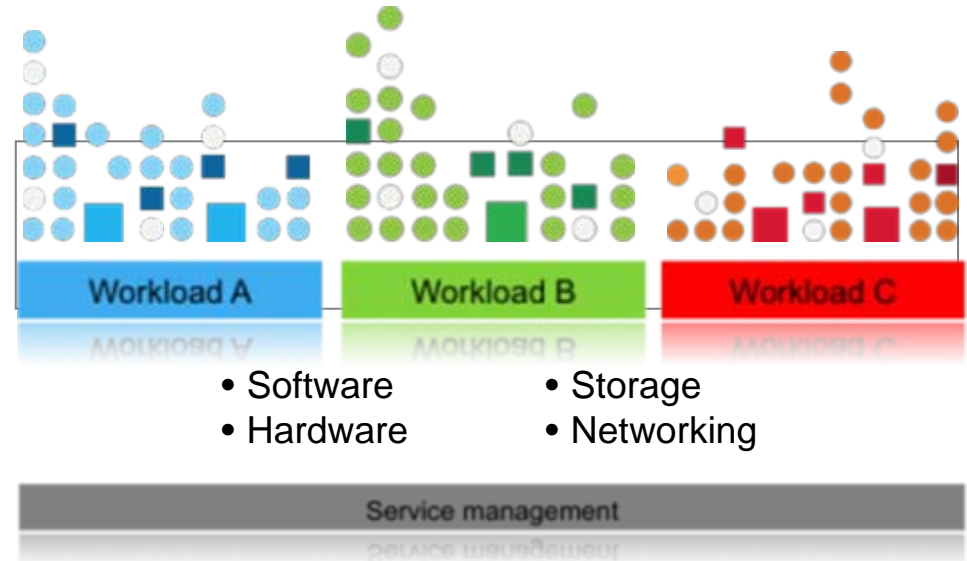
没有用云计算



使用云计算



- Virtualized resources
- Automated service management
- Standardized services
- Location independent
- Rapid scalability
- Self-service



