Velocity

Great Lakes Oracle Conference

May 16, 2019

AGENDA

- Velocity Technology Solutions Overview
- Cloud Concepts, Architecture & Security
- Migration Methodology & Approach
- Cloud Momentum in the Market
- Use Cases / Customer Stories
- Q & A

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VELOCITY
ACCELERATE YOUR JOURNEY TO THE CLOUD

Leading power provider of Managed Services for Complex Enterprise Applications

- Public, private and hybrid cloud capabilities
- Software defined, analytics-driven Cloud platform (VCAMP)
- Supported by AWS, OCI, and all major ISVs
- Services ranging from discovery to cloud migration

Serves over 420 customers, including 60+ hospital systems and 50+ Global 2000 corporations. Enables enterprises to:

- Optimize Complex Enterprise Application quality and speed
- Manage infrastructure and platforms at less cost
- Access technical & functional expertise

VELOCITY AT A GLANCE

HQ: Charlotte, NC
Founded in 2003

420+ Customers in Private, Multi & Hybrid Cloud

60 + Customers in Public Cloud

~800 Employees Globally

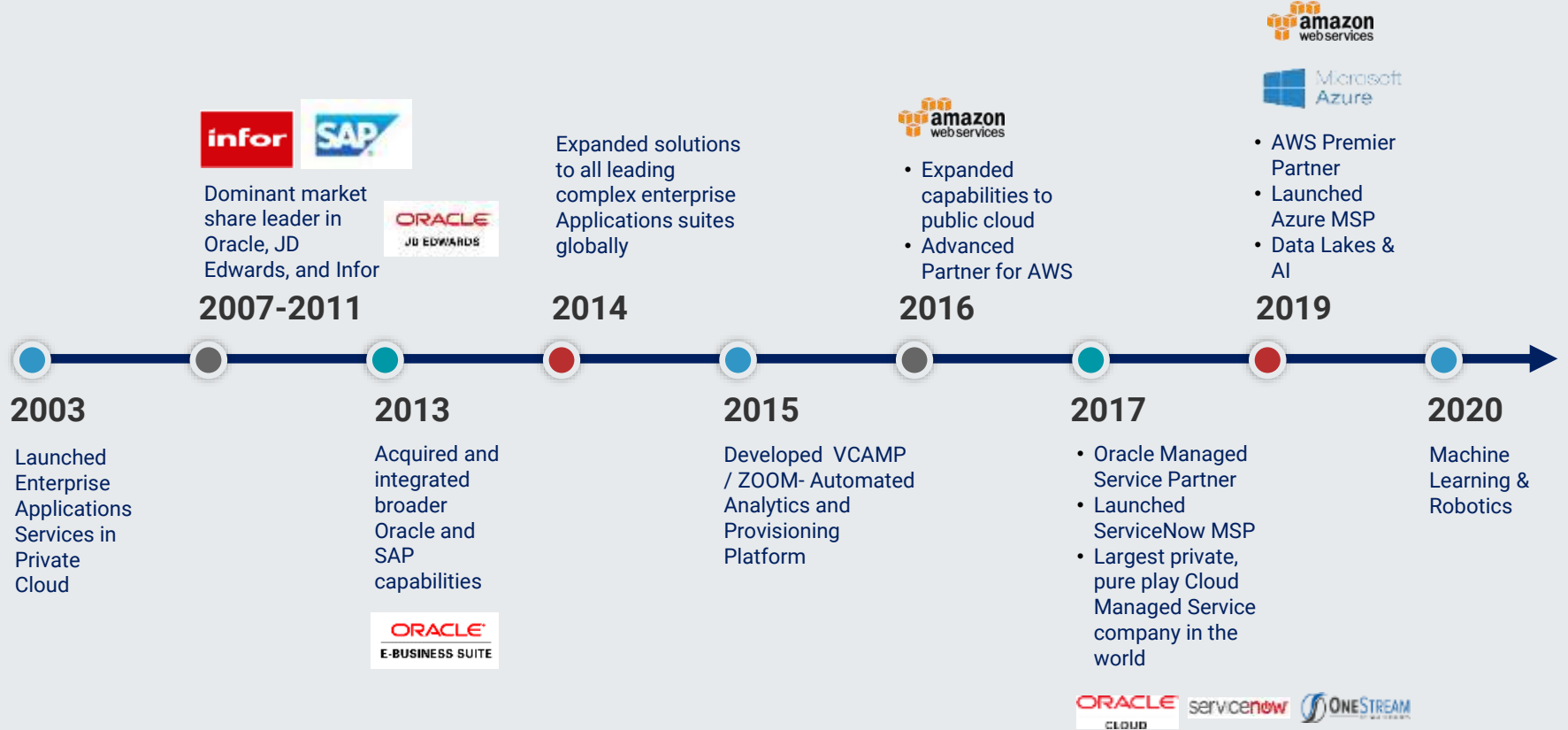**Software Defined Applications Management**
All major ERPs & related IaaS/PaaS in hybrid cloud environments

