

CSC

Migrate Applications to the Cloud with ACE Factory



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This presentation examines how CSC's Application Cloud Enablement (ACE) suite of transformation services can enable your cloud adoption objectives and enable you to extract value --- primarily agility and cost savings --- from your cloud investments.

Cloud Value: Reduced Costs and Improved Agility

Improve cost savings and agility by

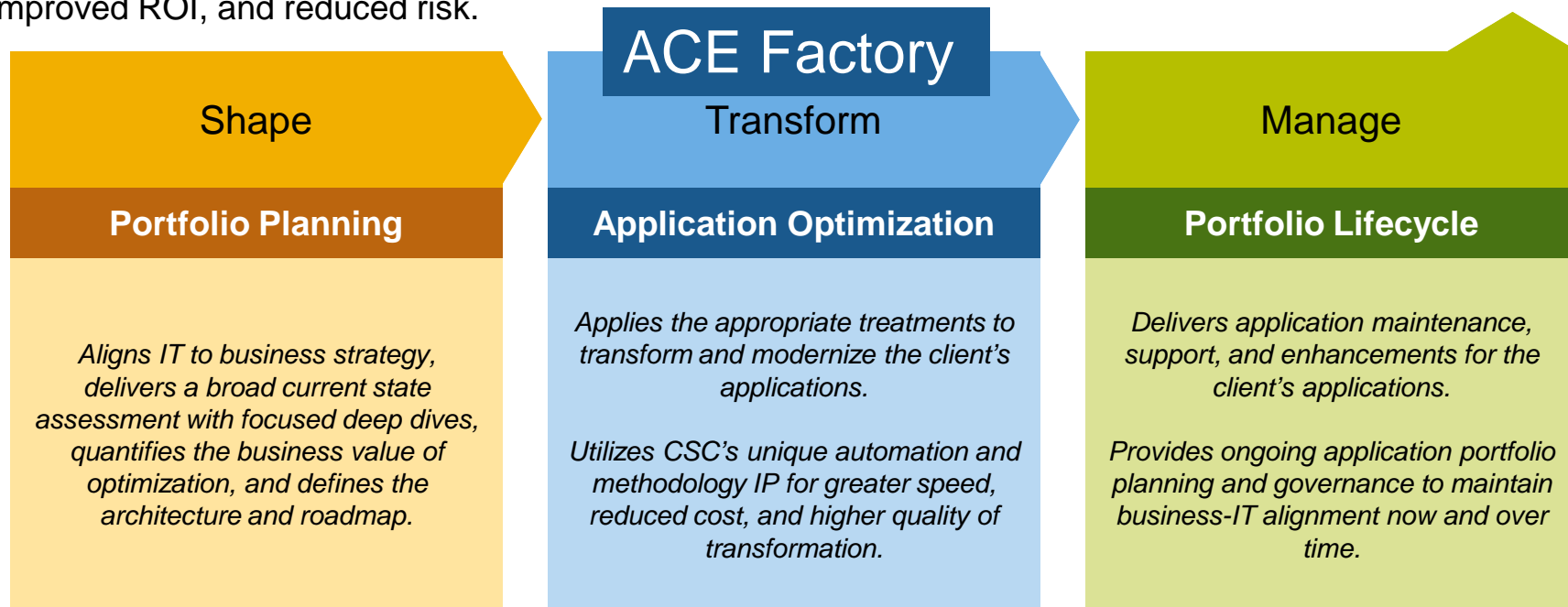


Business and IT Application Challenges

Business Challenges	Solutions
Legacy applications hinder time-to-market ability.	Modernize legacy applications through refactoring to benefits from cloud computing
High cost of legacy application modernization.	
Limited resources and competencies for legacy application modernization.	
IT Challenges	Utilize an industrialized, automated, and output-priced cloud transformation service.
High cost of legacy application maintenance.	
Limited resources and skills for transforming legacy applications.	Look to a trusted and experienced managed service provider to deliver cloud transformation capabilities.
Perceived unpredictability of transforming legacy applications.	

FuturEdge

FuturEdgeSM is an end-to-end, yet modular, lifecycle framework comprising CSC's services to align, modernize, manage and continuously improve an organization's application portfolio for greater agility, improved ROI, and reduced risk.



