

爱开发 重创新 更智慧

Innovate2011

IBM Rational 软件创新论坛



Software. Everywhere.



# 云计算助力中国系统和软件交付创新

DJ Ning

大中国区技术总监

*IBM Software, Rational*



# 议程

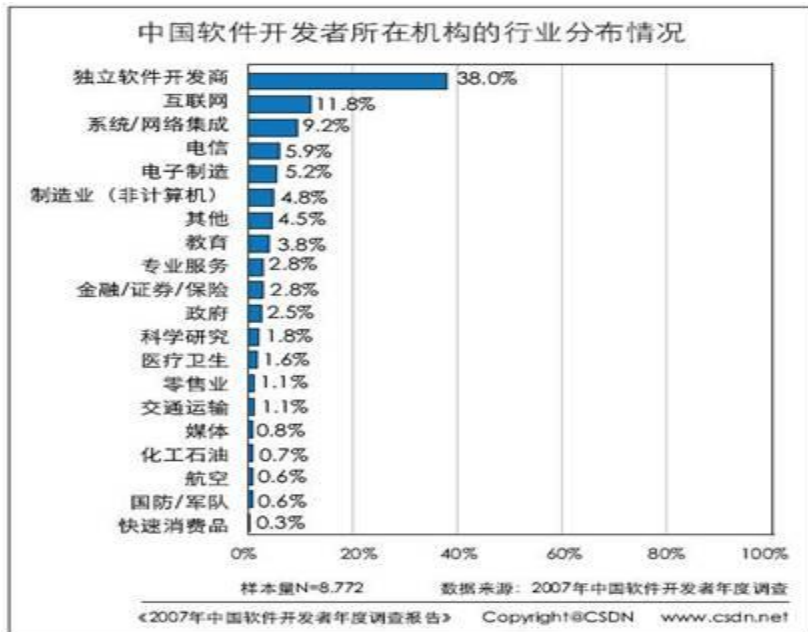
➔ 中国软件行业发展现状

云计算带给我们的创新

云计算助力企业系统和软件交付创新



## 中国软件行业现状



中国软件开发行业的特点：发展迅速，规模小，尚处于”产业积聚“阶段

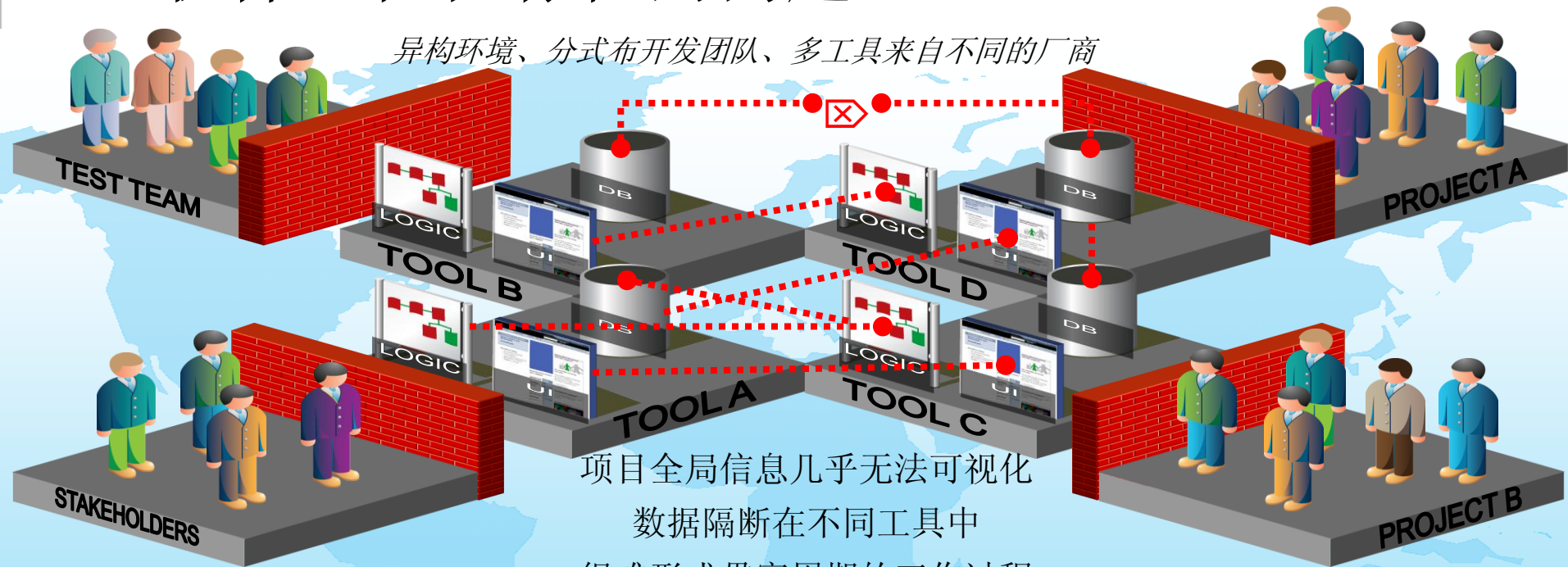
- 只有9.1% 组织的开发人员超过1000人
- 57.9%组织的开发人员小于50人
- 截止2010年5月，48家软件企业达到CMMI 5级