云计算带来的好处

现在的状态

基于云计算模式未来的状态

更好

每个系统都是独特的，
很少共同的配置

很多种配置，很难管理

基于标准组件的服务目录的标准化服务交付模式

一致的配置将利于统一的管控

基于模板和目录的配置

很少的配置

更快

需要数周乃至数月部署
新系统

复杂和慢的流程，低商业
价值

部署新系统更快，更快地走向市场，提高竞争力

服务使用者自我服务，提高客户满意度和响应效率

仅需数小时甚至分钟来
部署新系统的配置

很快的响应时间，用户可以
自己控制，认可价值

成本更低

每位管理员负责10余台
机器

CPU利用率小于10%

在新系统的部署中需要
很多角色和资源的介入

提高单位人工管理服务器（资源）的比例

提升服务器和能源利用率

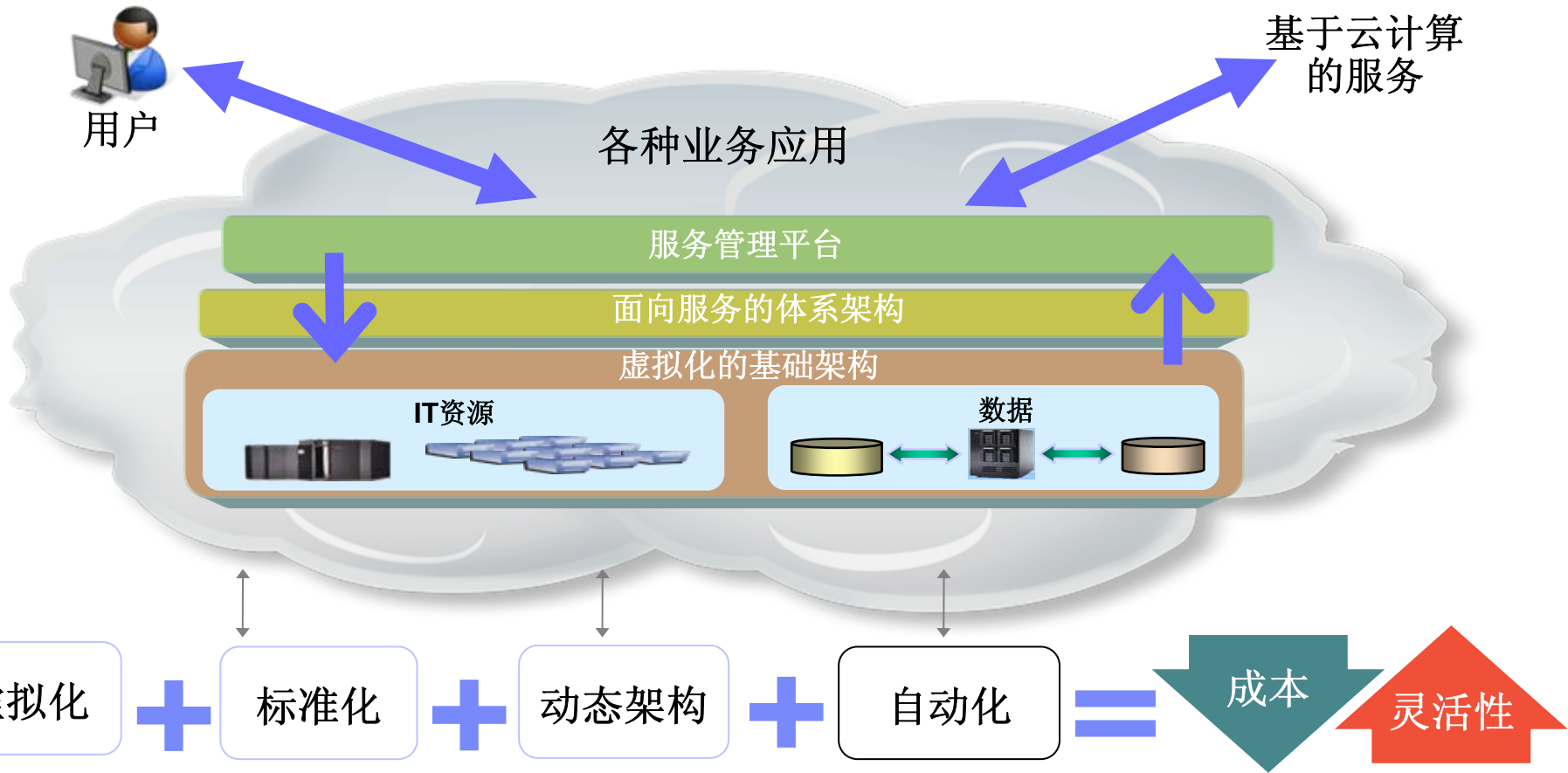
无人介入的部署，通过全生命周期管理降低成本

每位管理员负责成百上
千台机器

CPU利用率可以达60-
80%

最小化新系统的部署中
的人为介入

云计算所依赖的动态的基础架构



...充分利用虚拟化, 标准化, 动态架构和自动化的技术
...将节省下来的运营成本投入到新的业务创新的领域

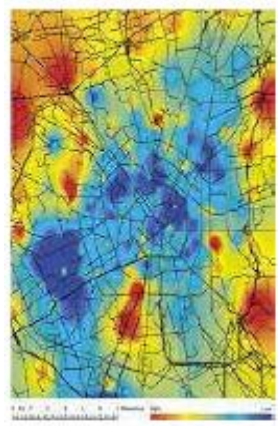
那些应用适合用云计算



交通



手机做为探测器



主要用于高速路、国道等区域：
可以有效弥补现有系统覆盖率不足，维护成本高的不足

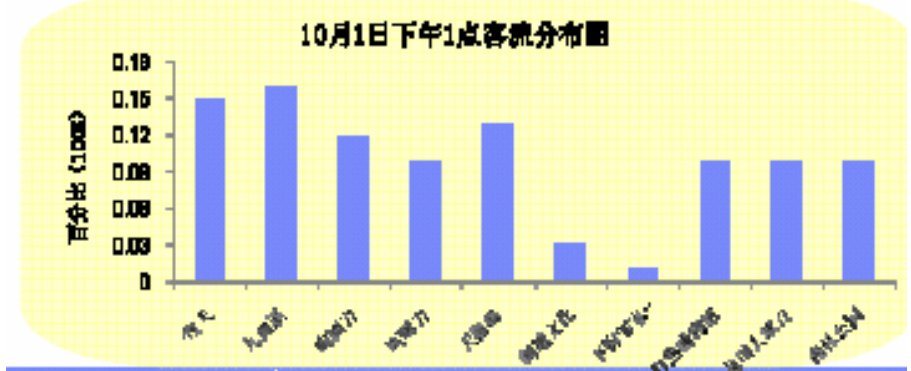
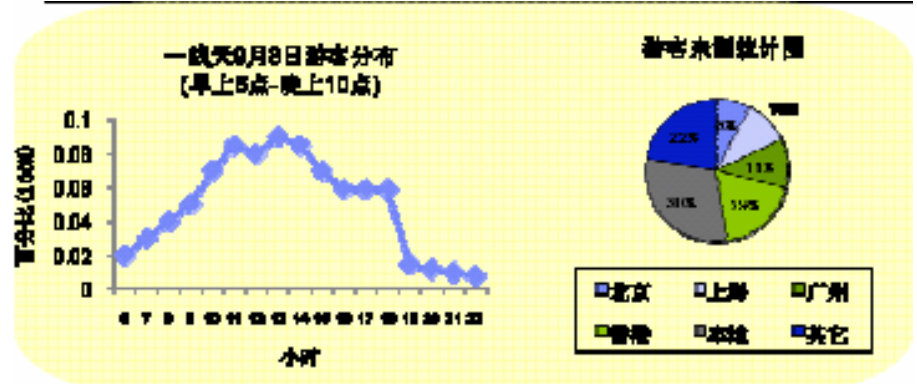
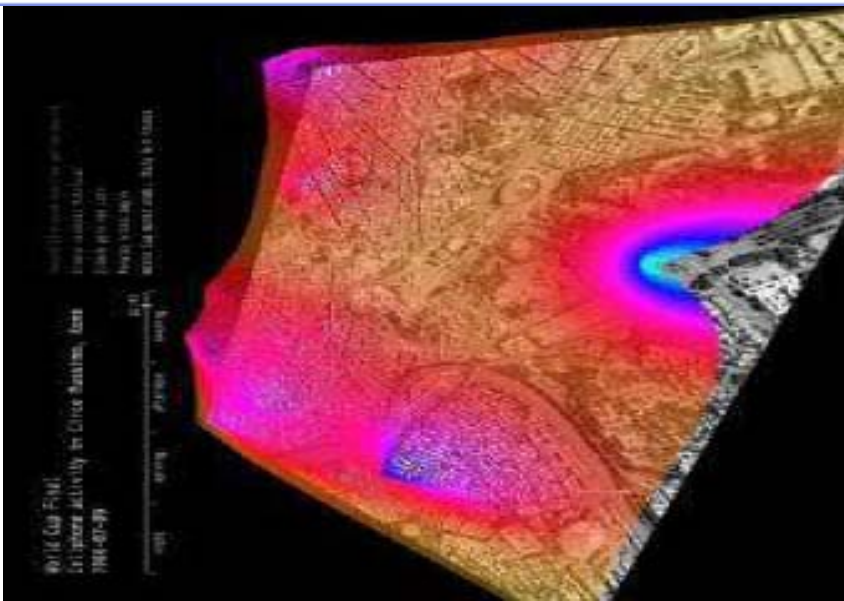


交通信号牌布置 可变方向的车道 道路规划

■ 旅游



手机做为探测器



城市总控中心

Incident By Status

28 Incidents found, displaying 15 to 24. [First] [Prev] 1, 2, 3, 4, 5 [Next] [Last] Lead Time: 2/17/2008

Status	Map	Incident Name	Lead	Updated
R	map	Southfield Pavilion Epidemic	Health	2007 at 11:43 EDT
R	map	Old Parsons Commission Epidemic	Health	2007 at 11:44 EDT
R	map	Munich Airplane Crash	Emergency	2007 at 05:30 EST
R	map	Pier-41 Boatw/Shipping Accident	Transportation	9/20/2007 at 10:32 EDT
Y	map	Summit Place Mall Epidemic	Health	10/28/2007 at 00:11 EDT 10/27/2007 at 08:38 EDT
Y	map	Sears Tower Evacuation	Fire Dept	08/19/2007 at 10:36 EDT 08/19/2007 at 10:37 EDT

Legend: Major Assistance Required | Resolved | Unknown

Incident GIS

连接地理信息系统

Data Overlays

- Incidents
- Critical Assets

Layers

Active:

- Large Cities (National)
- Major Cities (State)
- Landmarks (Regional)
- Minor Highways (Regional)

My Contacts

- Work
- Home
- Green Cross
- Glenn Moran
- Jean Akopy
- Shawn Kutrop
- Larry White
- Sonetime Team
- DC Work Group
- DC Training Group

VOC Links

- V.A. Healthcare
- Basin 6.2

Lead Time: 2/17/2008 10:02 p.m.