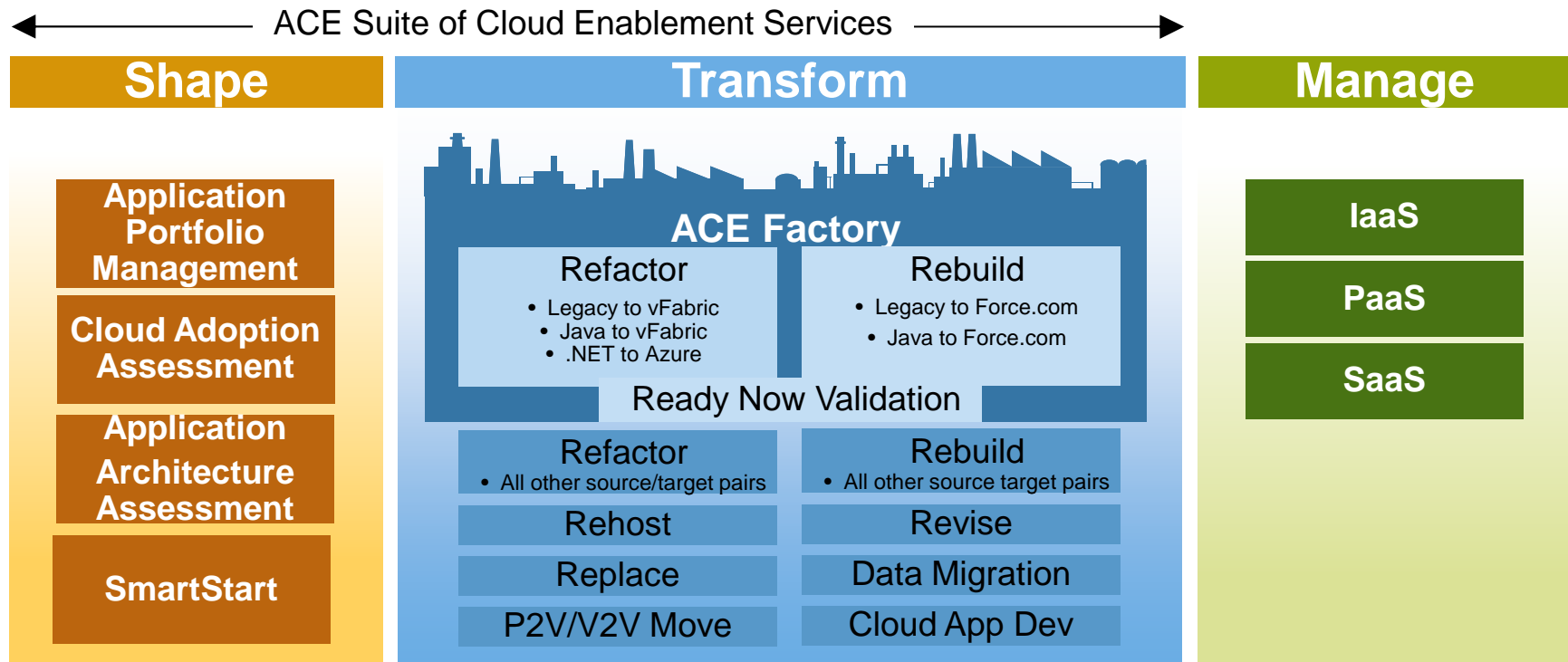
Leveraging the various FuturEdge treatment options together with global modernization delivery expertise positions CSC well to help you transform your application portfolios.

What is ACE (Application Cloud Enablement) Factory?

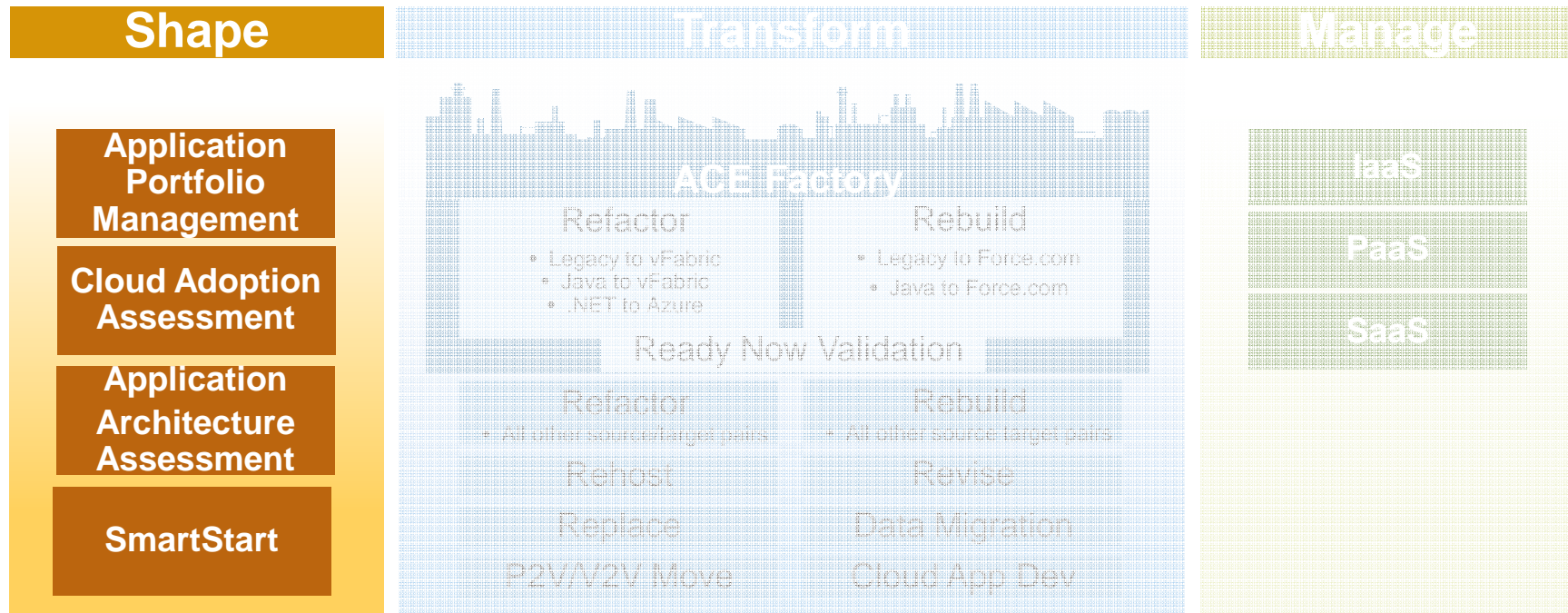
- Specialized **refactoring** and **rebuilding** of applications to be cloud aware, and enabling them to move from enterprise data centers to cloud
- An industrialized and proven approach, with dedicated “assembly lines” targeting a range of source-target combinations, including:
 - Refactor: Java to Spring on vFabric
 - Refactor: Legacy/COBOL to Java on vFabric
 - Refactor: Microsoft .NET to Azure platform
 - Rebuild: Java and Legacy/COBOL on Force.com
- Testing and validation of already virtualized applications in Infrastructure as a Service (IaaS) environments

