

# How to Create a high-performance, virtualized, secure and flexible Data Center infrastructure to enable new business value



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# Agenda

- Introduction
- Overview of Revenue potential with DC Infrastructure Services
- How can Cisco help in creating business value and competitive differentiation around DC
  - Service Creation approach
  - Process improvement
  - Infrastructure readiness
- Case studies and best practices
- Benefits summary
- Suggested next steps



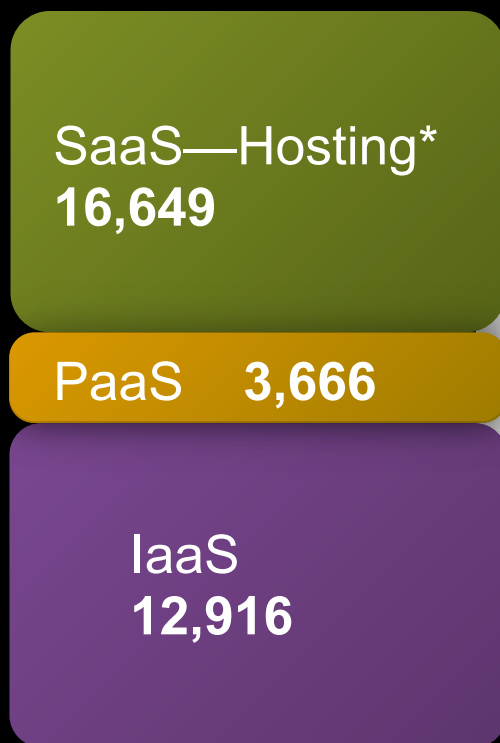
# Market Potential Overview



# Worldwide Services IaaS Revenue in 2013

Over \$33B Market Provides Significant Revenue Potential for SPs through new delivery models

## Cloud Computing—Services Revenues \$M—2013 (Estimate)



### Public Cloud

**“ Five to ten years from now, I don’t foresee that our DCs will exist in their present form...We just don’t have the scale to be cost effective.”**

CTO, One of the largest states in the U.S.

Note: \*SaaS revenues only include SaaS enablement by hosting apps for ISVs – and not revenues from the sale of any software or apps