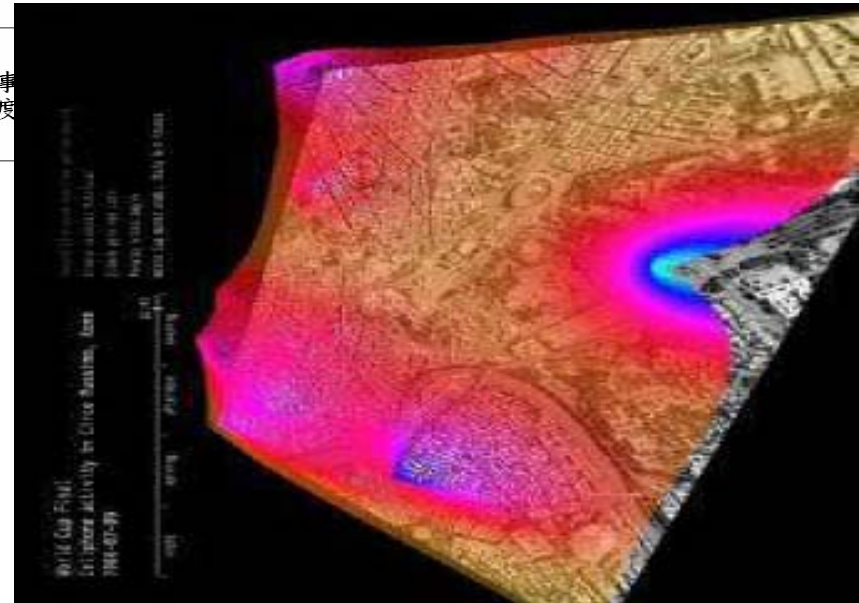
Basic Info | Additional Info | Notification | Geo-Location

CRITICAL INFORMATION

- *Incident Type: Boatw/ Shipping Accident
- *Incident Name: Pier-41 Boatw/Shipping Accident
- *Incident Prognosis: Green-Improving
- *Date & Time: 08/19/2007 at 10:28 EDT
- *Related Event

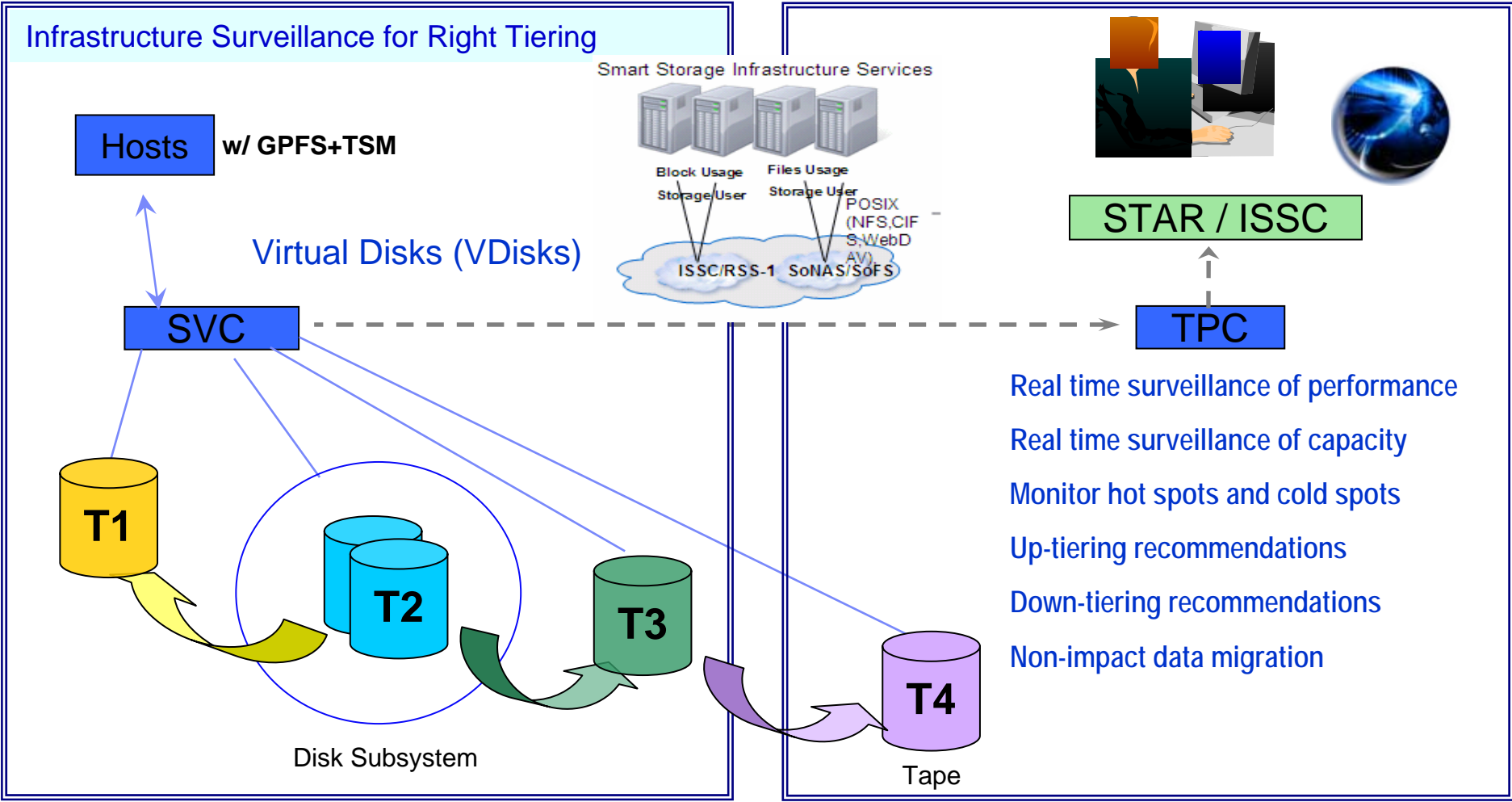
实时协作交流

显示突发事件详情与进度



Responsiveness Storage Service:

- Dynamics Analysis for application Right Tiering (DART)