CSC's ACE Suite of Cloud Enablement Services

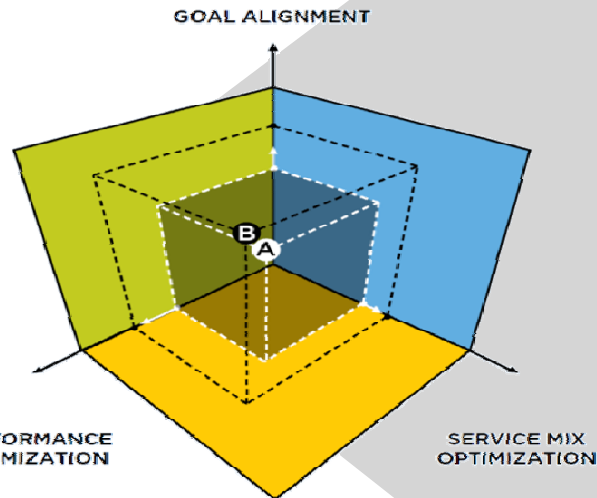
A fast, low-risk, and economical path to the cloud.



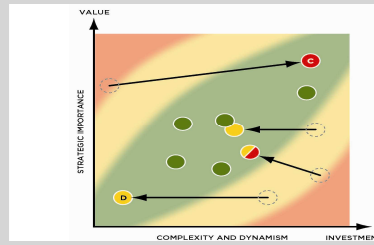
The ACE Context: Shape



Strategy Alignment

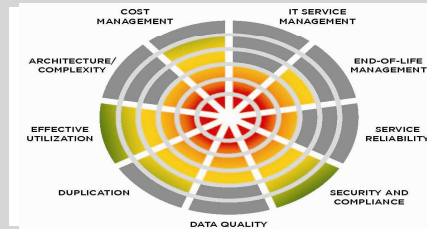


Goal Alignment



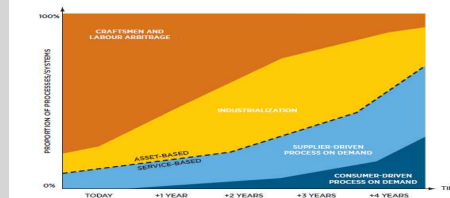
Alignment of business architecture, applications portfolio, and infrastructure to critical business functions through process fit and process alignment assessments.

Performance Optimization



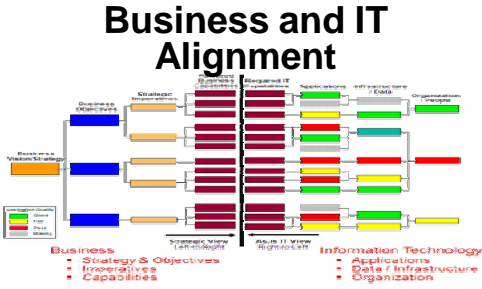
Optimized IT architecture that supports the portfolio considering levels of complexity, duplication, redundancy, high technology costs, and risk.

Service Mix

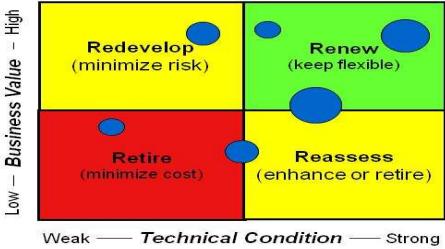


Optimum service mix of asset-based solutions and cloud service options (e.g., IaaS, PaaS, SaaS) for the portfolio.

