Migrating SAP® to the Cloud

Topics & Presenters
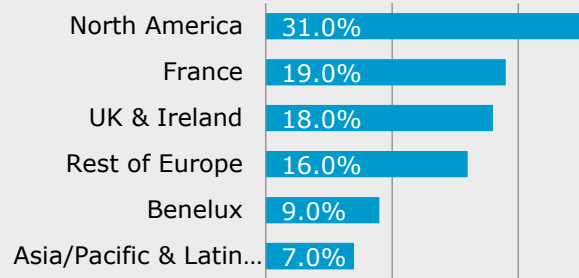

Teji Thomas
SAP® Cloud Migration Practice
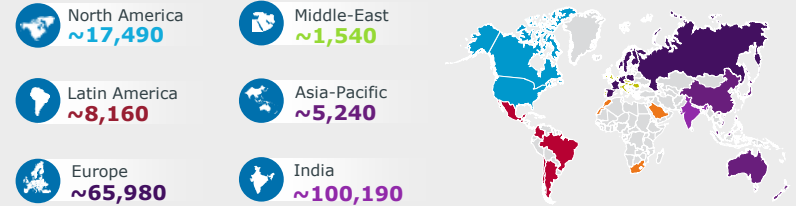
Capgemini Overview

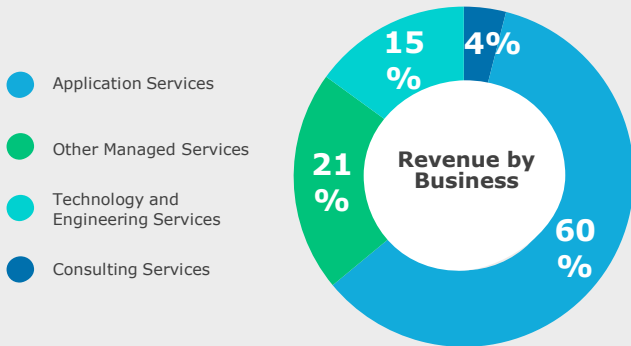## Revenue 2017: $14.3 billion USD

Region	%
North America	31.0%
France	19.0%
UK & Ireland	18.0%
Rest of Europe	16.0%
Benelux	9.0%
Asia/Pacific & Latin...	7.0%

Workforce: Approximately 200,000

200,000+ people worldwide working together as **one team**

- North America **~17,490**
- Middle-East **~1,540**
- Latin America **~8,160**
- Asia-Pacific **~5,240**
- Europe **~65,980**
- India **~100,190**

Our Global Services Cover These Businesses

Revenue by Business

- Application Services — 60%
- Other Managed Services — 21%
- Technology and Engineering Services — 15%
- Consulting Services — 4%

Broad Experience Operating in Key Industry Sectors

Revenue by Industry

- Energy, Utilities and Chemicals — 11%
- Financial Services — 26%
- Public Sector — 17%
- Others — 4%
- Manufacturing, Automotive and Life Sciences — 19%
- Telecom, Media and Entertainment — 7%
- Consumer Products, Agribusiness, Retail and Transportation — 16%
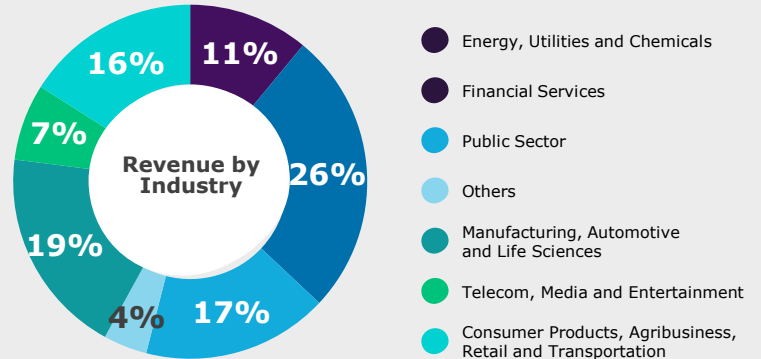
FY 2017 Results