Source: Cisco IBSG

# Associated “Users”

### Software as a Service (SaaS)

#### SaaS-Enabled Applications

CRM/ERP (Force.com)	Desktop Apps (Office)
UCC (WebEx)	Other Applications
Video	



End Users

### Platform as a Service (PaaS)

#### Platform-Enabled Applications

Billing	Collaboration
Applications-Developed Workflow	Metadata



Developers

### Infrastructure as a Service (IaaS)

#### Infrastructure-Enabled Services

Business data – Storage, backup, bulk encryption, DR

System infrastructure – BC / DR, DevTest, quality assurance, multilocation, VDI

Hosted hardware grid – CloudBurst, data base



IT  
Department

# Payment Plans

## Pay-as-You-Go



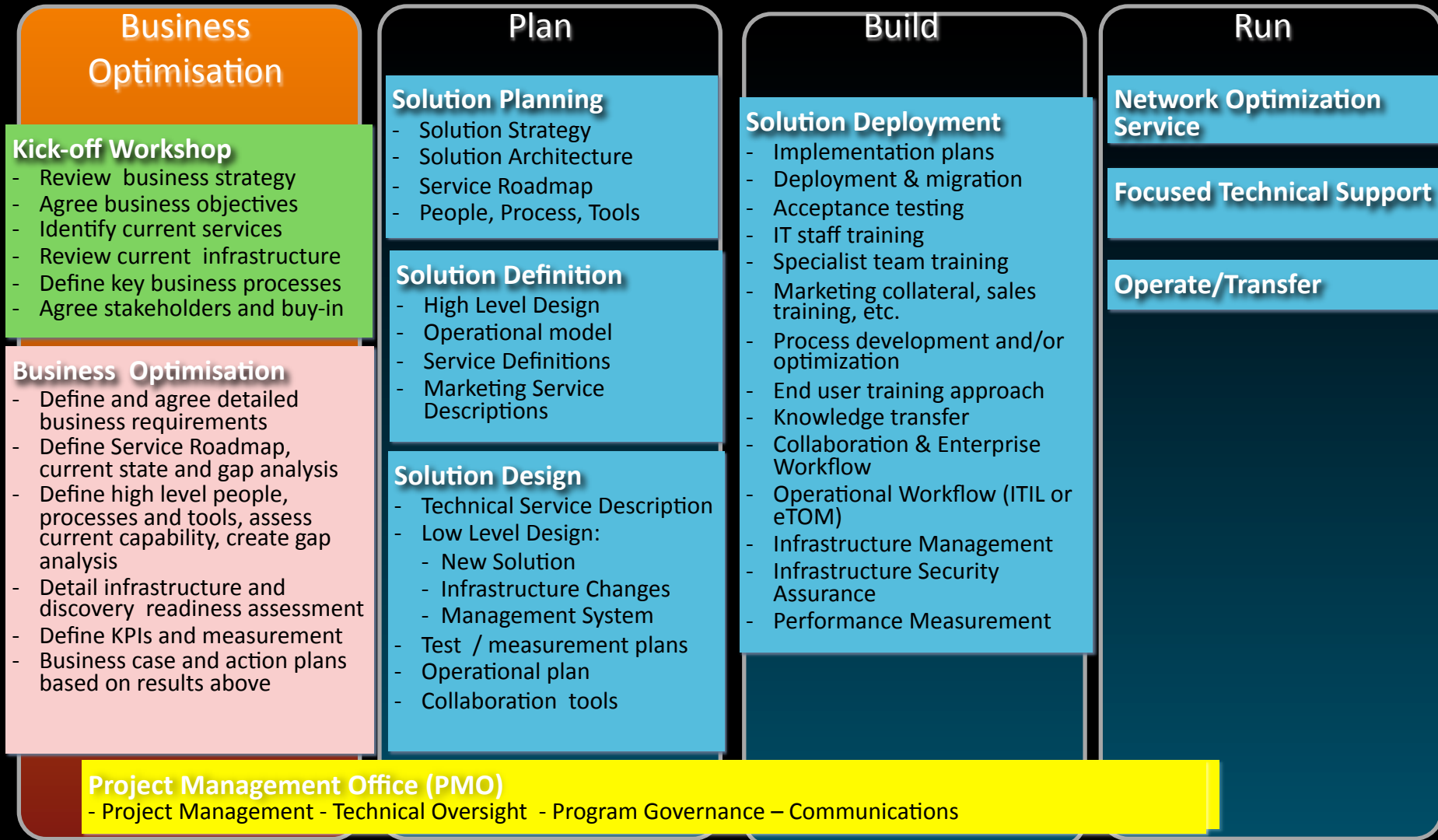
## Subscription



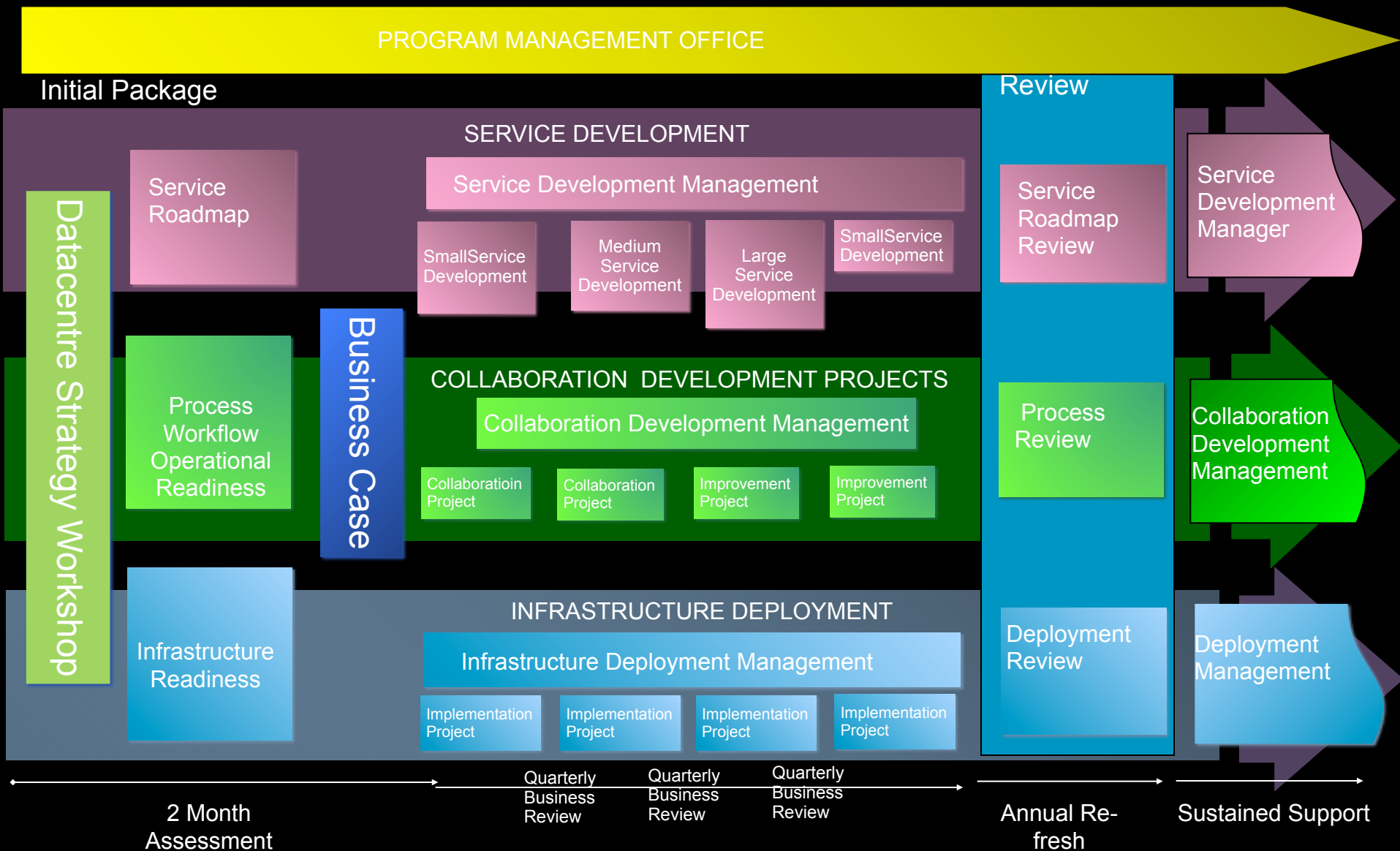
# How can Cisco Help? ALIGNING TECHNOLOGY WITH BUSINESS STRATEGY



# Data Centre Service Framework



# Business Optimization Service Engagement Approach



# Data Centre Strategy Workshop

**Business objective:** To define and align the business strategy to provide an agreed set of business objectives and committed stakeholders to guide the business optimisation project

## Scope

### ▪ Data Center Business strategy

Review and confirm stated corporate strategy

### ▪ Business Objectives

Translate strategy into business objectives to drive activity

### ▪ Current Services

High level review of current services and users / Customers

### ▪ Current infrastructure

High level review of network, processing, applications and IT to establish current state