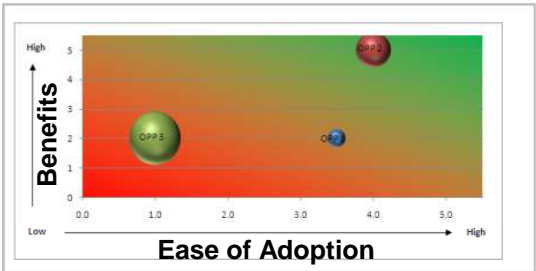
Application Assessment – Methodology



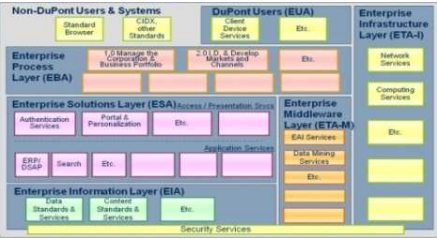
Portfolio Effectiveness Review



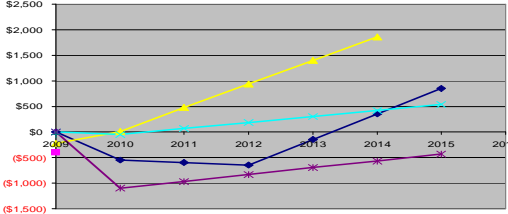
Cloud Candidates



Enterprise / Application Architecture



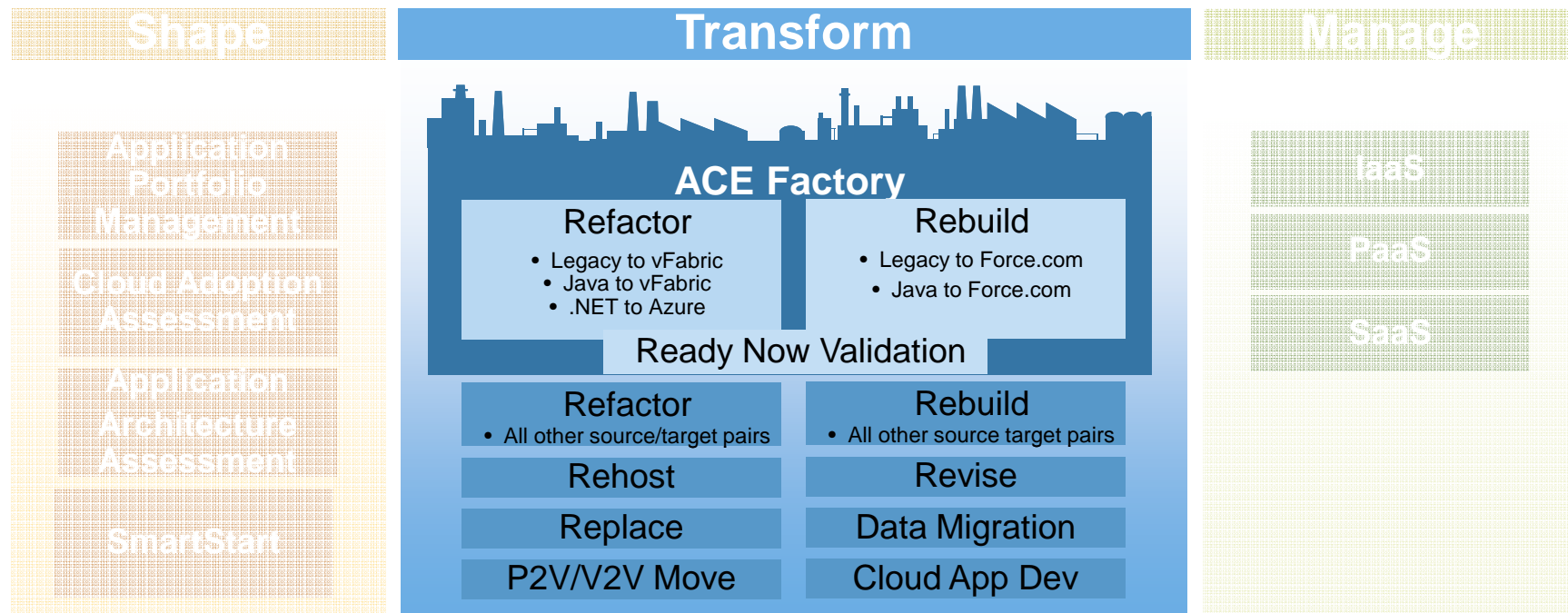
Business Case



Transformation Road Map

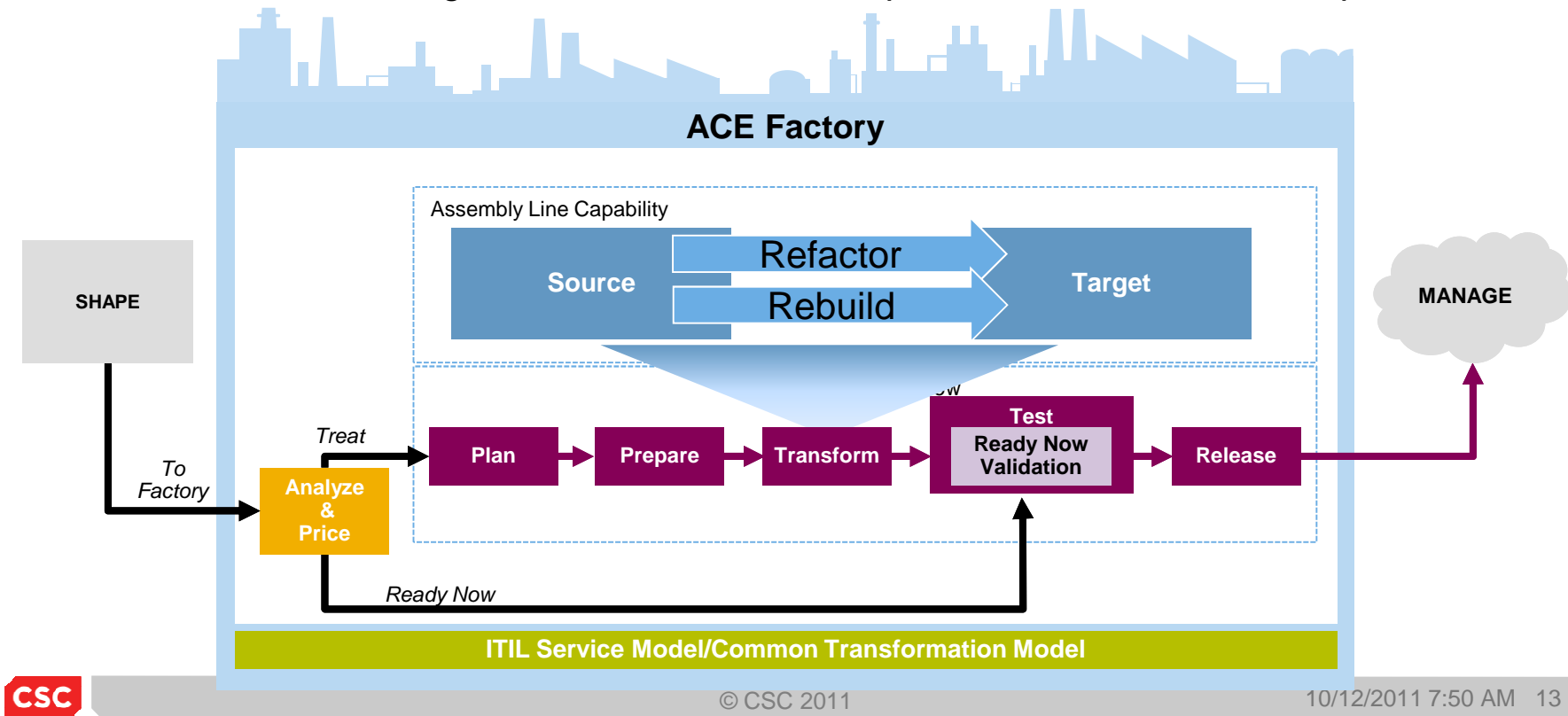


The ACE Context: Transform



CSC's Industrialized Treatment Capability

ACE Factory specializes in refactoring and rebuilding non-cloud, custom applications to be cloud aware, and enabling them to move from enterprise data centers to cloud platforms.



Alternatives for Migrating Applications to the Cloud

Option	Definition	Example
Refactor	<ul style="list-style-type: none"> To run applications on cloud provider's infrastructure Code or config changes to connect to new infrastructure services Changes vary from none to widespread, to invoke new APIs 	Moving a Java EE application from IBM WebSphere to Red Hat JBoss (same type of container, some different frameworks and configuration).
Rebuild	<ul style="list-style-type: none"> Rebuild your solution on a provider's application platform Discard code of the existing application Requires rearchitecting the application for a new container 	Modernizing a C application by redesigning it in C#, then using Windows Azure platform libraries and tools to deploy it to Microsoft's cloud.
Revise	<ul style="list-style-type: none"> Modify or extend the existing codebase, then use rehost or refactor options to deploy to cloud Encompasses major revisions to add new functionality or rearchitect the application for the cloud 	Redesigning a Java application, decomposing the functions into smaller parallel chunks, and then deploying on Rackspace Cloud Servers
Rehost	<ul style="list-style-type: none"> Redeploy the application to a different hardware environment Change the application's infrastructure configuration 	Deploying a Java application server on a Linux x86 server instead of Solaris SPARC-based server.
Replace (N/A)	<ul style="list-style-type: none"> Discard an existing application and use commercial SaaS to satisfy those business requirements 	