Strategic SAP Partnership

17,800+
SAP QUALIFIED RESOURCES GLOBALLY

30+
DELIVERY AND SOLUTION DESIGN CENTERS AROUND THE GLOBE

1,300+
SAP CLIENTS WORLDWIDE IN 2016

2,700
SKILLED RESOURCES IN NORTH AMERICA

SAP Global Partner

SAP Gold Partner

SERVICES SAP PARTNER

SAP® Certified
in Application Management Services

SAP® Certified
Support Center of Expertise
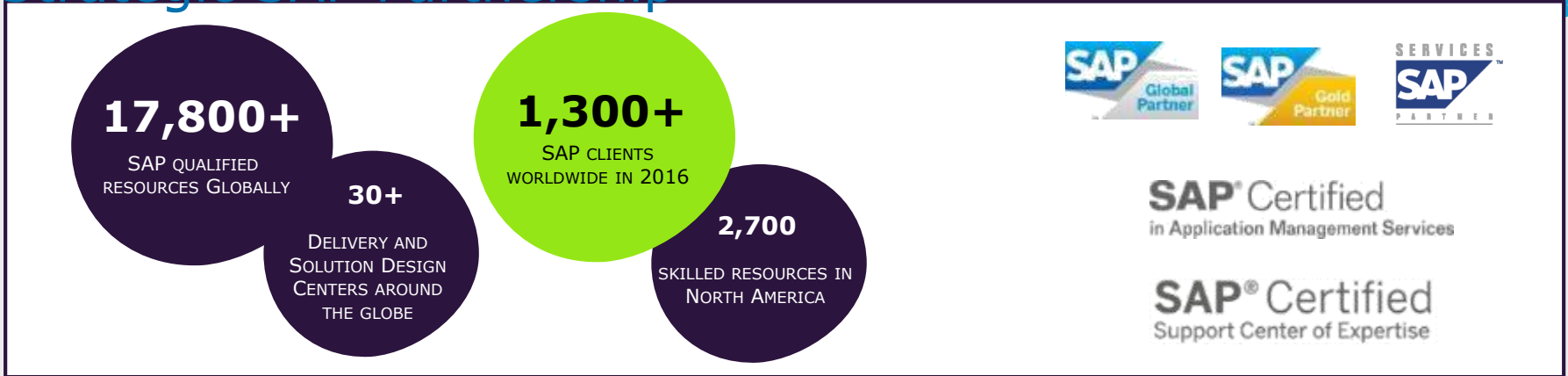
- **SAP North America Partner Excellence Award 2016 for Industry Services**
- **2017 SAP Pinnacle Award Winner** for Customer Choice Partner of the year
- **2016 Pinnacle Award Winner** for Customers Choice Award for Service
- **2016 Pinnacle Award Finalist** Quality Partner of the Year
- **2016 Pinnacle Award Finalist** for Customers Choice Award for Sell and Build
- **2016 SAP North America Partner Excellence Award** for Industry Services

SAP Pinnacle Awards 2015 Winner

Gartner
- **Capgemini positioned as Visionaries in Gartner Magic Quadrant for Public Cloud Infrastructure Managed Service Providers, Worldwide**
- **Positions Capgemini as a leader in the SAP Implementation Services, Worldwide Magic Quadrant**

FORRESTER
- **Cloud Service Providers: Gold Cloud Platform competency. Authorized reseller**
- **Positions Capgemini as a leader in the Global SAP Services Wave**
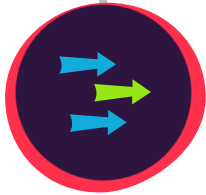
Migrating SAP®
to the Cloud

Shift to a cloud-first core.

Teji Thomas
SAP® Cloud Migration Practice

Capgemini

What are Customer Expectations?