### ▪ Key Business Processes

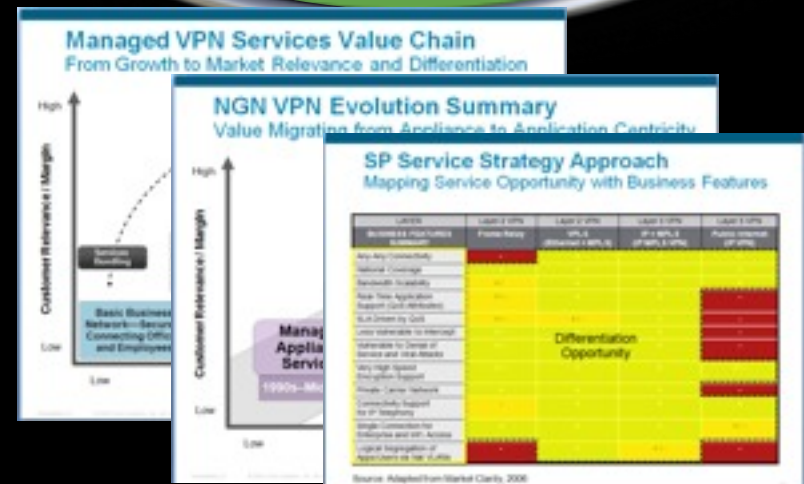
Identify / prioritise core processes which impact the business

### ▪ Stakeholders

Identify and interview stakeholders to gain buy in and commitment

## Deliverables

- Executive Workshop
- Strategy Review
- Service Review
- Infrastructure Review
- Business Process Review



# Business Requirements and Market Assessment

Business objective: Define target market, Understand strategic approach to the market

At a high level, competitive benchmark, Agree on Prioritisation criteria

## Business Requirements and Market Assessment

1	→ Business Requirements.....	3
1.1	→ Introduction - Drivers of the planned investment.....	3
1.2	→ Priorities for the market assessment.....	3
1.3	→ Possible target customers for SPs/DC services offering.....	4
1.4	→ Initial prioritisation criteria.....	7
2	→ Market Assessment.....	8
2.1	→ Market Segmentation and Sizing.....	8
2.1.1	→ Market Segmentation.....	8
2.1.2	→ Market Trends and Drivers.....	10
2.1.3	→ Market Sizing.....	12
2.2	→ Screening of existing DC services offerings.....	15
2.2.1	→ Major Regional Players.....	15
2.2.2	→ Overview by country.....	18
2.2.3	→ Global Cloud Players.....	20
2.2.4	→ Global data centre services players.....	21
2.2.5	→ Comparative position of SP as data centre location.....	22
2.3	→ Appraisal of possible target markets for SP.....	24
2.3.1	→ Prioritisation Criteria.....	24
2.3.2	→ Market Prioritisation.....	25

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# Service Creation Approach



# Service Roadmap

**Business objective:** To translate the defined Strategy into an executable service roadmap for the key users or market segments identifying new services

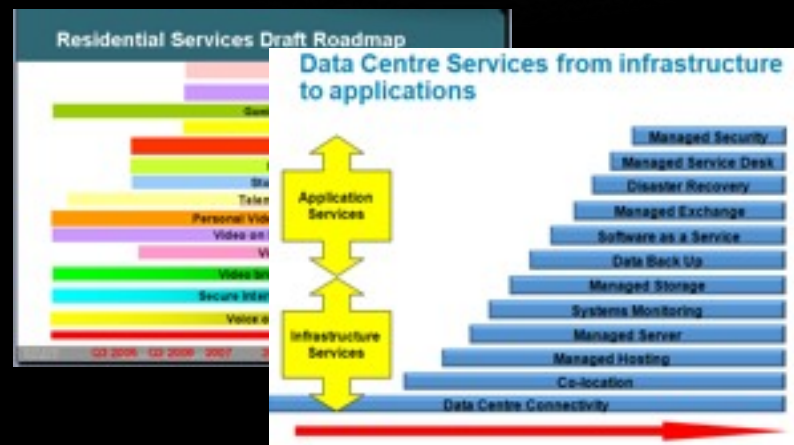
## Scope

- Segment Roadmap  
Key services defined for each user group or customer segment over time
- Consolidation Roadmap  
Overall roadmap to feed functional specifications
- High level Infrastructure Functional Specification