RSS 案例: SVC TPC STAR in action

Customer context

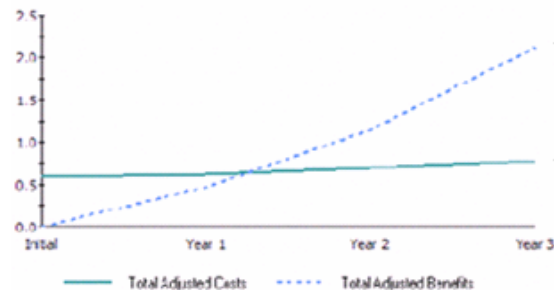
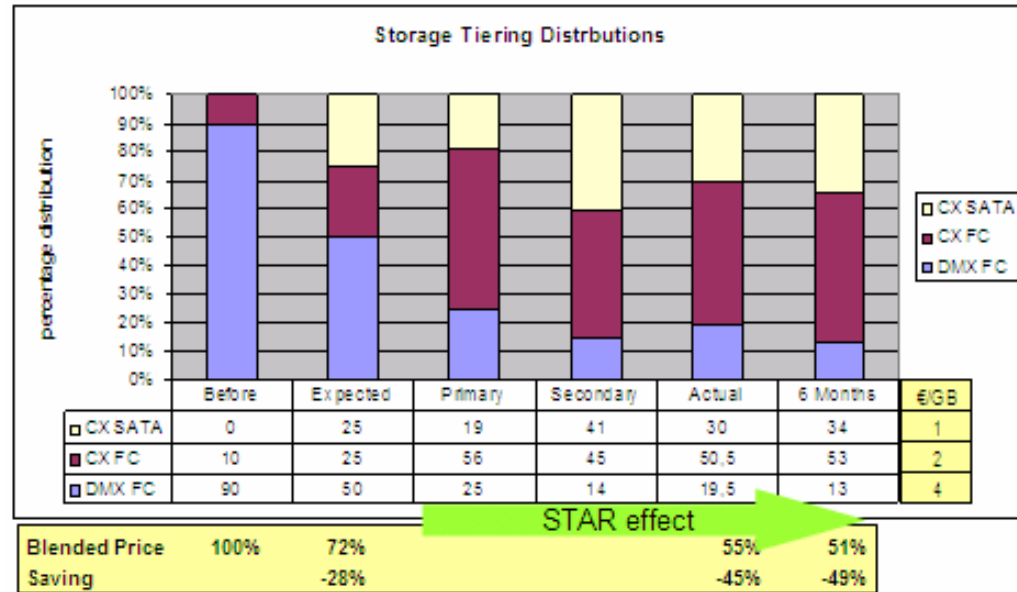
- Very large enterprise – non-IBM storage shop – 6-10 Peta Bytes – Mostly Tier 1 provisioning
- Seeking TCO reduction by ‘tiered storage’ adoption in its storage infrastructure
 - Tier 2-3 acquisition price = 50-75 % saving vs. Tier 1
 - Tier 2-3 energy consumption = 50-90+ % saving vs. Tier 1
- Loosely specified & changing environment

Virtualized Tiered Storage Project (Production Pilot)

- On line data mobility concepts well understood (already tested in PoC)
- Tiering “self-management” needed (up & down-tiering) IBM expected to provide a solution

The IBM solution:

- A process (DART) and a tool (STAR aka Storage Tiering Activity Reporter)
- Covers: Application profiling *for initial tiering* + Infrastructure surveillance *for right tiering*
- Apply Thin Provisioning technology to realize advanced storage allocation and improve storage utilization