Speed to Value

- Rapid delivery of services
- On demand capacity (Flexibility)
- Dramatically reduce procurement lead times

Business Agility

- Minimize integration impact
- SLAs match the solution to the business
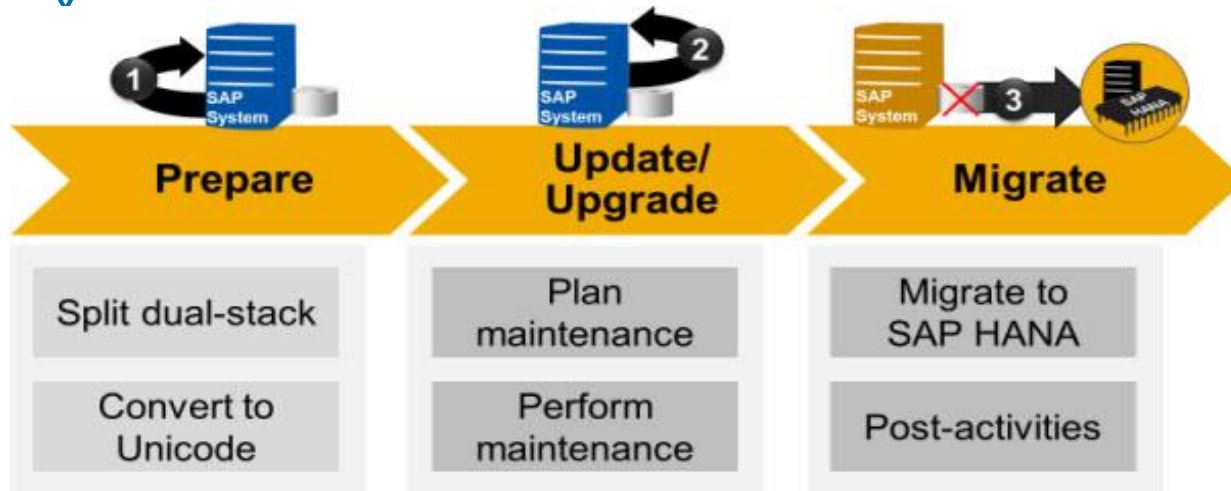- Respond to changing market conditions

Cost Reduction

- Consumption based billing
- Lower or eliminate CapEx
- Shared management and operations

Reliability and Security

- Multi-tenant and Dedicated Options
- Secure and compliance solutions
- Highly available resilient and redundant infrastructure

Migration Process/Methodology

Prepare
- Split dual-stack
- Convert to Unicode

Update/Upgrade
- Plan maintenance
- Perform maintenance

Migrate
- Migrate to SAP HANA
- Post-activities

- The SAP BASIS Team are certified in;
  - SAP OS/DB Migration
  - SAP HANA
  - Certification from Cloud Service Providers

Our Competencies

- S/4 HANA 1610, 1709
- BW on HANA
- BW for HANA
- Upgrade
  - Non-Unicode to Unicode
  - Version Upgrade
- Migration from traditional DB to HANA
- Migrate from traditional DC to Cloud
- Migrate from Cloud to Cloud
- Agility to work with different Cloud Service Provider
- After build Support for SAP BASIS
- Expertise with multiple tool sets used for Migration
  - SUM
  - SWPM
  - DMO of SUM
  - Cloudendure

Migration Approaches for SAP® Environments

Homogenous Migration (Lift & Shift or System Copy)
- Both operating system and database are the same in Source and Target System
- Standard SAP® System Copy process can be used
- Tool based migration performed with block level copy processes