Alignment of infrastructure, technical strategy requirements

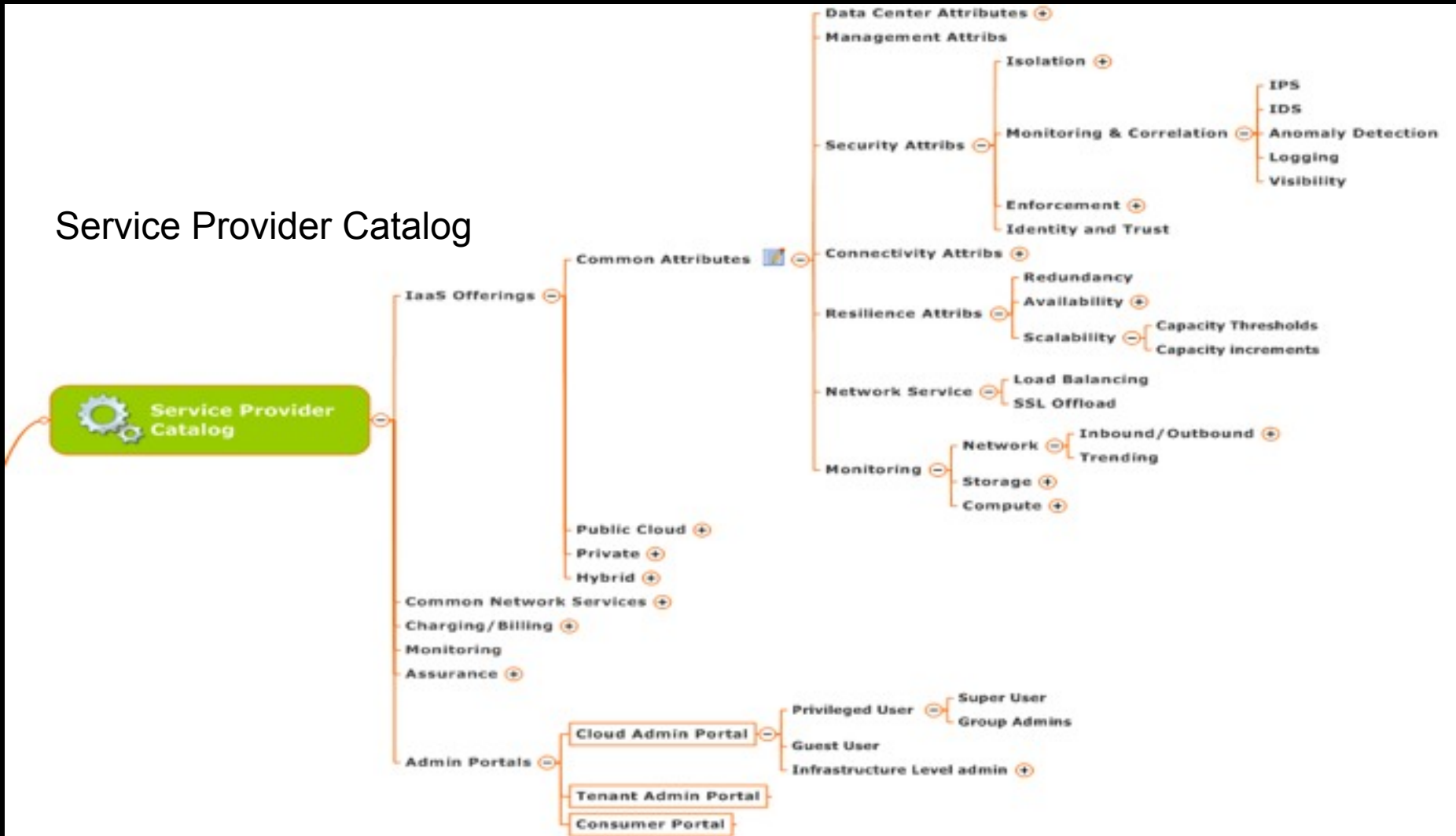
## Deliverables

- Service Roadmap per segment
- Consolidated Service Roadmap
- Infrastructure Requirements Document



# Service Catalog : Service Provider

## Service Provider Catalog



# Process Improvement



# Datacenter Customer Experience Process

**Business objective:** To identify areas to improve the Customer experience to reduce churn and build a deeper relationship to improve profitability

## Scope

- Audit of existing Customer impacting processes
- Service creation process from idea to market
- Sales process from quote to cash Specifications
- Customer Care process from fault to resolution
- Comparison with new service requirements
- Process improvement

## Deliverables

- High level Customer experience Process Map
- Gap analysis against best practice
- Recommendations for improvements



# Infrastructure Readiness Cloud enablement services



# Cisco Advanced Services

## Cloud Enablement Services Summary

### Cloud Strategy Service

#### Assess Strategy:

- ✓Technology & Security
- ✓Management Tools
- ✓Operational Readiness
- ✓Chargeback Approach
- ✓Program & Architecture Management Offices

**Accelerate Time to Value**

### Cloud Planning & Design Service

#### IaaS Design:

- ✓Technology, Security &
- ✓Tools Architecture
- ✓SLA Design
- ✓Chargeback Design
- ✓Program & Architecture Management Offices

**World Class Expertise Worldwide Presence**

### Cloud Implement & Integrate Service

#### Implement & Integrate

- ✓Technology & Security
- ✓Tools
- ✓Staging & Validation
- ✓Program & Architecture Management Offices