ROI in 3 yrs is 250%

Break even @ 16 months



当前IT管理者面临的挑战：

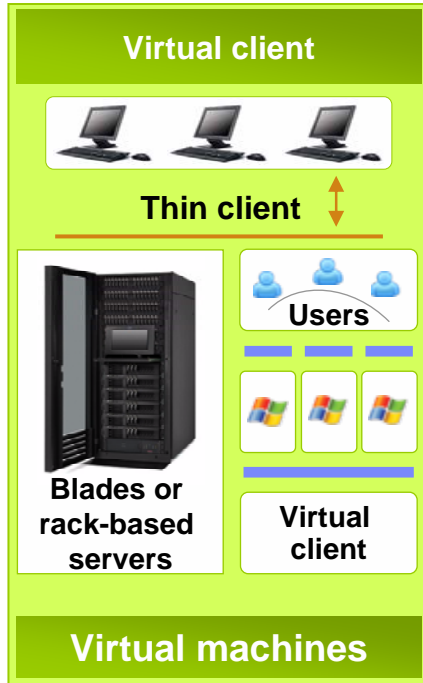


IBM智慧桌面云解决方案 - 不同的应用场景对应的不同解决方案



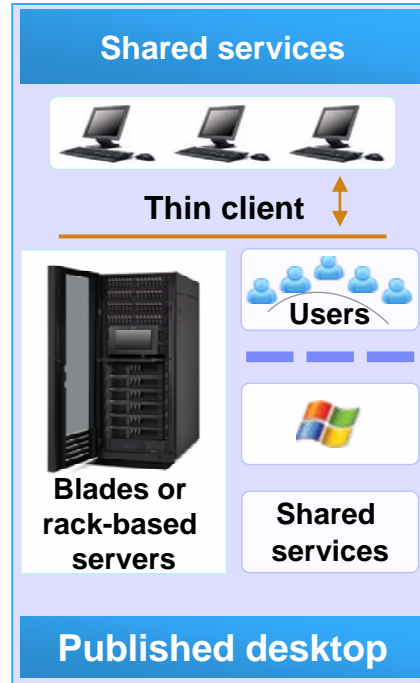
物理层 1:1

- 1:1 物理对应
- 较高成本
- 多媒体支持效果优异
- 安全



虚拟个人操作系统

- 完美的桌面体验
- 可选择操作系统
- 较好的安全性和总拥有成本
- 充分利用现有技能



共享桌面

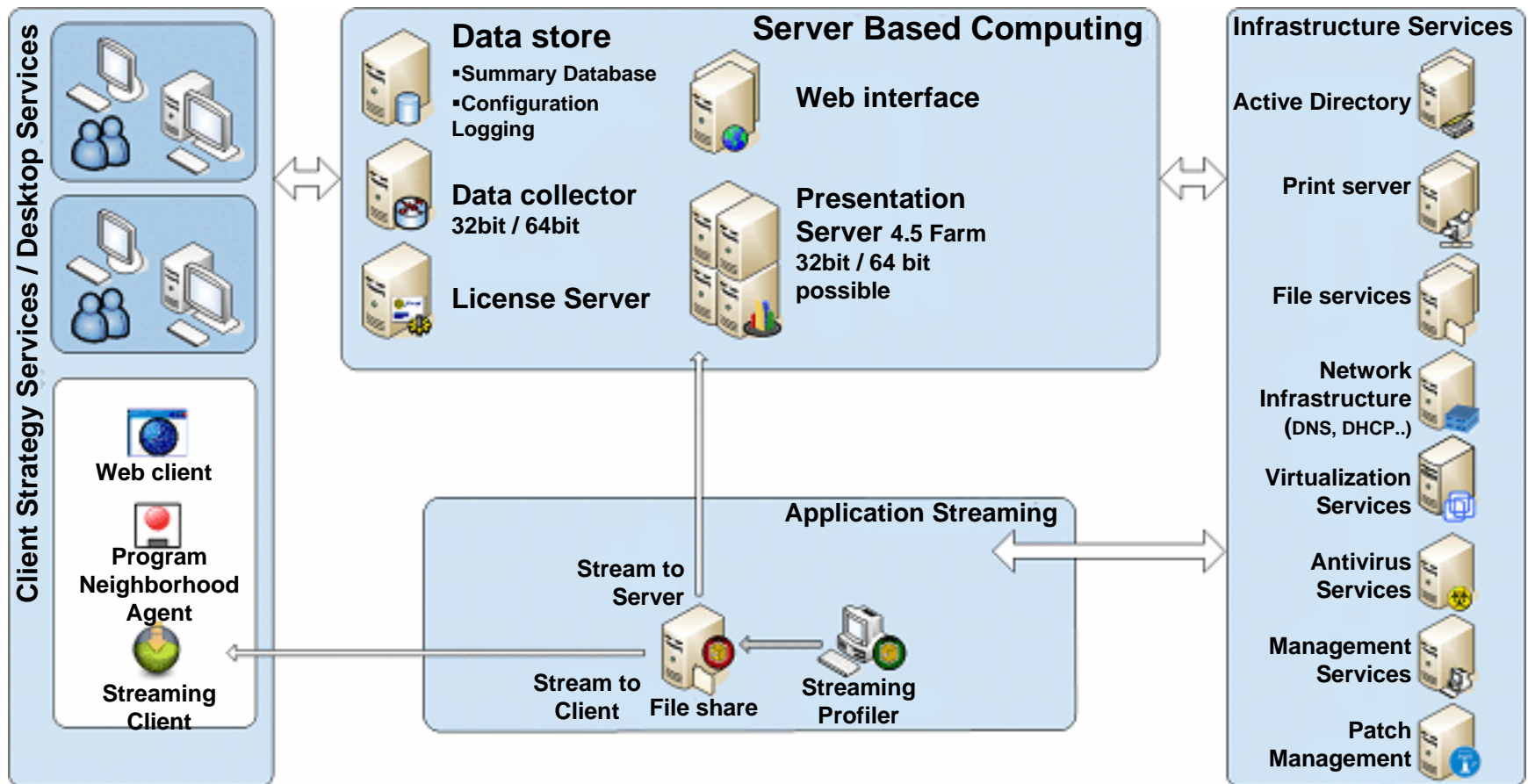
- 共享一个操作系统和应用程序
- 最少的故障隔离