Heterogeneous System Migration
- At least one of the following is changed during the copy:
  - Operating system
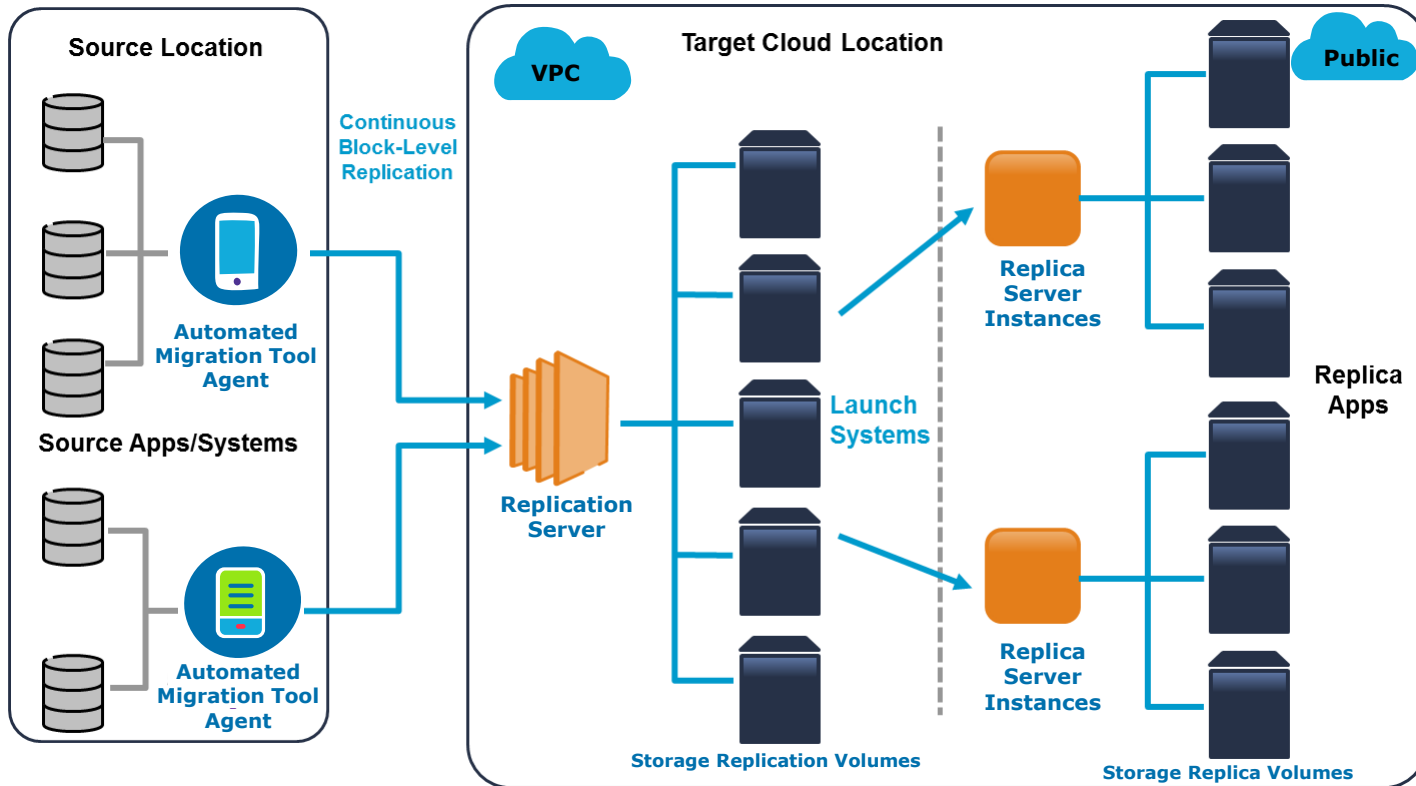 - Database system
- SAP® Certified Migration Process