**Proven Delivery Capability**

### Cloud Optimization Service

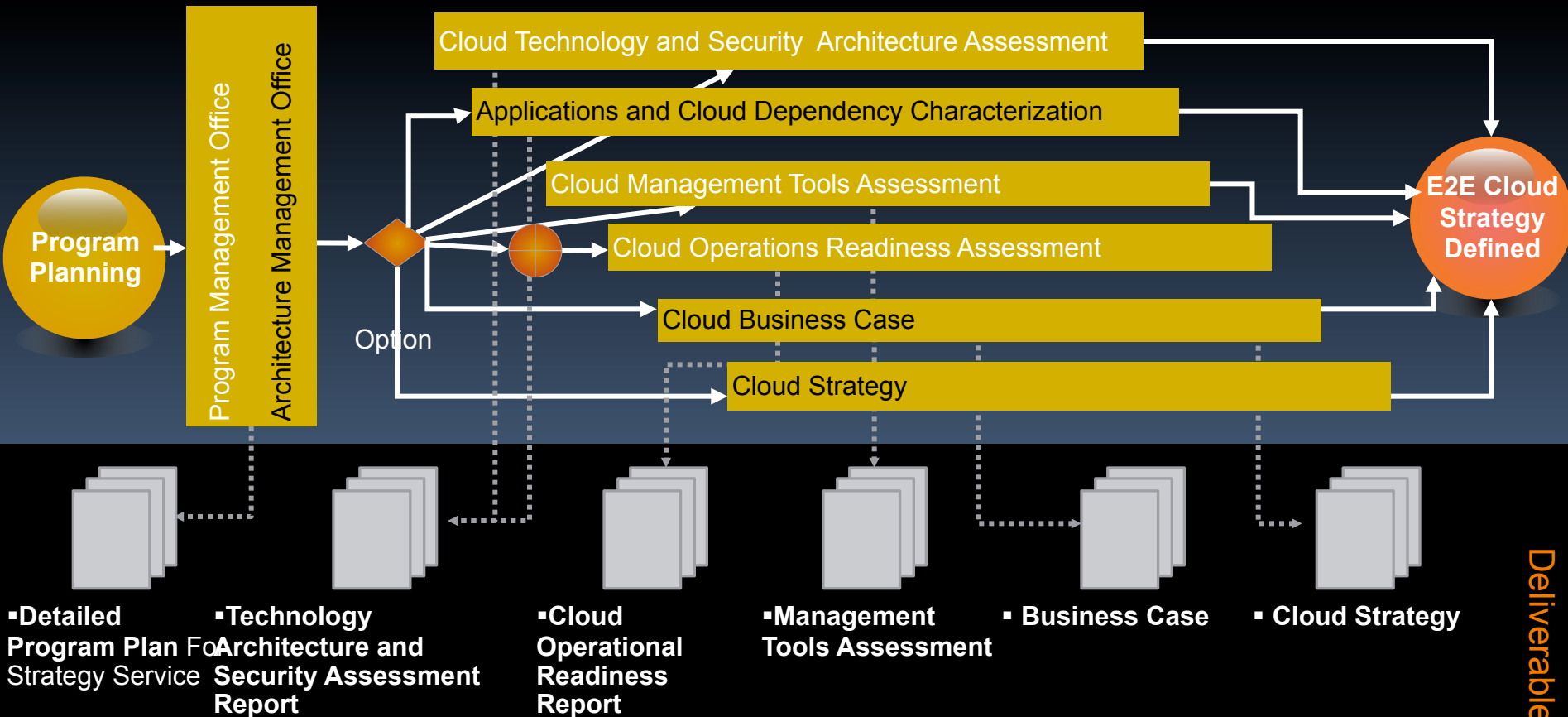
#### Optimize via ...

- ✓Architectural reviews
- ✓Security Audits
- ✓Cost reduction exercises
- ✓Process Improvements
- ✓Tool customization