资料来源：CSDN 网站

2010年敏捷联盟《国内外敏捷软件开发发展现状与展望》

# 企业软件工程化存在的问题

异构环境、分式布开发团队、多工具来自不同的厂商



项目全局信息几乎无法可视化  
 数据隔断在不同工具中  
 很难形成贯穿周期的工作过程  
 维护和管理的高成本

一直存在的不同团队、不同组织结构的壁垒



# 议程

中国软件行业发展现状

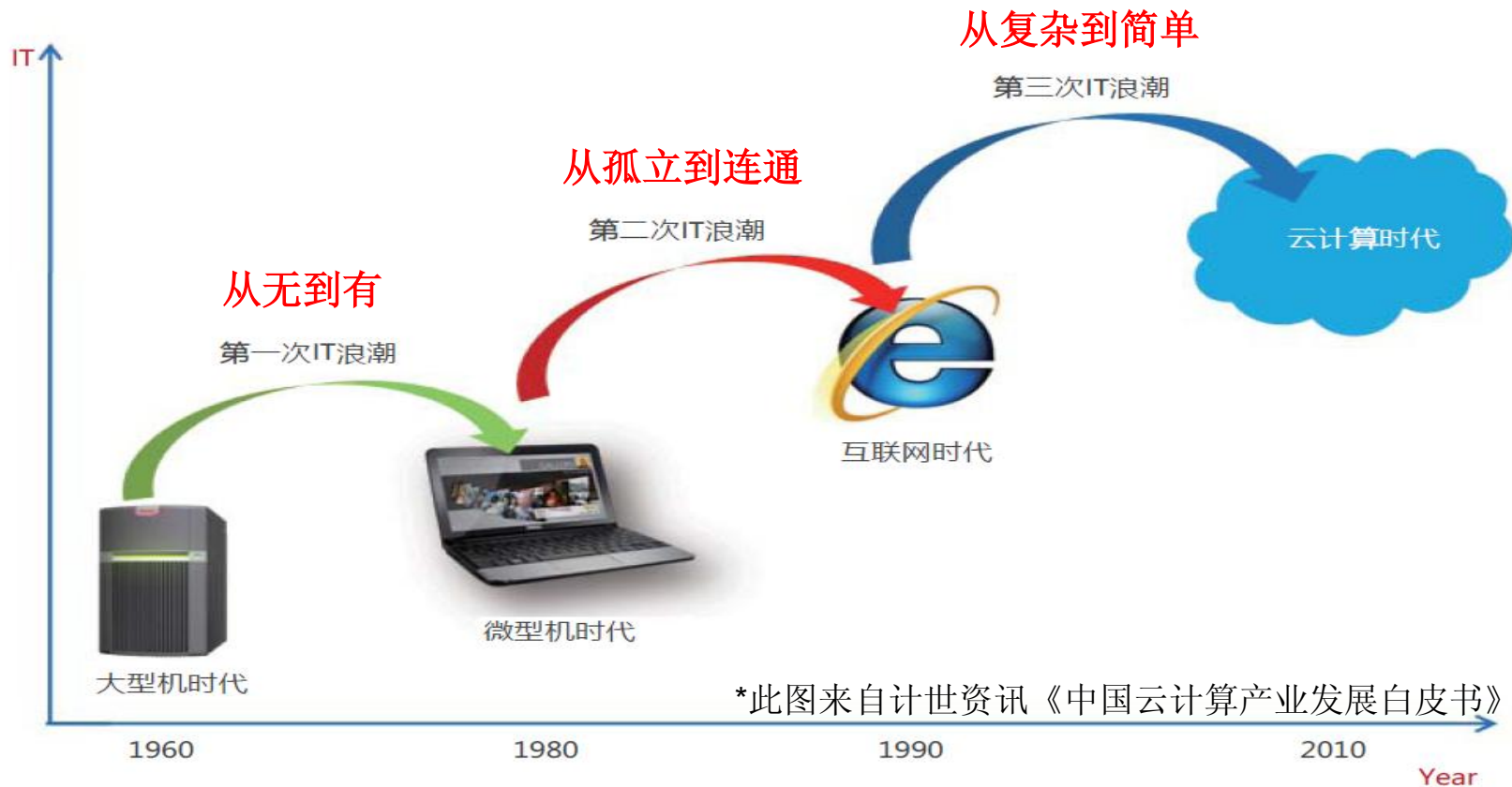
→ 云计算带给我们的创新

云计算助力企业系统和软件交付创新



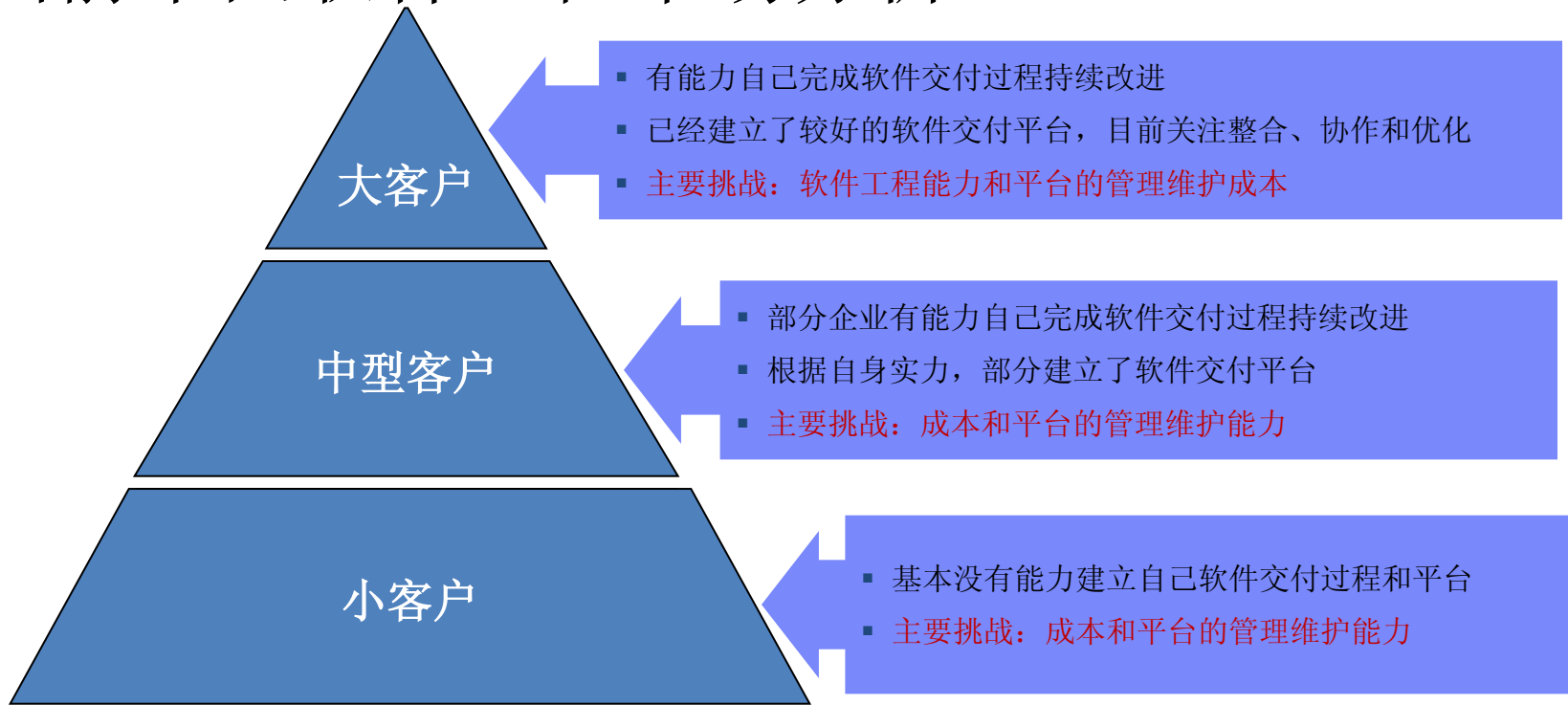


# 云计算被认为是第三次IT浪潮



\*此图来自计世资讯《中国云计算产业发展白皮书》

# 当前中国软件工程市场分析





# 最终用户期望 IT 更快部署、更简单也更便宜

## 对软件工程平台的期望

更容易部署  
更容易使用  
更便宜  
可适应的流程



云的通用特性  
快速部署  
资源抽象和标准化  
按用量收费  
弹性伸缩



*Computing Clouds: vast, amorphous, delocalized  
nebulae of processing power and storage*