Rebuild
- Rebuild/Clone of Common Usage Pattern (App Server, SAP® Engines)
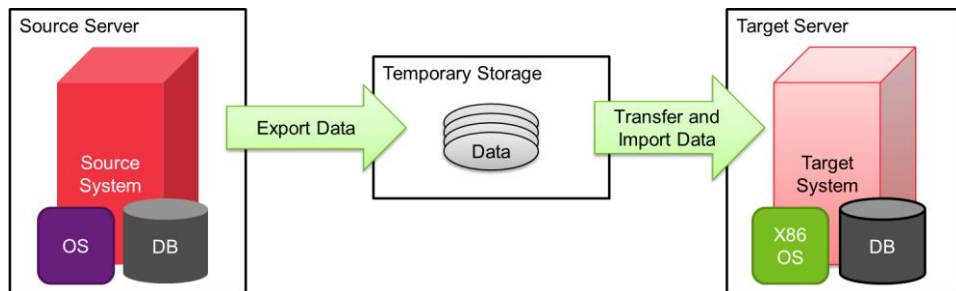- Limited Transactional Data

Source Server → **System Copy** → **Target Server**
OS 1 / DB 1 → OS 1 / DB 1

Source Server → **System Migration** → **Target Server**
OS 1 / DB 1 → OS 2 / DB 1

OS 1 / DB 1 → **System Migration** → OS 1 / DB 2

OS 1 — OS 1

For a Homogenous Migration
we have automated the process….

SAP® Migration Approaches for Heterogeneous System Migrations Need to Stay Within the Guardrails…

- Migration approach must follow the SAP approved Heterogenous Migration Process

- Size move groups appropriately for both the number of applications as well as the amount of data

- Size move groups to fit within the approved migration window

- Test system interdependencies and interfaces early in the process

- Risk mitigation through mock runs of production in the target production environment

- Consistency of approach for each application across Dev, QA, and Prod

Source Server — Source System — OS — DB

Export Data

Temporary Storage — Data

Transfer and Import Data
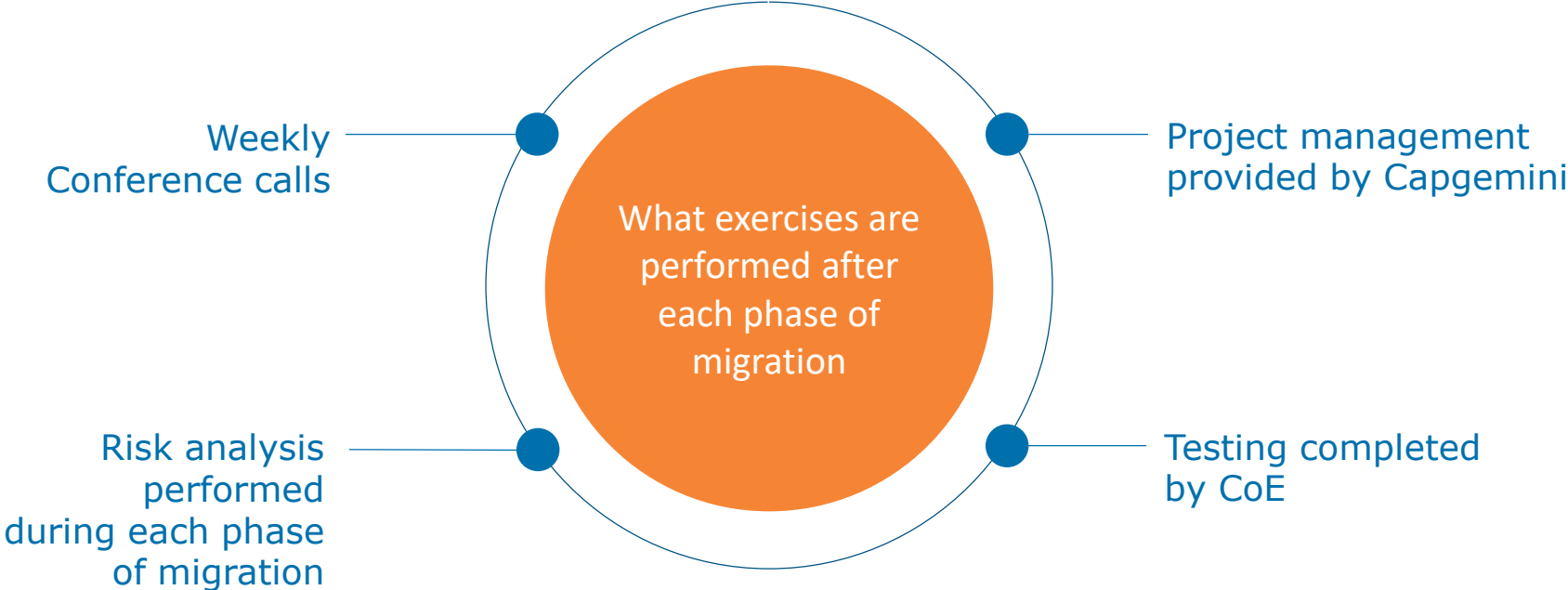
Target Server — Target System — X86 OS — DB