**Delivering Unique Cisco Insight**

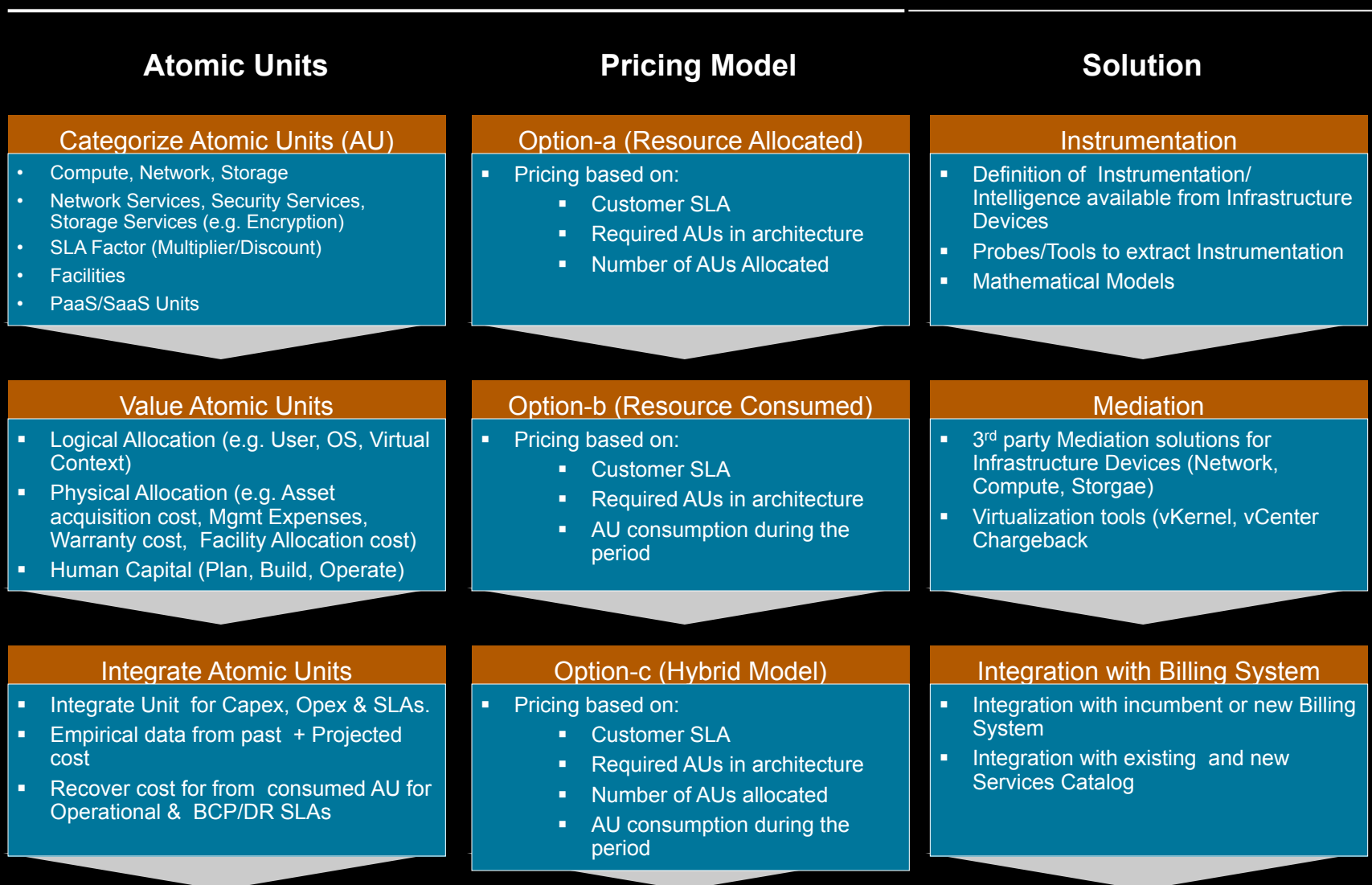
# Cloud Strategy

## Engagement Flow—Deliverables



**Typical Project Duration: 1 to 3 Months**

# Cloud Chargeback Approach



## Scenario for Service Pricing

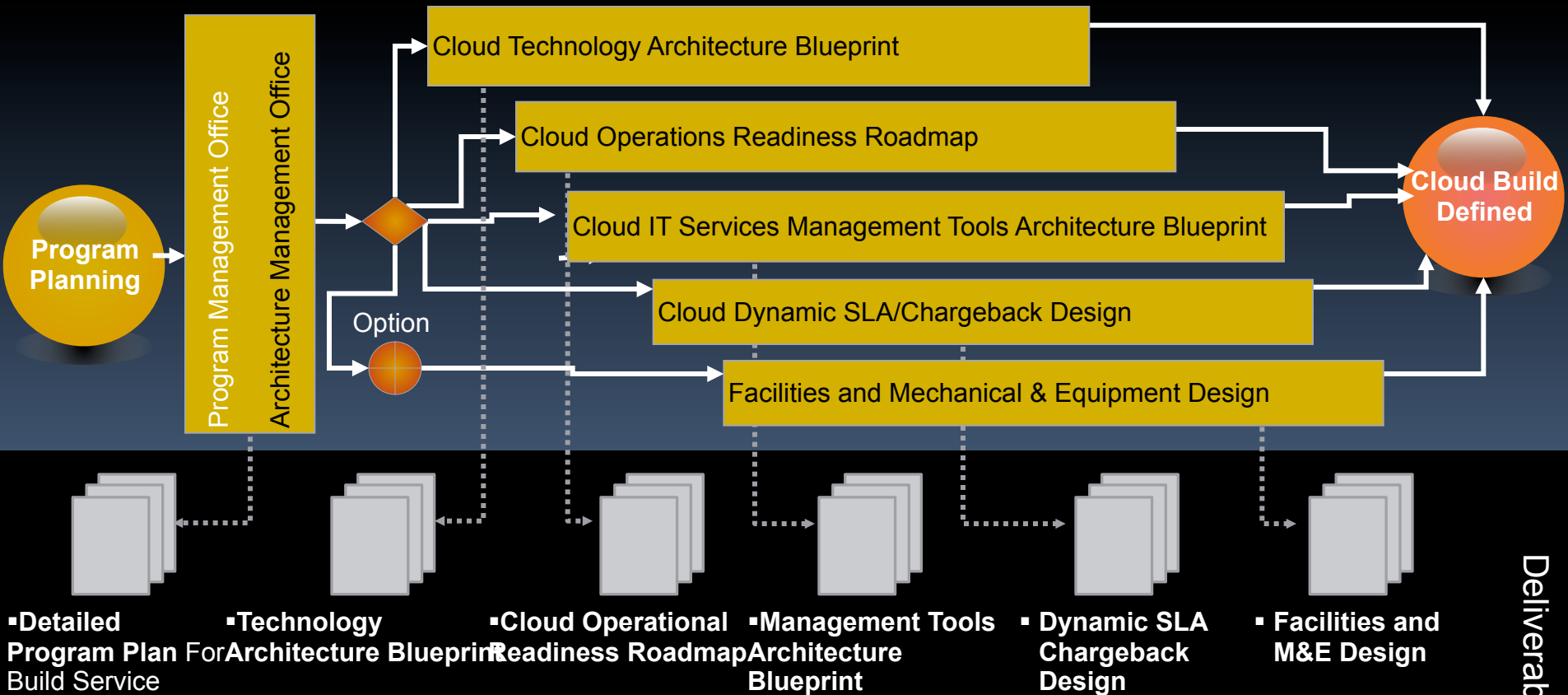
Existing Data Centre (6 KW/rack, 26 Racks, 192 GB RAM per Blade, XEON 5570)