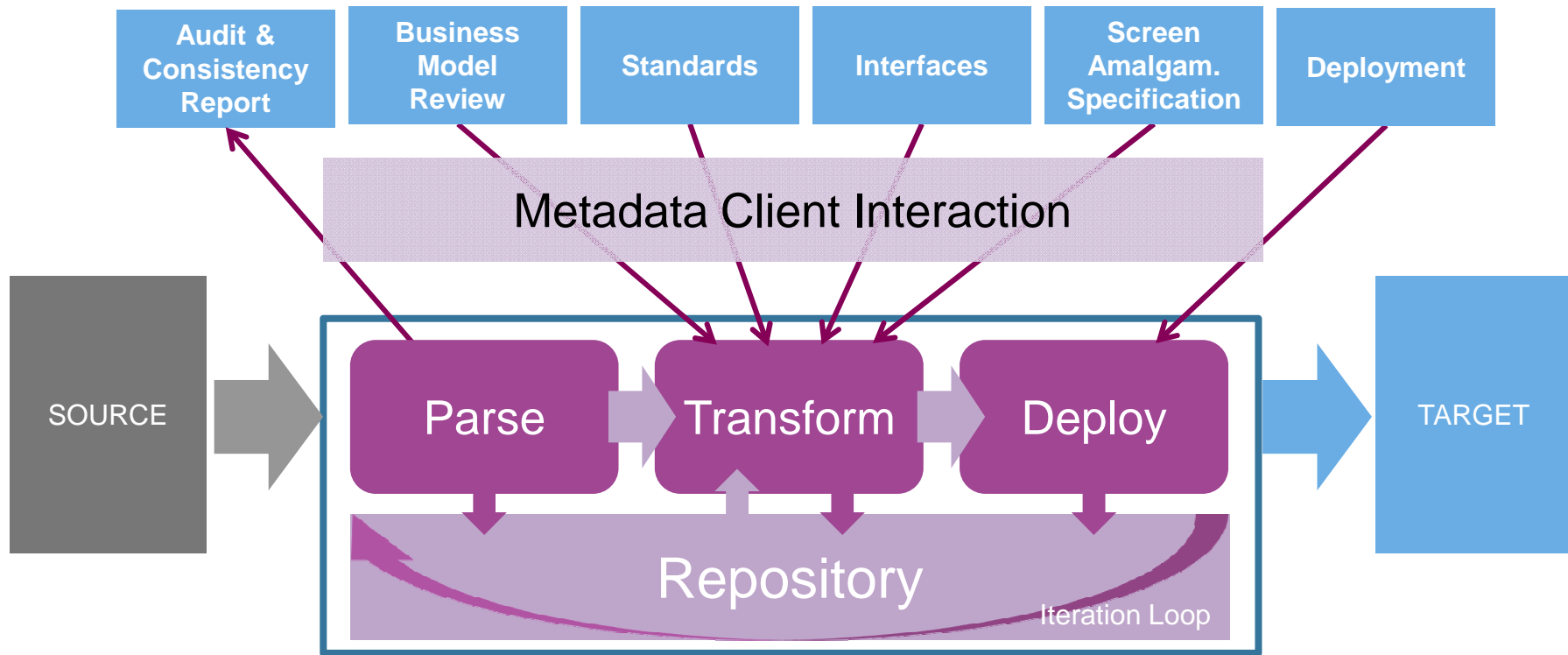
Source: Gartner, "Migrating Applications to the Cloud: Rehost, Refactor, Revise, Rebuild, or Replace?" December 2010

ACE Factory – Moving Java applications to vFabric Spring

- Rapid transformation from Java to Spring using CSC’s Quick Transformation Engine (Q-TE)
- Capable of handling any legacy J2EE application transformation
 - EJB1.x , 2.x and EJB 3 transformation, STRUTS, JSF, Hibernate, iBatis, Tiles
 - Spring IoC, Security, Spring Transactions
 - Categorized into 40+ transformations
- Optimal deployment of Spring applications on the vFabric platform
 - Expertise on TC Server tuning
 - Enterprise load balancing through ERS
 - Advanced management capabilities through HYPERIC
 - GemFire session and L2 caching,
 - Cloud ready messaging – RabbitMQ
 - Specialized performance and security testing

Service Level Agreement	Silver	Gold	Platinum	vFabric Platform
Reconfigure	●	●	●	tc Server Spring Edition, Java EE 5
Migrate to vFabric	●	●	●	tc Server Spring Edition, Java EE 5, Spring
Enterprise Advance Spring Features	◐	◐	●	Spring framework
Data Movement	●	●	●	laaS (retain source relational technology)
Maintain QoS				
Functional Validation ¹	●	●	●	
Performance ²	●	●	●	
Scalability ³	●	●	●	
Application Security ⁴	●	●	●	