Don't fall into these traps...

- Networking is one of the primary reasons for delays in the project:
  - DNS Settings incorrect
  - Hardcoded hosts files with IP addresses on the servers or on the desktop
  - Subnet conflicts between source and cloud because of improper documentation

- Unexpected configuration not clearly defined upfront:
  - Multiple uses for a single database (HANA)
  - Multiple uses of a single server (Homogeneous migrations)

- Clearly define who is doing 3rd party application migrations/installations

- Should be like for like testing, not addressing new enhancements. Be careful not to introduce change during the migration.
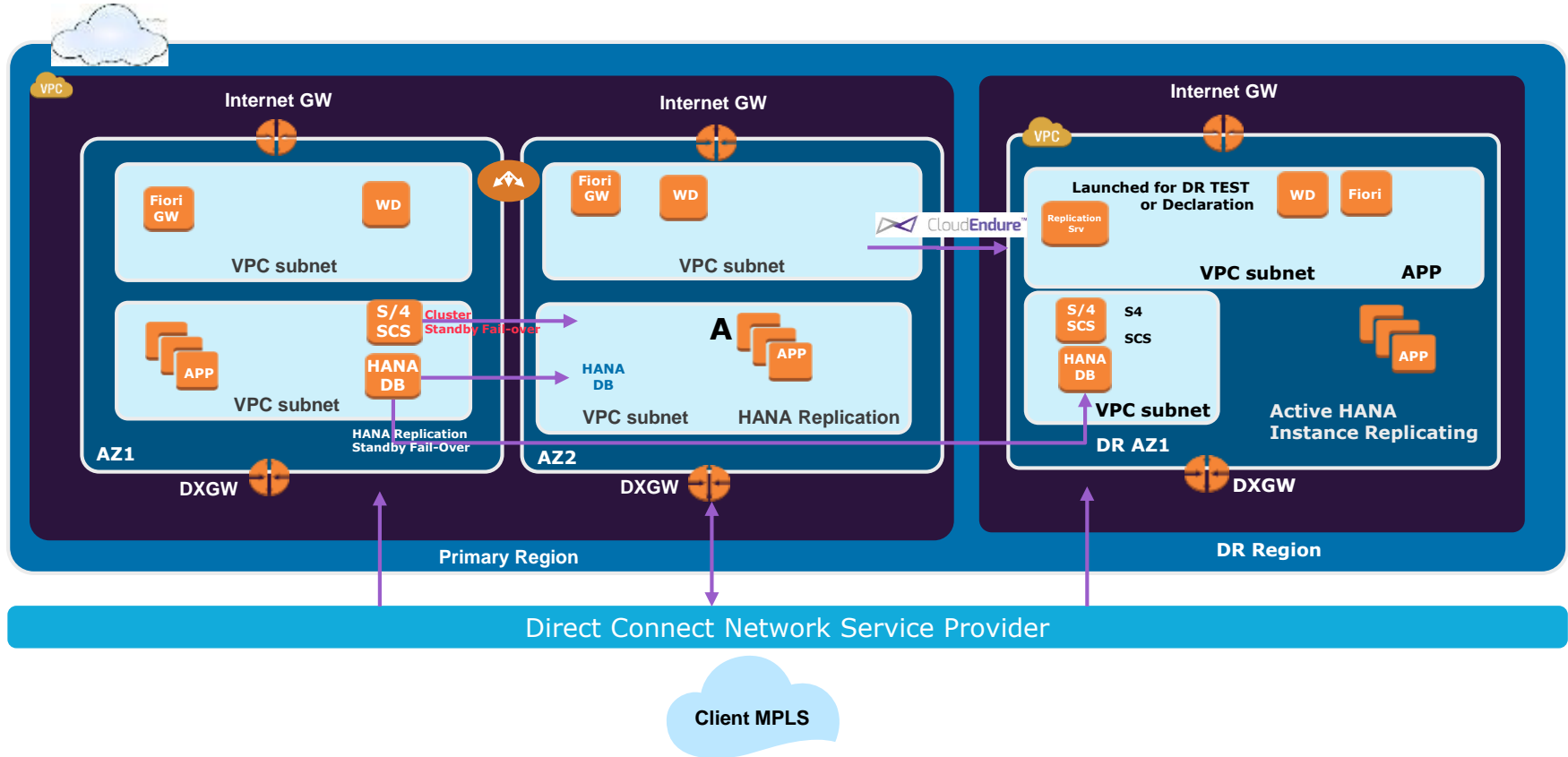
Project Cadence, Risks, Testing