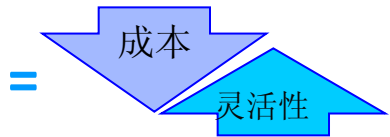
The Economist, June 2008

Source: IBM Corporate Strategy

# 云计算助力系统和软件交付创新



更低的成本  
更快地部署  
更专业的管理和维护



# 什么是云计算?

一种 用户体验 和 业务模式

- 标准化的服务
- 快速部署
- 灵活的价格
- 容易获取

一种 基础架构管理 和 服务交付 方法

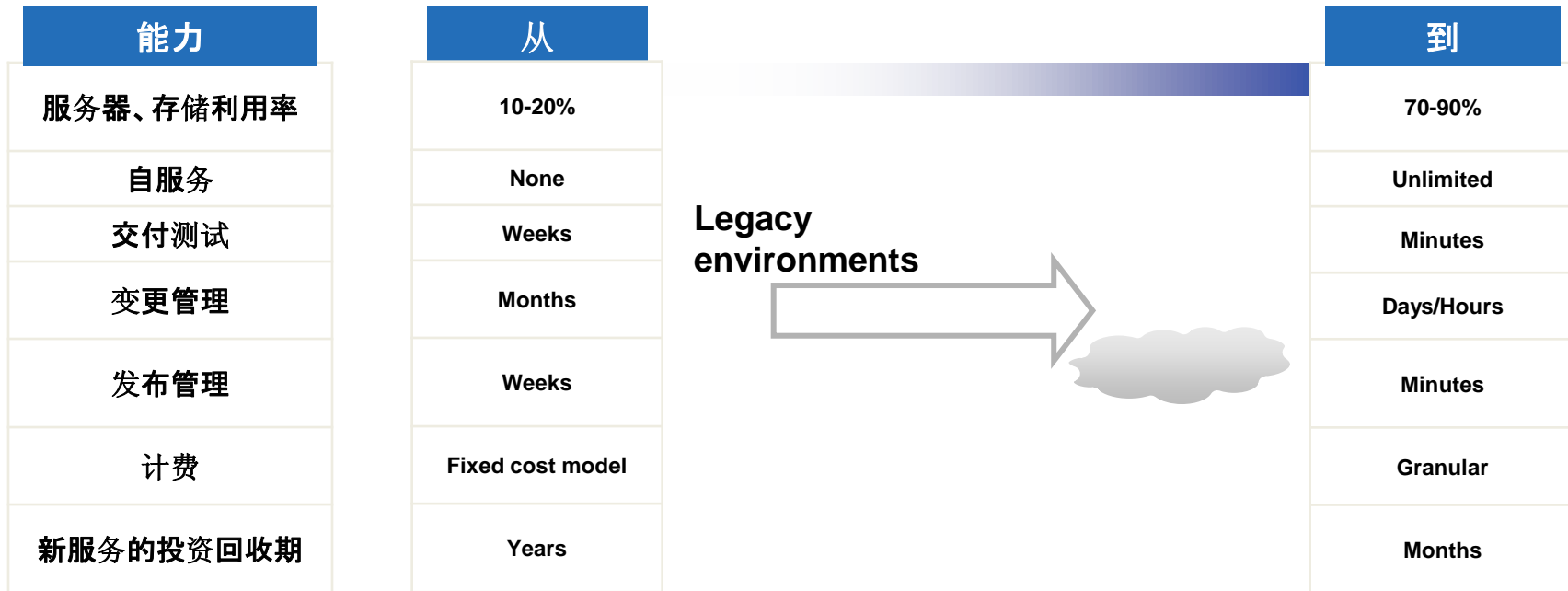
- 虚拟化的资源，单一且大量
- 弹性地交付服务

和银行的ATMs和自动售货机类似，云服务可以：

- 自服务
- 规模经济



## 云计算带来的创新



# 议程

中国软件行业发展现状

云计算带给我们的创新

➔ 云计算助力企业系统和软件交付创新



# IBM SmartCloud Enterprise

IBM Smart Business Register | Sign In

## Development & Test on the IBM Cloud

Overview Control panel Account Support About

Interact with the Development and Test Cloud directly from IBM Rational tools to quickly create and manage complex IT topologies. Register or sign in to get started.

Search

**IBM cloud news**  
November 05, 2009  
IBM Introduces New Offerings for Software Development in the Cloud  
IBM today announced new solutions for developers to create and deliver software in both public and private cloud environments. E-mail this page Save to del.icio.us Diggs this page  
November 04, 2009  
IBM Advances Cloud Computing in Education; Unveils

**In the cloud**  
November 04, 2009  
Cloud Computing Management  
www.ibm.com/it/about/storage/m/cloud/environme...  
exciting for comp...  
to focus on end-...  
worrying about it!

**View demo**  
IBM SmartCloud Enterprise  
Development & Test on the IBM Cloud  
Creating Instances on the Cloud

## 特性和功能:

- 选择虚拟的服务器配置
- 从服务列表中选择预配置的软件镜像 (images) :
  - ▶ Linux® operating systems; Red Hat and Novell SUSE
  - ▶ Windows
  - ▶ IBM Lotus®, WebSphere®, DB2® and Informix® stacks
  - ▶ IBM Rational® Application Lifecycle Management
  - ▶ Tivoli® Monitoring software
- Virtual Private Network (VPN/VLAN) services
- Premium support options; 24\*7 by phone