Global Cloud Application Efficiencies
Automation built on Dev/Ops

VELOCITY'S JOURNEY

Dominant market share leader in Oracle, JD Edwards, and Infor

2007-2011

Expanded solutions to all leading complex enterprise Applications suites globally

2014

- Expanded capabilities to public cloud
- Advanced Partner for AWS

2016

- AWS Premier Partner
- Launched Azure MSP
- Data Lakes & AI

2019

2003

Launched Enterprise Applications Services in Private Cloud

2013

Acquired and integrated broader Oracle and SAP capabilities

2015

Developed VCAMP / ZOOM- Automated Analytics and Provisioning Platform

2017

- Oracle Managed Service Partner
- Launched ServiceNow MSP
- Largest private, pure play Cloud Managed Service company in the world

2020

Machine Learning & Robotics

LEVERAGE THE DIFFERENCE APPLICATION EXPERTISE MAKES

ORACLE CLOUD

- Oracle Cloud Managed Services Provider (MSP) Partner
- 1st Oracle HCM Cloud implementation with Payroll
- One of the 1st to implement Oracle Cloud with HCM Data Loader
- Early adopter and inclusion as an Oracle HCM Cloud Go-to Partner

ORACLE JD EDWARDS

- 1st and Largest JD Edwards Cloud Provider, Co-Founded by JD Edwards
- 145+ JD Edwards Customers
- 100+ JD Edwards Resources
- Hosted and/or managed every version and point release of JDE World and JDE EnterpriseOne

ORACLE PEOPLESOFT

- 15+ years delivering success to the PeopleSoft Community
- Certified Professionals with an Average of 15-20 years experience supporting PeopleSoft
- PeopleSoft BPO offering for Payroll Outsourcing, Employee Service Center, Garnishment, VOE & HR Transformation Services
- 35+ PeopleSoft Cloud Migrations
- Established PeopleSoft Selective Adoption Strategy enabling Fluid and Analytics

ORACLE E-BUSINESS SUITE

- 135+ EBS Customers
- Largest Pure Play EBS Cloud Organization
- 350 Total Oracle Resources 150 specifically dedicated to EBS
- 20 years Implementing and Supporting EBS Customers around the globe
- Full Life Cycle Suite of EBS Services
- Line of business includes HCM Cloud practice

ORACLE ENTERPRISE PERFORMANCE MANAGEMENT

- 40+ Hyperion Certified as well as CPA accredited professionals
- PBCS Implementation & Application Management Services
- 30+ Customers
- 100+ cross-industry capabilities