Basic Data	Value	Unit	Comments
Invoice Unit / Cost Unit "Slice"	0.5 GB RAM		
Number of physical server per Scenario	200 Blades		
Number of UCS 6 RU Chassis per rack	2 UCS Chassis per rack		
max. Power per Rack	6 KW		
Number of UCS Chassis for 200 Blades 8250	30 UCS Chassis		
Number of Racks	26 Racks		
Conversion rate Euro to USD	1.487		Exchange rate from www.ecb.europa.eu per date xxxxxxxx
Costs per KVA per month	140 Euro / KVA		incl. DC Power and Cooling
Cost per FTE	508000 Euro per Jahr		
Cost per Rack incl. Cabling	5000 USD per Rack		
Estimated depreciation period for CAPEX	36 Monate		
Discount for Cisco Equipment	0 % of Cisco list price		
Discount for VMware Equipment	0 %		
# of slices per typical VM	16 slices per VM		is equivalent to 8 GB RAM per VM
typical VMs per Blade	24 VM per Blade		based on 8 GB RAM per VM
Total VMs for 200 Blades	4800 Virtual Machines		
Cost for VMware License ESX 4.0 Kosten (List price)	6354 USD	per CPU	
Unified Computing System (UCS)		Unit	
Number of Blades 8250 (full width)	200 Blades 8250		
CPU per Blade	2 CPUs per Blade		
RAM per Blade 8250	192 GB		
Power in kW für 200 Blades	162 kW		
Support cost in % der Cisco HW/SW GPL and VMware	8 %		
Number FTE's per Year for DC Operations	8 FTE Fulltime equivalent		
Cost per DC Operations per Year	406418 USD		
# slices for one UCS System with 200 Blades 250	76800 slices		Production Capacity of 200 Blades
CAPEX Calculation for UCS Solution with 200 physical Servers (8250 Blades)		GPL USD	net
CAPEX			
UCS System with 200 Blades 8250		11,718,846	11,718,846
NEXUS 7000 Core		1,498,480	1,498,480
VMware Licenses ESX 4.0		2,621,600	2,621,600
Cisco Site Plan Design Imple Training protective Support for Year 1		634,800	634,800
Racks and Cabling		130,000	130,000
Total CAPEX		16,603,746	16,603,746
OPEx Calculation for UCS Solution with 200 physical Servers (8250 Blades) per Month		GPL USD	net
OPEx			
OPEx Cost DC Power, Facility, Energy and Cooling per Month		32,716	32,716
Support cost for Cisco and VMware		109,398	109,398
OPEx DC Operation 2P per Month		40,910	40,910
Total OPEx		179,818	179,818
Calculation for UCS Solution with 200 physical Servers (8250 Blades) per Month			
OPEx total		179,818	28%
CAPEX total		461,771	72%
Total cost per month (CAPEX und OPEx)		641,590	
Cost per Slice in USD		8.33	
Cost per Slice in Euro		5.62	

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# Cloud Planning and Design

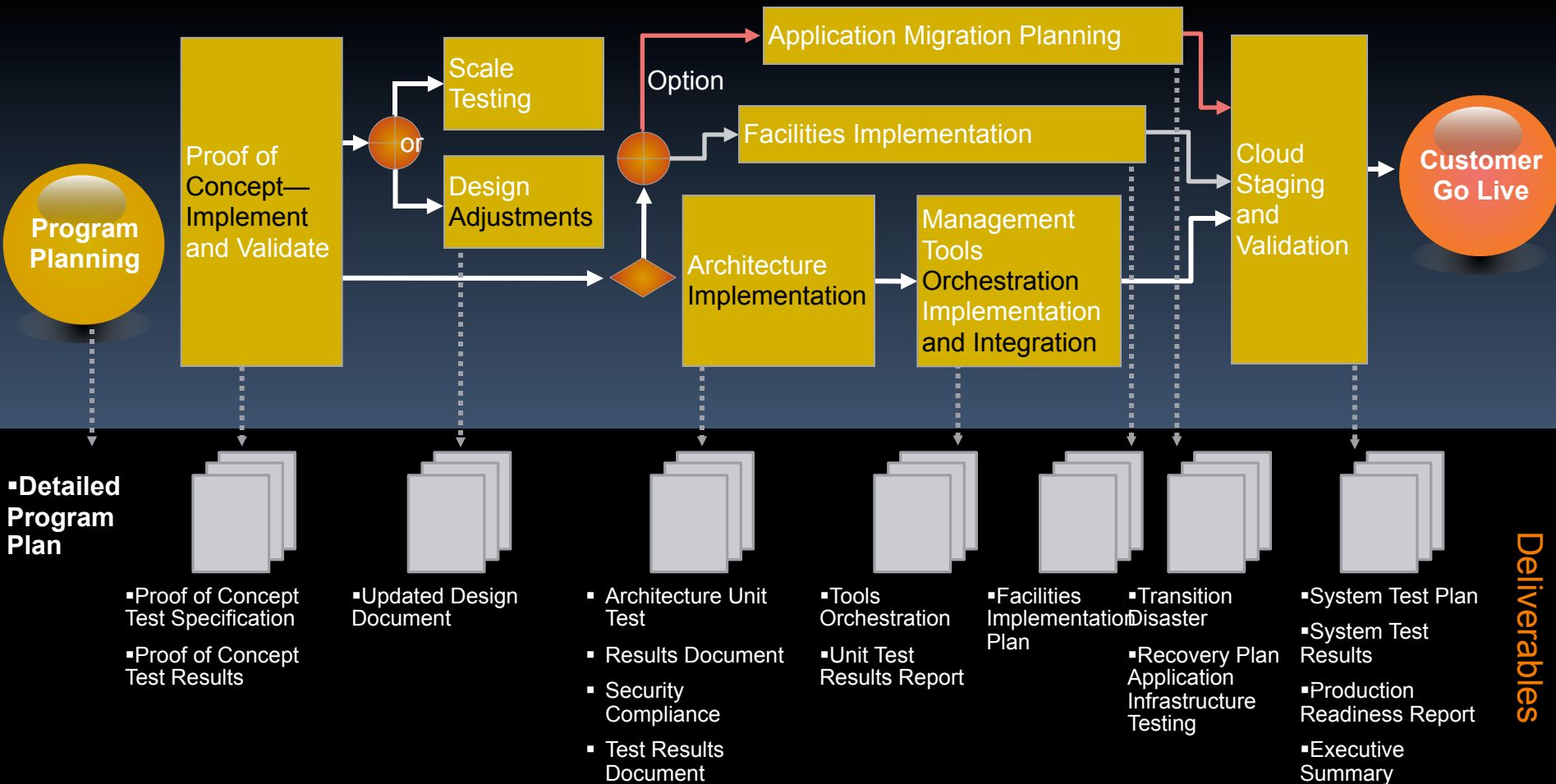
## Engagement Flow—Deliverables



**Typical Project Duration: 2 to 3 Months**

# Cloud Implementation

## Engagement Flow—Deliverables



Typical Project Duration: 6 to 18 Months

# Case Studies



# Cloud (IaaS) Project– Case Study-1

## Service Provider

## Challenges

- Deliver new cloud services to enterprise customers
- Increase automation, efficiency, and scalability of service delivery