ACE Factory Process Using Q-TE



Supported Source → Target Pairs

Source Platform / Technology	Target Platform/ Technology	Method
<ul style="list-style-type: none"> •Java •J2EE 	Java/Spring on vFabric – Private Cloud PaaS	Refactor: Automated assessment using QTE for pricing. Assisted /automated transformation using Q-TE.
	Force – Public Cloud	Rebuild: Extraction of biz rules using COTS tools; rebuild using the Force RAD capabilities.
<u>Languages:</u> COBOL,CSP,RPG <u>Transaction Processing:</u> CICS <u>Datastores:</u> Sequential Files, VSAM, DB2 <u>Batch:</u> JCL <u>Platforms:</u> Mainframe, AS/400	Java/Spring on vFabric – Private Cloud PaaS	Refactor: Assessment and automated transformation using Q-TE with some additional manual re-factoring required to deploy on vFabric as necessary.
<u>Languages:</u> COBOL <u>Platforms:</u> Mainframe, AS/400	Force.com – Public Cloud	Rebuild: Extraction of biz rules using COTS tools; rebuild using the Force RAD capabilities.
Microsoft .NET (ASP.NET, C#.Net,VB.Net, SQL Server)	Microsoft Azure – Public Cloud (Windows Azure, SQL Azure)	Refactor: With assessment and transformation tools.

FuturEdgeSM Case Study: CSC LIFE/Asia Legacy Transformation

Financial Services / Internal



Client Profile

- LIFE/Asia is CSC's Asian version of LIFE/400. It came to Asia in 1990s and provides support to products and business in the region with greatly enhanced functionalities.
- LIFE/400 provides the means of controlling all aspects of policy administration, introducing new lines of business, setting up new routes to market, and providing an architecture that enables the integration of disparate systems within an overall IT infrastructure.
- LIFE/Asia supports following products:
 - Traditional life insurance-whole life, annuity, term life
 - Investment-linked/general life-lump-sum premium, basic premium

Business Situation

- Business need to modernize the application from COBOL to Java for CSC's existing clients. A complete rewrite would have been huge and risky.

Project Summary

- *Application Transformation – Refactor , Convert*
 - Java transformation of CSC's LIFE/Asia software written in COBOL on the i-Series platform using Q-TE.

Business Results

- Actual Transformation completed in 3 months (9 months for other similar projects) with additional 3 months on preparation, products designs, database migration and 5 months elapsed on testing.
- FTE transformation team resources reduced by 80% compared to other similar projects.
- Eliminated hardware obsolescence risk.
- Modern development environment enables flexibility, improved development and maintenance productivity, and better IT staff availability.

Other references

Client	Description
BPAY	<p>The client is Australia's single largest bill paying system adopted by the Banking Sector. Each month, 25.74 million bills worth \$19.2 billion are paid using this facility. (As at March 2010).</p> <p>Q-TE was used to transform the core of this application from MVS COBOL to Java</p>
Bluescope Steel	<p>Java transformation of an aging Management Accounting System, (MAS), a mainframe application written in CSP for an Australian specialty steel manufacturer.</p> <p>Client concerns about the cost of maintaining the aging CSP system, its ability to quickly respond to changing business needs and on-going availability of suitably experienced and skilled CSP resources</p> <p>Result:</p> <ul style="list-style-type: none"> • Transformation project complete in 6 months. • Modern development environment to enable flexibility
NZ Government	<p>Java transformation of two major applications used by New Zealand Government Department - TRACE and SWIFTT originally written in LINC on the Unisys platform</p> <p>The client wanted to modernize all LINC applications to a more cost effective Unix / Java / Oracle environment eliminating high cost of Unisys mainframe operation and lack of flexibility in the LINC development platform</p> <p>Result:</p> <ul style="list-style-type: none"> • Transformation project complete in 12 months with additional 3 months spent on 'JLive' production Testing. • Eliminated hardware obsolescence risk • Reduced hardware support costs from \$4 Million to \$100K per year • Reduced system software license fees