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APPLICATIONS EXPERTISE
MULTI-CLOUD & HYBRID

Flexible Cloud Models	Multi-Cloud IaaS	Multi-Cloud PaaS	Application Expertise as a Service
BUSINESS PROCESS SERVICES			BUSINESS PROCESS SERVICES
PROFESSIONAL SERVICES			
FUNCTIONAL SUPPORT			FUNCTIONAL SUPPORT
APPLICATION MANAGEMENT			APPLICATION MANAGEMENT
OPERATIONAL SUPPORT	OPERATIONAL SUPPORT	OPERATIONAL SUPPORT	
CLOUD AUTOMATION SERVICES	CLOUD AUTOMATION SERVICES	CLOUD AUTOMATOIN SERVICES	CLOUD AUTOMATION SERVICES
PLATFORM SERVICES		PLATFORM SERVICES	
INFRASTRUCTURE SERVICES	INFRASTRUCTURE SERVICES	INFRASTRUCTURE SERVICES	

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Cloud Concepts, Architecture & Security

OCI vs. ERP Cloud

Software
as a Service

Applications

ERP Cloud

Platform
as a Service

Middleware

Database

**OCI
(Oracle Cloud
Infrastructure)**

Infrastructure
as a Service

Operating System

Virtual Machine

Servers

Storage

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IaaS vs. PaaS vs. SaaS
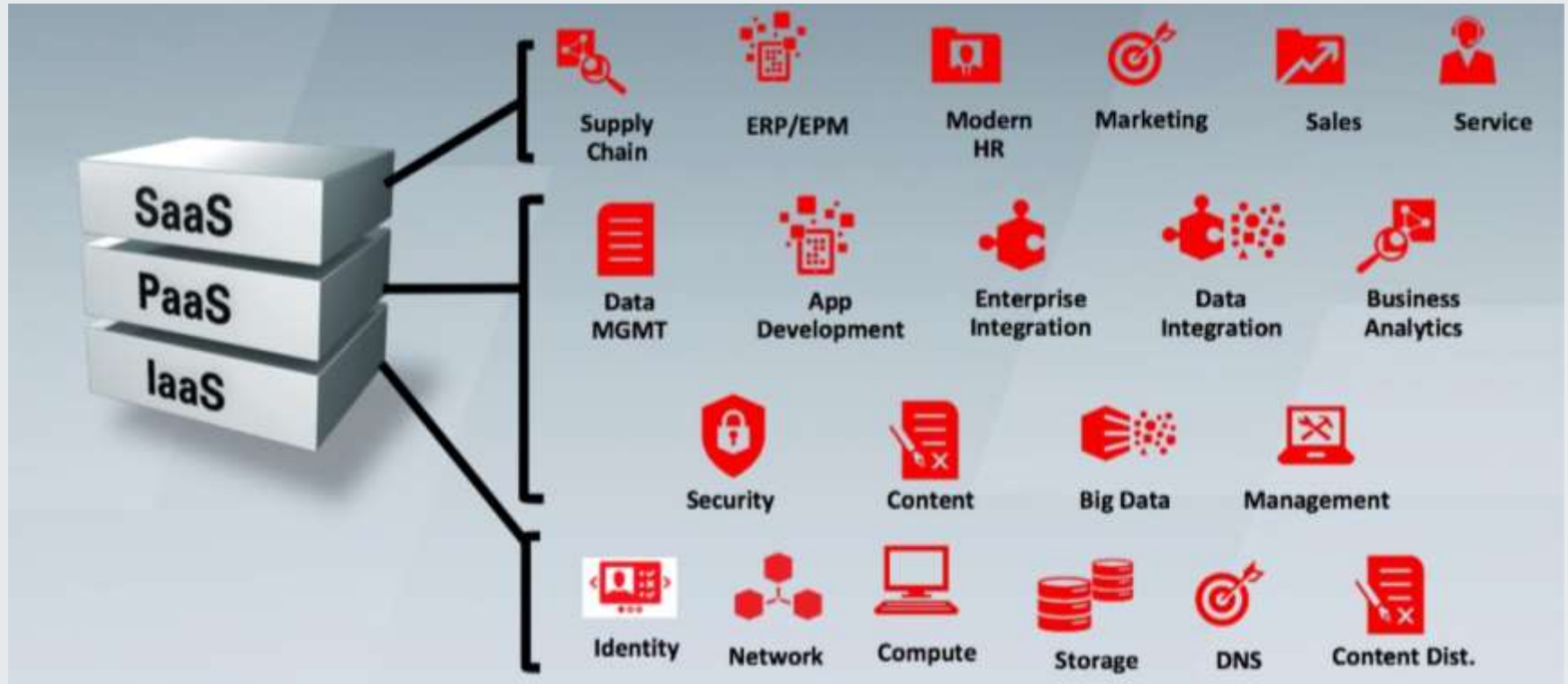
Certification