- 更困难的部署和管理



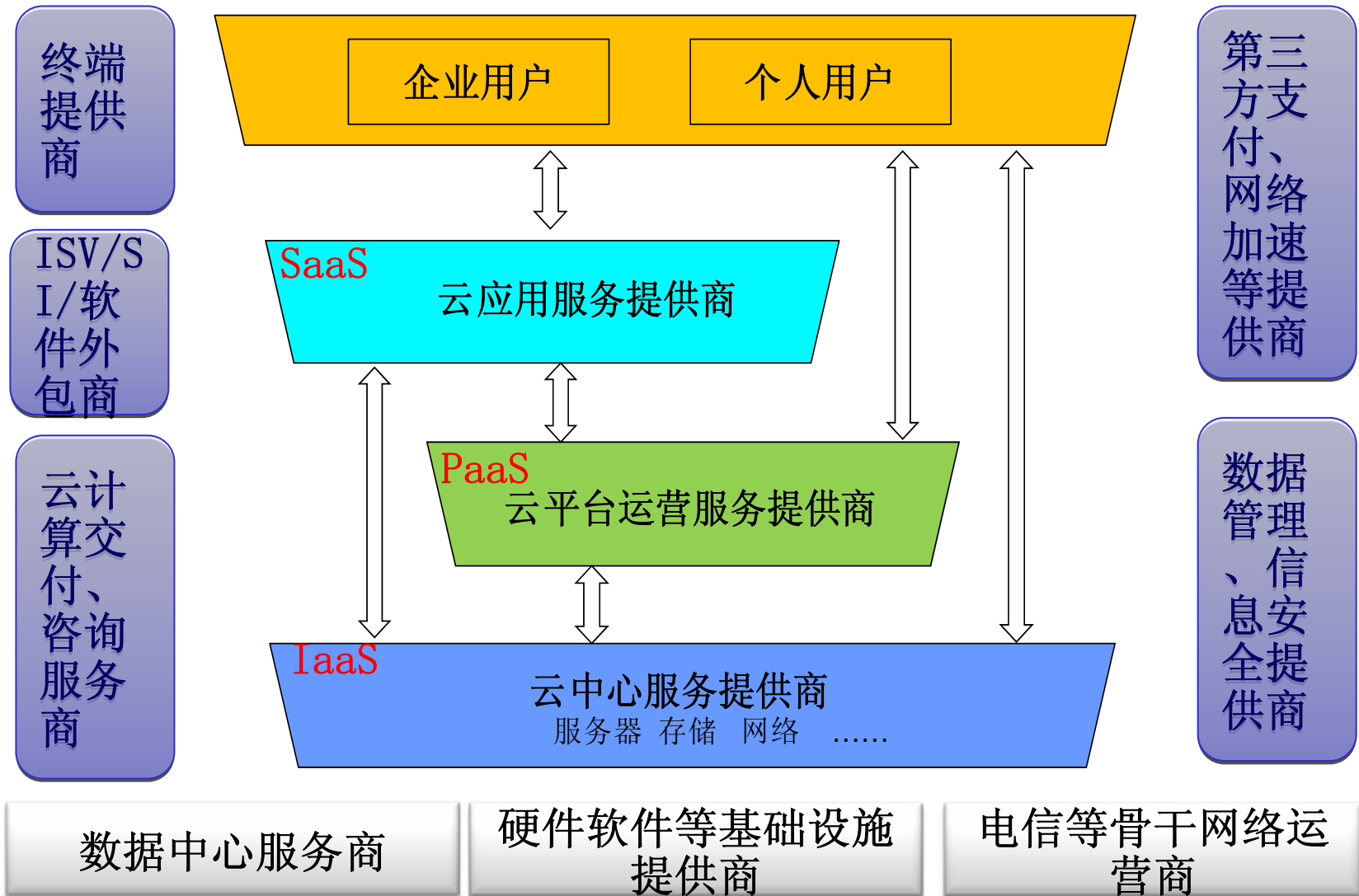
流服务

- 一对多广播
- 共享一个操作系统与应用
- 高级故障隔离
- 高可复制性
- 高可管理性

IBM智慧云解决方案架构简介：共享桌面模式



云计算拥有复杂的生态系统，提供商需要有众多的合作伙伴



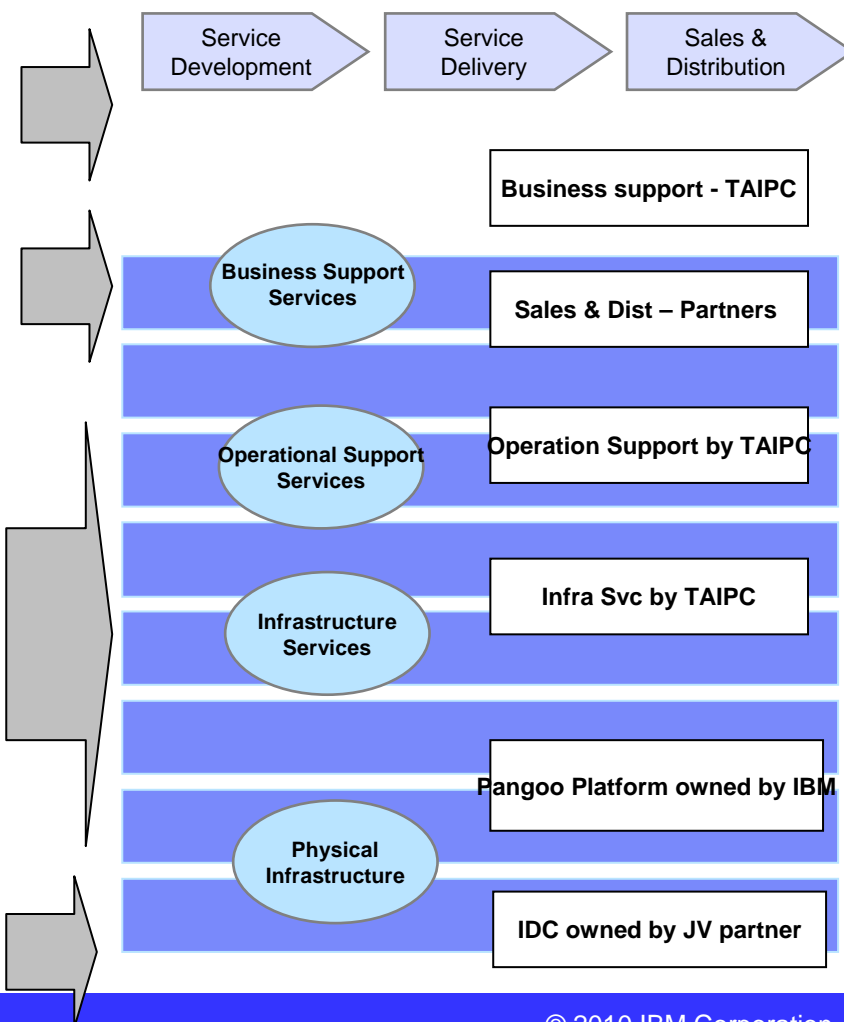
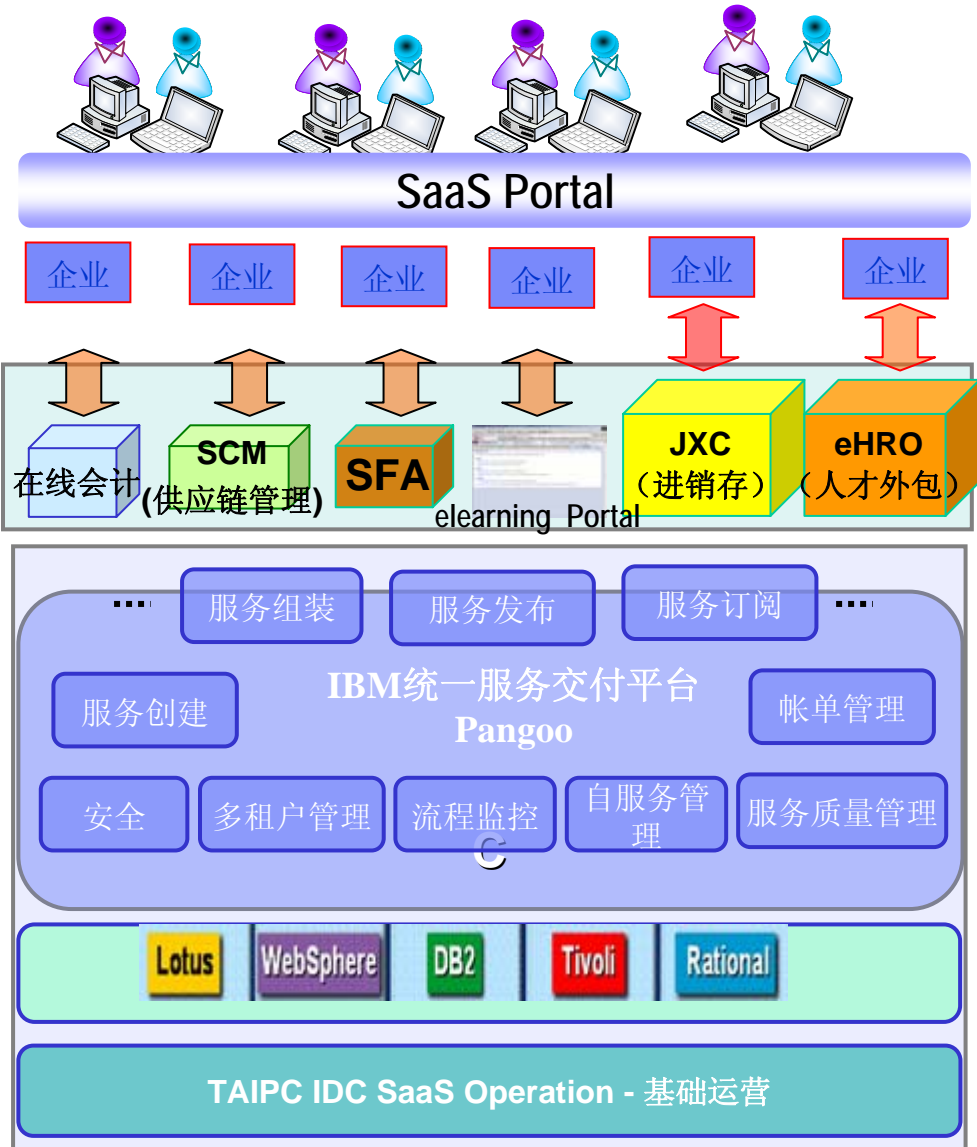
公共云平台

- 软件开发商及服务提供商利用互联网建立服务生态社区并可以服务大量的中小企业客户
- 商务及技术的创新协助建立低成本、高可扩展、安全的互联网服务
- 通过对于运营数据的分析获取对于商务的深层认知并支持优化服务及开发新的增值服务