Results You Can Expect from ACE

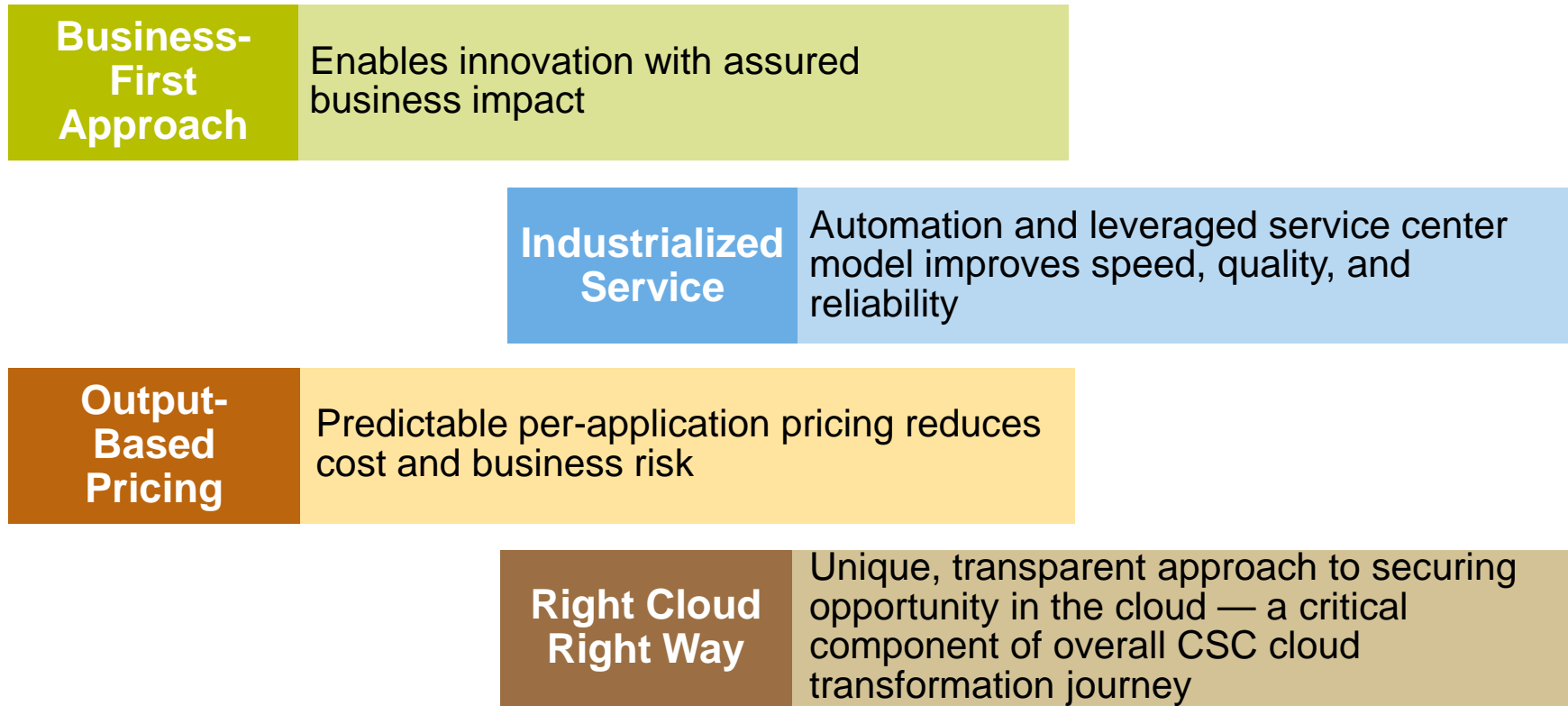
Reduced Transformational, upgrade, migration, and validation costs

Protected Against the unknowns of legacy application transformation

Improved Cost transparency and predictability

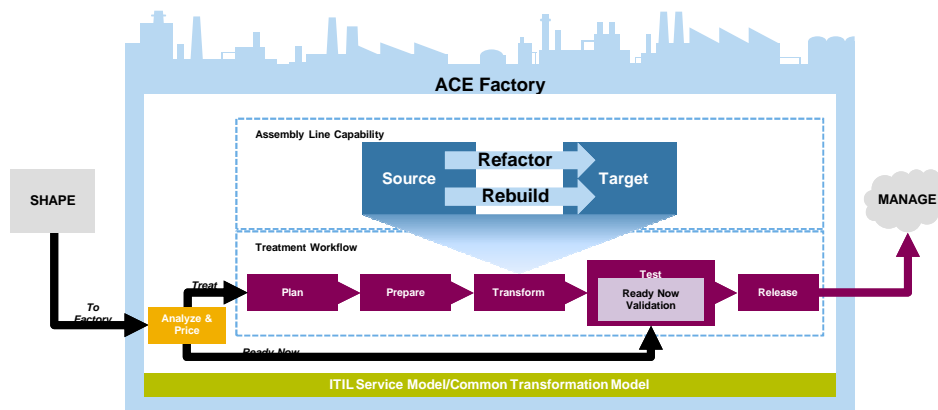
Accelerated Time-to-value in realizing benefits of cloud computing

What You Can Expect from CSC



ACE Factory Summary

An agile, managed service that quickly assesses, then refactors or rebuilds and tests an enterprise's legacy custom and mainframe applications for the cloud.



- **Lowens cost** — through industrialized factory approach with automation, leveraged tools, and resources
- **Increases predictability** — through innovative output-based pricing, ensuring up front the cost of transformation
- **Speeds time-to-value** — by treating legacy applications through our “assembly line” capability to quickly migrate them to the cloud

A man in a dark suit and blue tie is holding a silver laptop. He is looking at the screen. The background shows a city skyline with tall buildings under a blue sky with clouds. The image is overlaid with a dark grey banner at the top and a dark blue banner at the bottom right.

CSC

Ask Me How!

VISIT US:
www.csc.com/cloud

Migrate Applications to the Cloud with ACE Factory

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THANK YOU





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