Weekly Conference calls

Project management provided by Capgemini

What exercises are performed after each phase of migration

Risk analysis performed during each phase of migration

Testing completed by CoE

General SAP Cloud Architecture

SAP High Level Architecture with High Availability & DR

Disaster Recovery Options

Replication Model

- Data replicated from primary to secondary site for database systems
- Recovery Point Objective: 1 hr
  - Available to recover data from point 1 hr before disaster
- Recovery Time Objective: 4 hrs
  - Secondary site will be up and running in 4 hrs
- More Costly but quicker disaster recovery time with lower data loss

Backup Model

- Data backup taken from primary site every 24 hrs and moved to secondary site
- Recovery Point Objective: 24 hrs
  - Available to recover data from point 24 hrs before disaster
- Recovery Time Objective: 24 hrs
  - Secondary site will be up and running in 24 hrs
- Lower cost but higher turnaround time and higher data loss

SAP BASIS Support

Services		
SAP BASIS Support is based on the following assumption		
• Support will be from our Rightshore® Distributed Delivery Model site based in India with Management oversight from US Center		
• 24x7 mission-critical operation supporting business operations in all major time zones		
• Project Activities are not included in the scope but can be provided on request		

Service Area	Description
Development	SAP BASIS Support runs traces with ABAP team to resolve issues pertaining to Program
Development	Providing Impact Analysis prior to applying OSS notes to ensure all dependencies are taken care and there are no conflicts with the systems
Pro-Active/Preventive Maintenance	Based on EWA reports pro-actively address issues before they occur and prevent downtime
Job Scheduling	Capgemini will provide support to other teams resolving application job failures as necessary.
System Utilization	Provide system utilization report based on EWA and advise on measures to reduce Cost of Operation
Project Services	Capgemini will provide SAP BASIS consultation under this service for the purposes of developing ROM estimates, "what if" analysis, and other general consulting
Database Administration	Database Administration although not part of the SAP BASIS services; limited functionality such as assisting with DB tuning etc is provided
License Management	Client will procure the Licenses and also Manage the same to be in compliance
Management	Management oversight is provided from sites in US during US Business hours and On-Call service after Business hours support is available on need basis

Q & A

About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of 200,000 team members in over 40 countries. The Group reported 2017 global revenues of EUR 12.8 billion.

Learn more about us at

www.capgemini.com

People matter, results count.