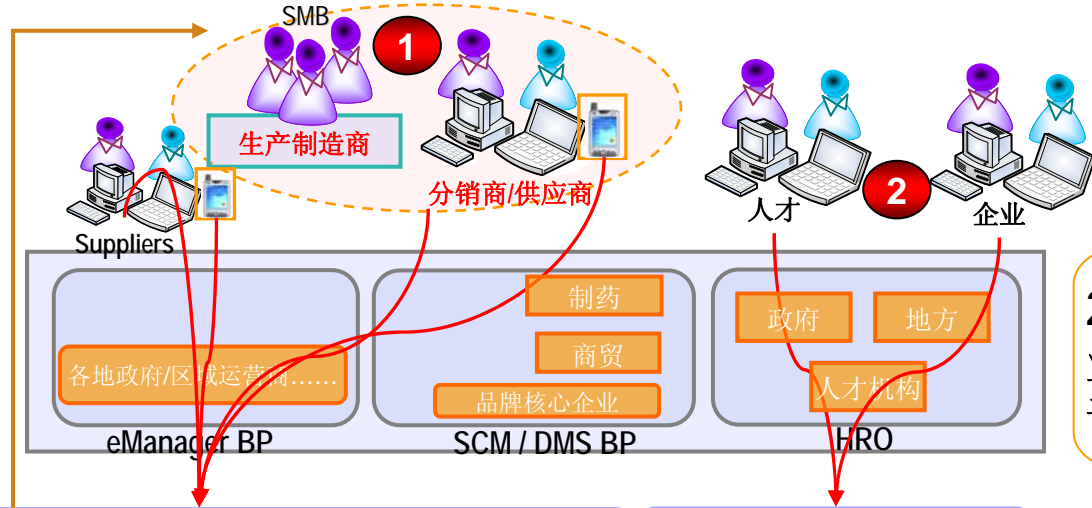
案例：SaaS 模型

TAIPC has ICP License for doing eCommerce
JV partner has VAS License for Telco Value Added Services



案例:TAIPC

1) 整合SaaS统一登录门户 (YXL)