ORACLE CLOUD INFRASTRUCTURE	Oracle E-Business Suite Application Tier on Oracle Cloud Infrastructure Compute Classic Virtual Machines (VMs)			
	Oracle E-Business Suite Release 12.2 [1]		Oracle E-Business Suite Release 12.1.3	
Cloud Service For Database Tier	Oracle Database 12c Release 1 (12.1.0.2)	Oracle Database 11g Release 2 (11.2.0.4)	Oracle Database 12c Release 1 (12.1.0.2)	Oracle Database 11g Release 2 (11.2.0.4)
Oracle Cloud Infrastructure Compute Classic VM [2]	• Certified • Image-based single-node provisioning [4] • Automated multi-node provisioning • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift
Database Cloud Service including: • DBCS VM (Single Instance) • DBCS VM (2-Node Oracle RAC)	• Certified [3] • Automated multi-node provisioning [5] • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift	• Certified [3] • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift
Exadata Cloud Service (Oracle RAC)	• Certified [3] • Automated multi-node provisioning • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift	• Certified [3] • Automated lift and shift	• Certified • Automated multi-node provisioning • Automated lift and shift

Certified and Automated Combinations for Linux x86-64 on Oracle Cloud Infrastructure

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Regions vs. Domains

- Completely independent of other regions
- Across countries or even continents
- Mitigate the risk of region-wide events, such as large weather systems or earthquakes
- Meet requirements for legal jurisdictions, tax domains, and other business or social criteria
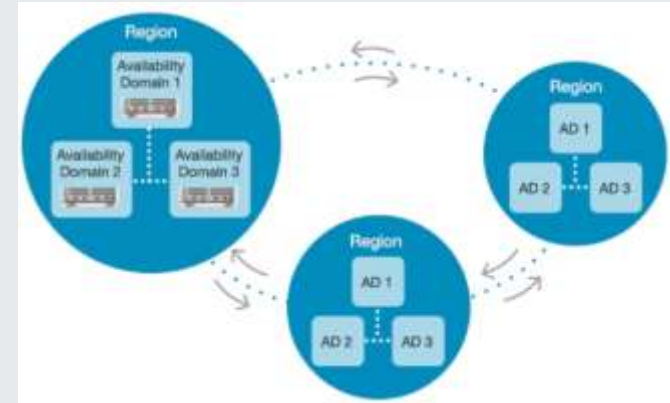
- Isolated from each other
- Fault tolerant
- Do not share infrastructure (power or cooling, or network)
- Inter connected with a low latency, high bandwidth network