The production site is at

<http://www.ibm.com/cloud/enterprise>

More information on the offering landing page

<http://www.ibm.com/cloud/solutions/development>

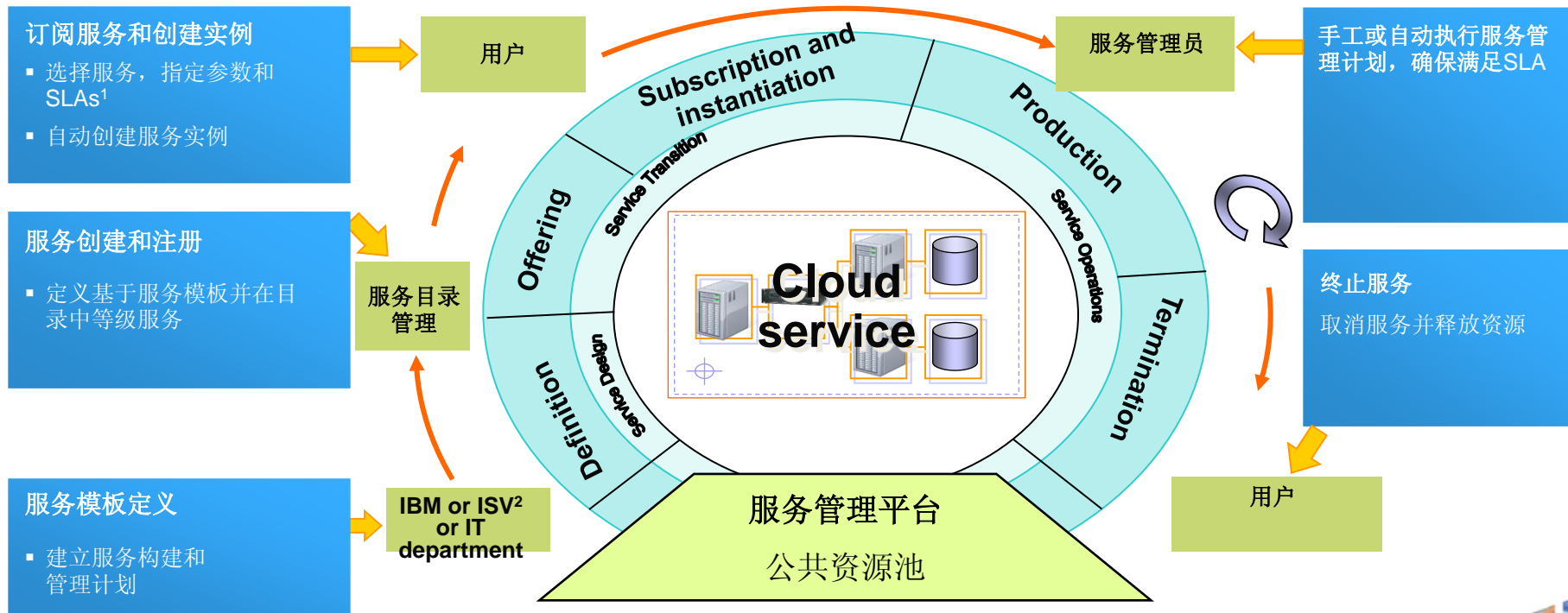
SmartCloud Enterprise 中包含大量高质量的镜像:

- 基于Rational工具的镜像COE开发大量的高质量镜像





## 云服务的生命周期



# IBM云，你可以一小时内建立开发和测试环境

通过易用的子服务门户，用户自服务地完成环境的建立



**Select Image**

- Rational Build Forge (1)  
Rational Build Forge Management Console
- Rational Build Forge Agent (2)  
Rational Build Forge Agent
- Rational Quality Manager (5)  
Rational Quality Manager Demo
- Rational Team Concert (6)  
Rational Team Concert Express with Sample Data
- Rational Team Concert and Rational Quality Manager (8)**  
Rational Team Concert and Rational Quality Manager
- Rational Application Developer (9)  
Rational Application Developer v7.5.2
- Rational Software Architect (10)  
Rational Software Architect v7.5.2

Next Cancel

**Add Instance**  
Step 1 of 3: Select image Configuration

Image Name: DB2 Express-C  
Image Description: DB2 Express-C is an entry-level edition of the DB2 database.  
Request Name: Anthony Dasari  
Quantity: 25  
Platform:  32bit  64bit

Server Size (#CPU/RAM/HDD):  
 Bronze 24GB/850GB  
 Silver: 48GB/1024GB  
 Gold: 96GB/2048GB  
 Platinum: 16TB/60TB/2048GB

Expires On:  
DB2 user passwords(s): db2cloud  
Image Id: 37

Previous Next Cancel

**Development & Test on the IBM Cloud**

Instances Images

Name	IP Address	Host Name	Created on	Usage	Status
Candice Gitzean			Oct 19, 2010	0.00%	Provisioning

Candice Gitzean (change name) Expires on 10/19/10 7 Days (Basic)