2) 开发HRO行业解决方案测试

3) 增强eManager行业解决方案, 丰富DMS, Logistic等SaaS产品

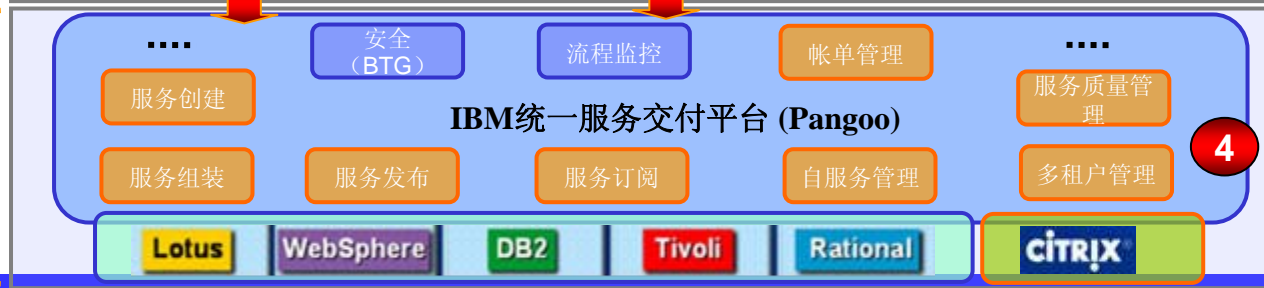
IBM SaaS 统一登录门户

HRO Portal

SaaS Offering



SaaS platform

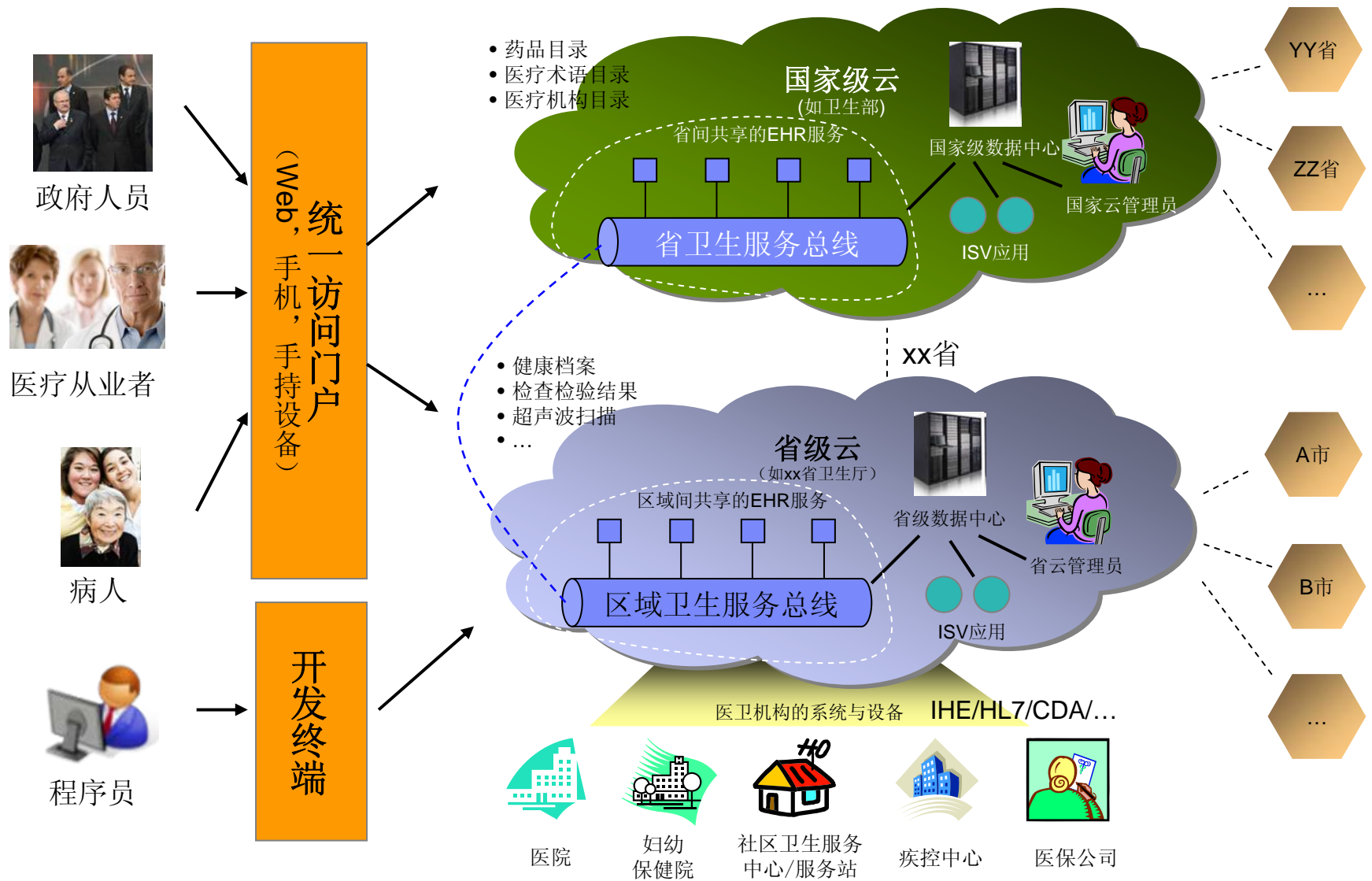


4) 强化SaaS服务平台, MBPS eLearning Infrastructure Support

案例：混合云

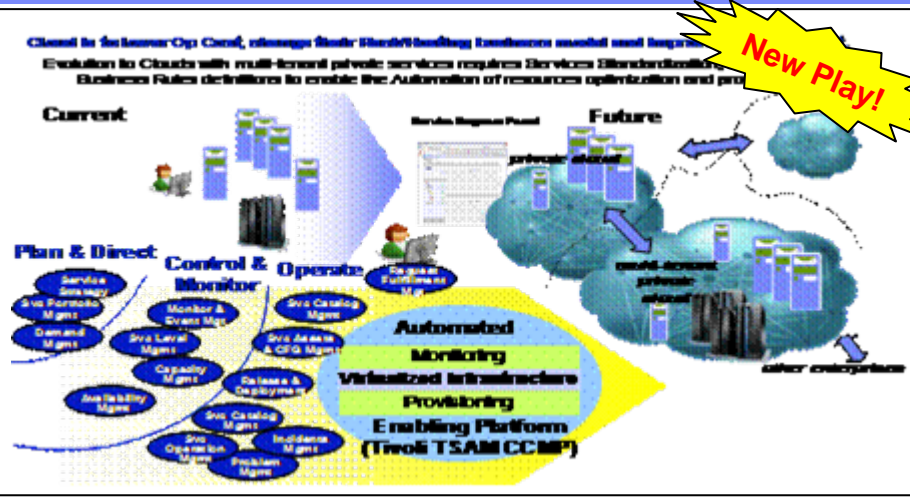


案例：健康云

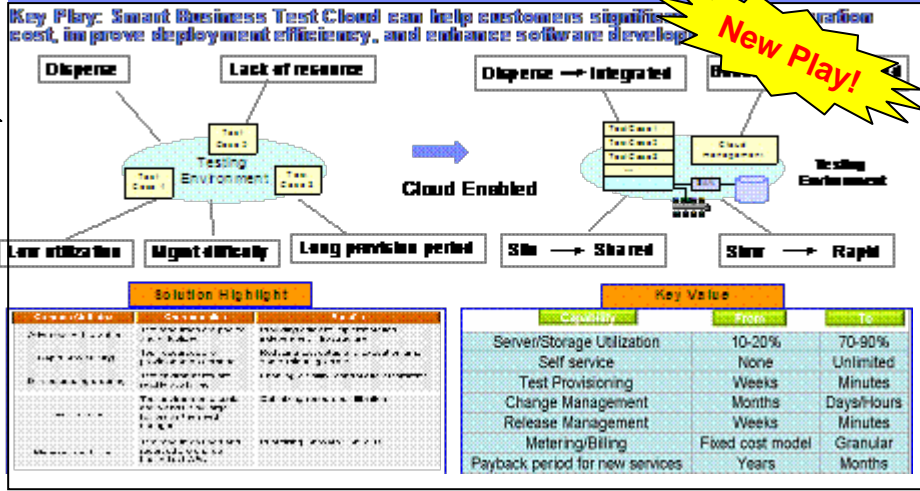


IBM 云解决方案

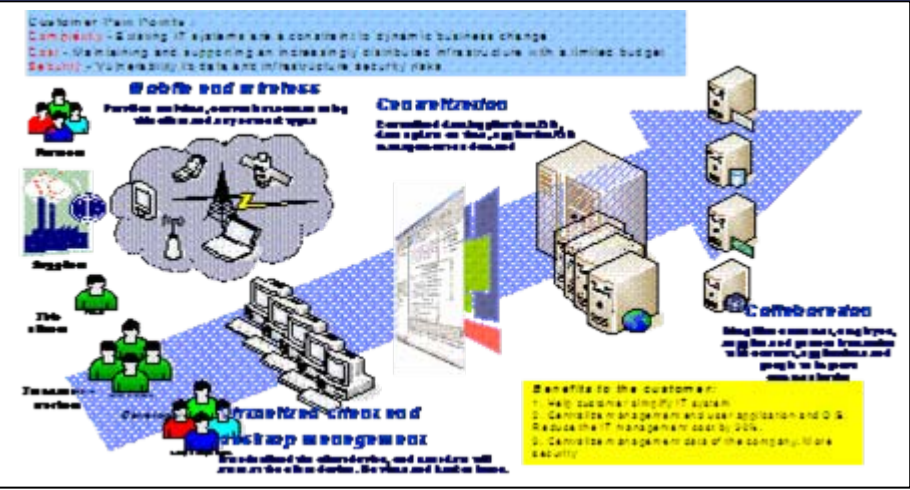
云转型咨询和实践路线图规划



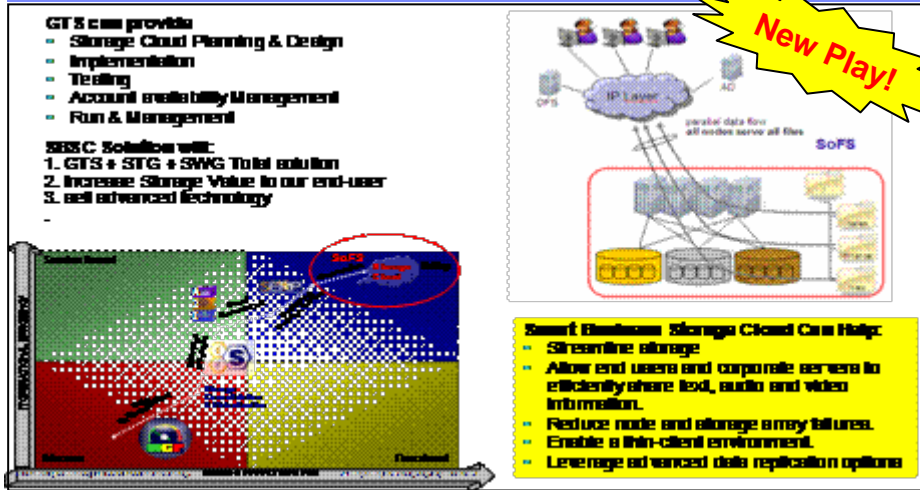
智慧测试云



智慧桌面云



智慧存储云





谢谢!