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Architecture - Example
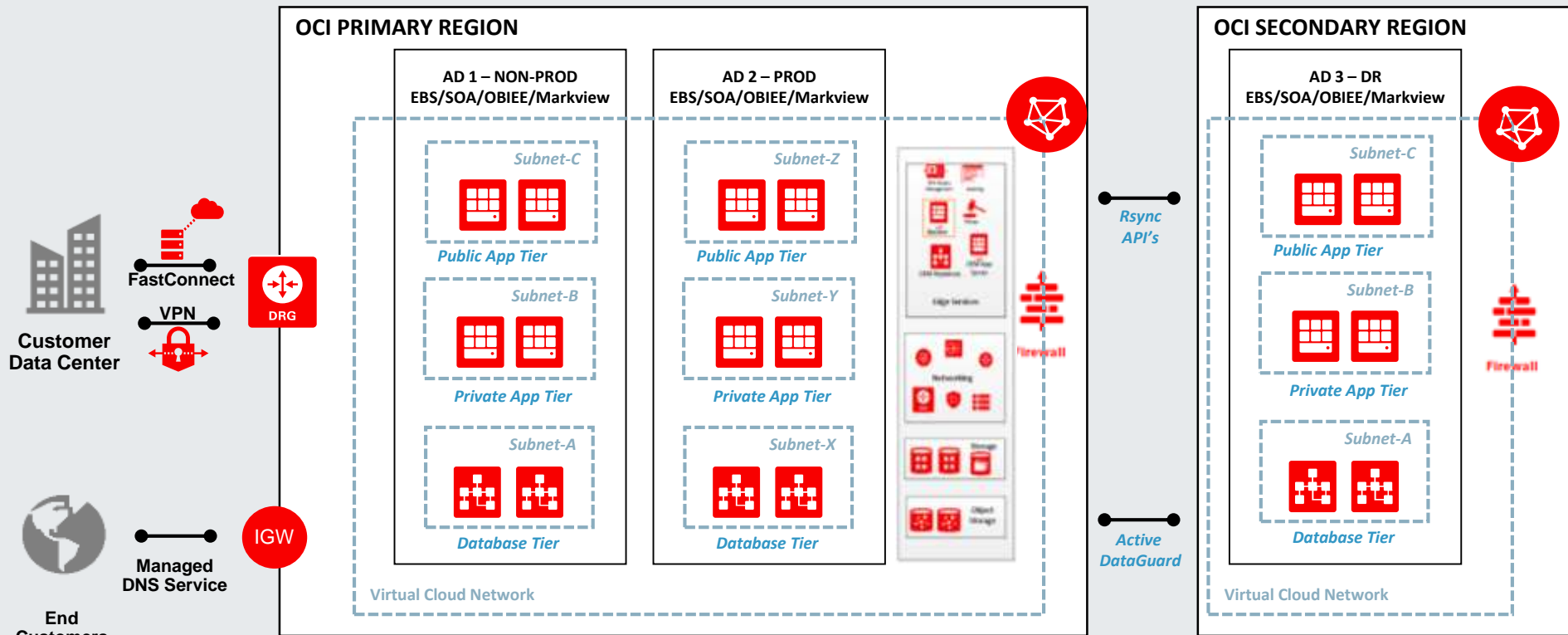
Security

- Identity and Access Management (IAM)
- Network security architecture
  - Secure Virtual Cloud Network (VCN)
  - Availability Domains
  - Subnets
  - Routing Tables
  - Security Lists
- Secure VPN Access, DRG & Internet Gateways
- Oracle CASB (Cloud Access Security Broker) Monitoring
- Data storage security configuration
  - Encryption (At rest and transmission)
- Audit logging at all levels

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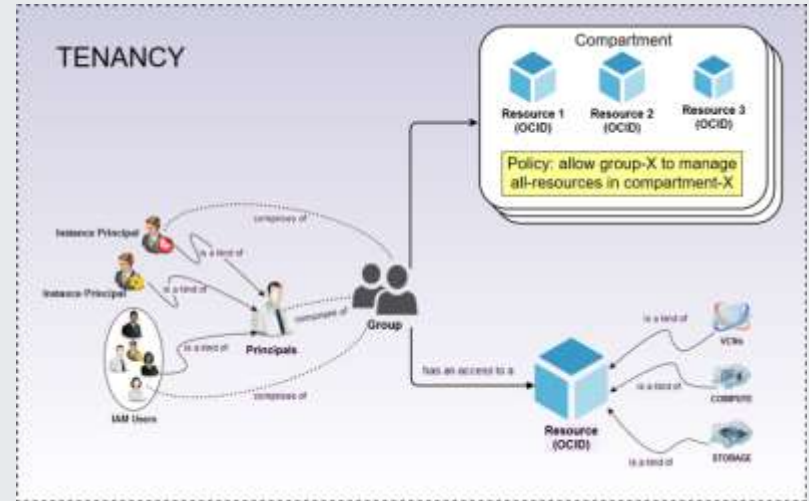
Licensing EBS