Refresh Instance Delete Instance Create Image

1 Choose a service

2 Choose a configuration

3 Image is provisioned

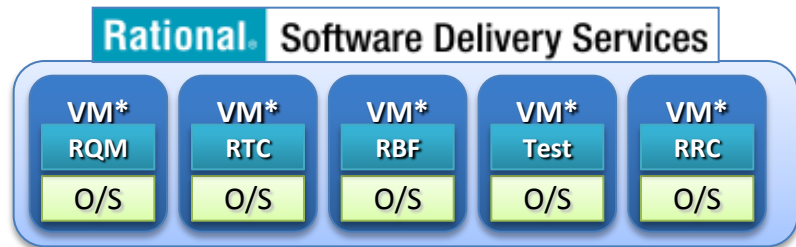
# 智慧的Rational软件交付云

## 私有云、公有云或混合云按需应变

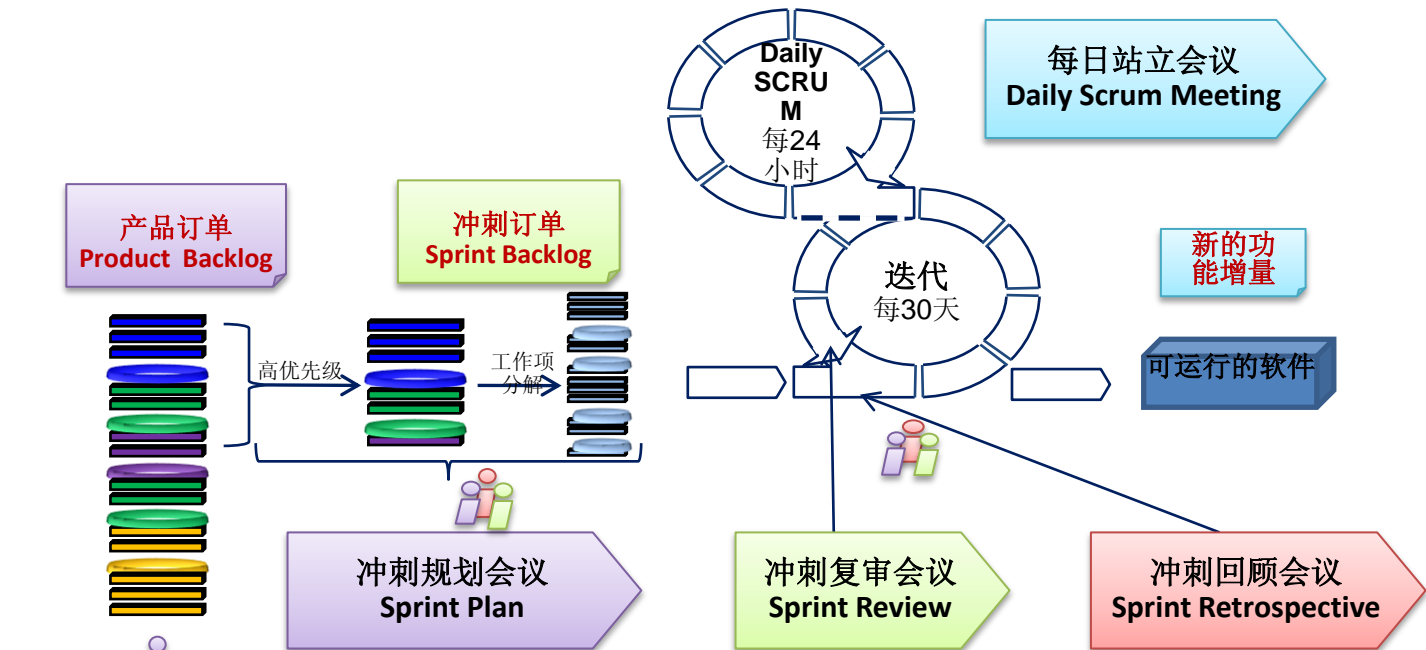
- 有经验的部署专家快速提供所需服务
- 使软件工程环境更简单和更便宜
- 内置标准化但可定制的开发过程
- 支持敏捷团队协作、自动化和透明开发
- 提供测试云和持续集成所需的构建云
- 将云环境纳入企业的软件交付业务流程
- 灵活控制云环境，加速的回报

*“Cloud is a major innovation in testing. We are eager to reap these opportunities, together with IBM Rational’s market-leading technologies”*

**Hans van Waayenburg,**  
CEO Sogeti Europe, and Head of Capgemini Global Testing



## 融合敏捷开发的智慧

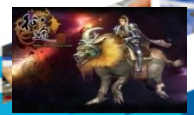


简单化

标准化

自动化

游戏产品



# 提供敏捷开发的基本能力

## 敏捷式计划管理

- 迭代计划和执行的一体化
- 迭代计划的拖拽编辑
- 现成可直接使用的敏捷流程模板

## 实时透明的项目数据

- 基于Web的可定制的项目仪表盘
- 实时的度量数据和报表，无需人工干预
- 项目里程碑的追踪和状态

## 简捷的配置管理

- 简单明了的流管理和视图
- 自动化的检入和检出操作
- 代码变更集与工作项集成
- 代码变更集的查询和回滚
- 代码变更集的冲突发现和合并
- ClearCase和SVN的连接