## Cisco Solution

- **Unified Service Delivery solution:**
  - Nexus 5000, 7000, 1000V
  - VMware vSphere 4, VMsafe API
- **End-to-End Architecture Services:**
  - Overarching program management
  - Discovery analysis
  - Extensive testing
  - High and low-level designs
- **Optimization Services:**
  - Assessment Service
  - Network Support Service
  - Continuous Learning Service

## Benefits

- Accelerated cost-effective delivery of cloud computing solution
  - Expanding market share and grow differentiation
  - Increasing feature velocity
  - Reducing OpEx
  - Delivering enhanced security
  - Enabling multi-tenancy consolidation

# Cloud (IaaS) Project– Case Study-2

## Differentiated Services

### ▪ Customer Challenges

- Augment their current Managed Services line of business and enter Cloud Computing space-
  - Deliver flexibility of Cloud computing in secure & highly available manner.
  - Aggressive Phase-1 timeline to transition services from existing Services Catalog into Cloud in 75 days.
  - Web based view into Operational Metrics such as resource utilization, uptime & KPIs.

### ▪ Solution

- Modular, Scalable, Pre-Engineered & Pre-Integrated VCE vBlock Architecture:
  - Faster time to production
  - Balanced Compute/Storage/Network configuration
  - Fully Virtualized
  - Joint expertise and on-site delivery from VCE Coalition Services team.

### –Impact on Customer

- Customer was able to focus on Business requirements and key project milestones.
- VCE Coalition team translated them into High Level Design, Low Level Design, Test Cases, Implementation Plan, VCE support during customer on boarding and Knowledge transfer to customer SWAT team.
- Customer was assured of world-class expertise from the joint forces of three companies.

### Tier 2 Hosting Service Provider

### Cloud Objective:

Build a Cloud environment for existing Managed Services to enhance performance, reduce cost, ensure 100 percent availability, and deliver the highest customer satisfaction possible.

# Cloud (IaaS) Project– Case Study-3

## Differentiated Services

### Customer Challenges

▪Desire to replace legacy services with more flexible on-demand services which will:-

- Differentiate themselves in the marketplace
- Reduce OPEX through automation
- Reduce CAPEX through virtualization

▪Risk to customer growth and service levels if cloud implementation failed or did not deliver

### Solution

▪Approach the customers requirements from three perspectives:-

- Business Impact & Business Case
- Operating Process and Model
- Technical Infrastructure and Management Solution

### Impact on Customer

▪The Customer was able to focus on the go to market strategy and services rather than technical “nitty gritty”, confident that Cisco was delivering to their requirements

▪The customer was able leverage Cisco’s experience and expertise to provide build a unique value proposition

### Tier 1 Service Provider

### Cloud Objective:

The overall objective is to build a scalable and flexible infrastructure capable of delivering cloud based services across multiple geographies in a consistent manner reducing OPEX and delivering the same services regardless of the subscribers location or geography

# Cloud (IaaS) Project– Case Study-4

## Customer Challenges:

- Desire to replace legacy hosting strategy with a more flexible on-demand services approach which will enable them to:
  - Meet certain but ill-defined immanent growth
  - Implement a step—wise maturity growth in Operations
  - Create a services approach to IT
  - Become partners with Business Units in planning and deploying IT services
- Part of the CIO's "Big Strategic Bet"

## Solution:

- Strategy and Roadmap for implementing Private Cloud as IaaS
  - Organizational, Technology, and Business aspects
  - Business Case for the CIO for funding the program
  - Method and costs for initial implementations

## Impact on Customer:

- *Before the engagement ended:*
  - Major portions of the strategy integrated for implementation
  - OpEx drains revealed in the analysis attacked for mitigation
- Business case moving to executive committee

## Major Energy Utility

## Cloud Objective:

To build a scalable and flexible infrastructure capable of delivering cloud based services across multiple business units in a consistent manner reducing OPEX and CAPEX, and delivering consistent Enterprise Shared Services in a new, highly efficient fashion.

# Benefits In Summary...

- More robust market propositions – benefiting from Cisco's knowledge of services globally – and Determine new Revenue generating opportunities around DC Services
- Position IT as a competitive differentiator (industry benchmarks)
- Measure IT effectiveness and efficiency (KPIs)
- Increase your ability to consistently meet service-level agreements (SLAs)
- Increase responsiveness to business needs and faster time to Market
- Benefit of tight integration of Cisco commercial and technical capabilities
- Extensive knowledge transfer
- Increased effectiveness in the DC over both short and long term

# Benefits In Summary...

- Cisco and our Partners deliver a comprehensive Services Portfolio, based on proven methodologies & expertise across multiple technology areas
- Ensure that Cisco technology is deployed effectively and supporting customer's business and technical requirements
- Reduce cost (Capex/Opex) and increase cost transparency based on tailored ROI/TCO model while keeping flexibility
- Reduce risk and increase the value of IT (more business relevant)
- Ensure accuracy in forecasting capacity need in DC and avoiding unnecessary up-front investment

# Suggested Next Step

- Agree on Discovery Workshop to:
  - Information gathering session
  - Discuss potential solution ideas and value proposition
  - Discuss high level business case