## 灵活的工作流管理

- 需求、开发任务和测试项的属性和状态定制
- 需求、开发任务、代码变更集、编译和测试项的关联和追踪
- 快速搜索和结果共享
- 审批和讨论区

## 扩展的持续集成

- 需求、开发任务、代码变更集、编译和测试项的关联和追踪
- 本地或远程编译服务器
- 支持Ant和任何具有命令行的编译服务
- 个人编译和集成编译

## Jazz Team Server

- 项目资产(项目、需求、任务和代码)的单一数据源
- 支持各种团队的组织架构
- 根据角色赋权
- 开发过程的定制和执行
- 基于人员和项目资产的团队内和团队间协同
- 项目模板、过程和数据的继承

RTC(Rational Team Concert)包含的主要功能模块



# 云应用的交付平台

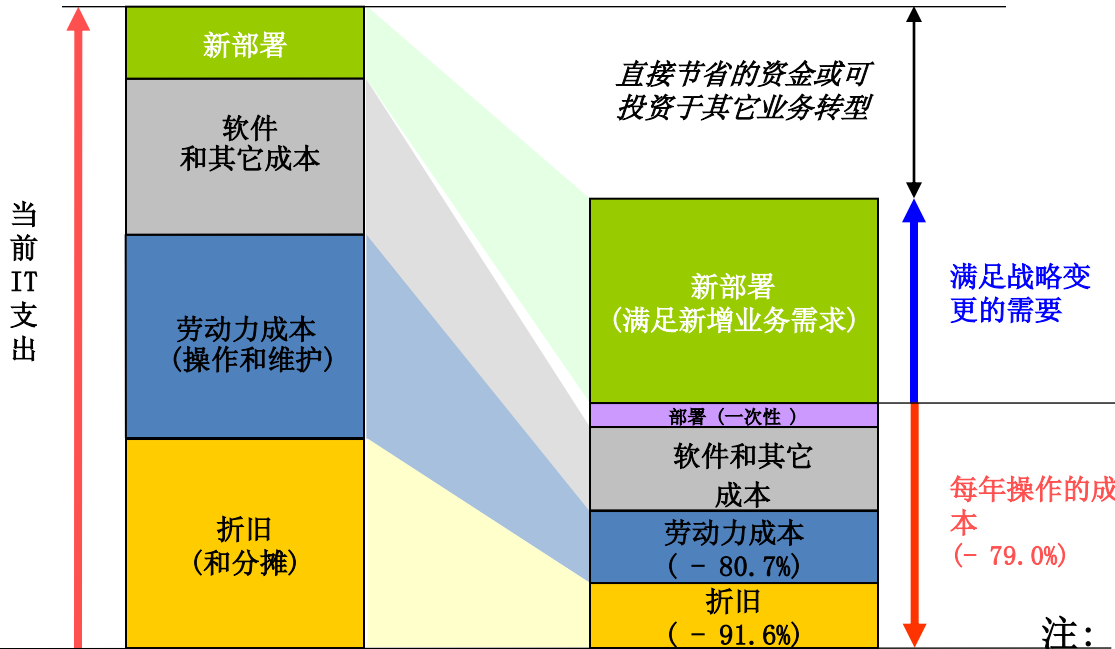




# IBM 内部的云计算部署 - TAP

Without Cloud

With Cloud



## 运作的商务结果

每年节省: \$2.35m (- 79%)     \$3.4 m to \$1.03 m

投资回收期: 53 days

净现值 Net Present Value (NPV): \$3.17mil

内部收益率 Internal Rate of Return (IRR): 206%

投资回报率 Return On Investment (ROI): 700%

注: 5年的折旧期, 5%的折旧率

TAP - Technology Adoption Program - IBM 驾驶技术创新的新模型



Software. Everyware.





[www.ibm.com/software/rational](http://www.ibm.com/software/rational)

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