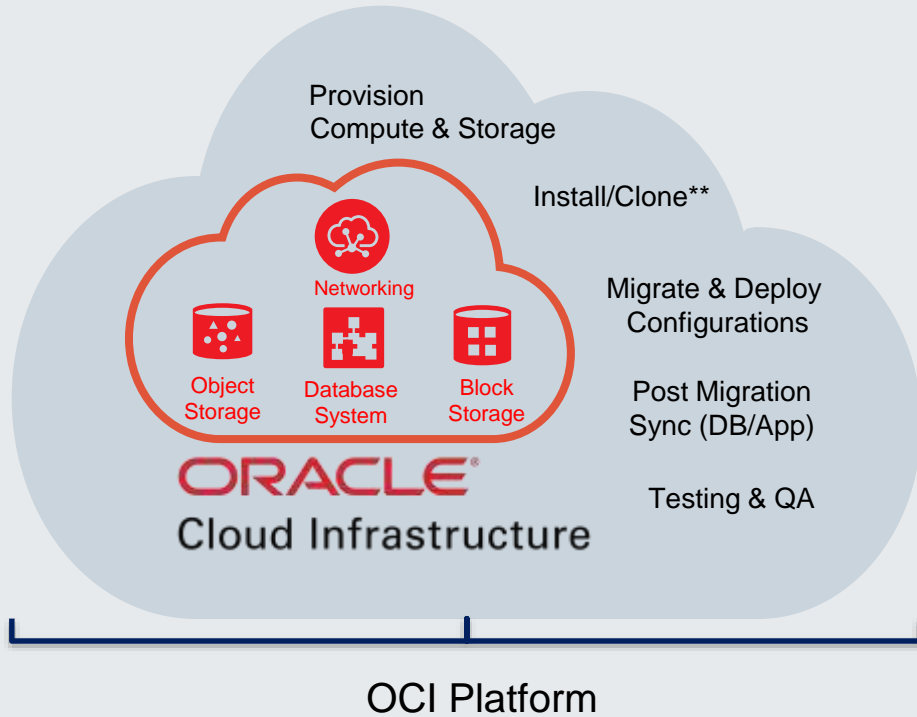| BYOL	Enterprise	High Performance	Extreme Performance
Bring your own licenses "as-is"	Licenses included following features:	Enterprise features plus:	High Performance features plus:
• ULA • Named User Plus • Processor License	• Data Masking and Subsetting Pack • Diagnostics and Tuning Packs • Real Application Testing	• Multitenant • Partitioning • Advanced Compression, • Advanced Security, Label Security, Database Vault, OLAP, Advanced Analytics, Spatial & Graph • Database Lifecycle Management Pack • Cloud Management Pack for Oracle Database	• In-Memory Database • Active Data Guard • RAC (requires two VMs of at least two OCPUs each)

Compute
VM's: Based on OCPU's and shapes OCPU/Hr

Storage
Block Volume: GB Storage Capacity/Month
Object Storage: GB Storage Capacity/Month

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Responsibilities − Oracle vs. Customer

Provision
Compute & Storage

Install/Clone**

Networking

Object Storage

Database System

Block Storage

Migrate & Deploy
Configurations

Post Migration
Sync (DB/App)

Testing & QA

ORACLE®
Cloud Infrastructure

OCI Platform

Applications

Middleware

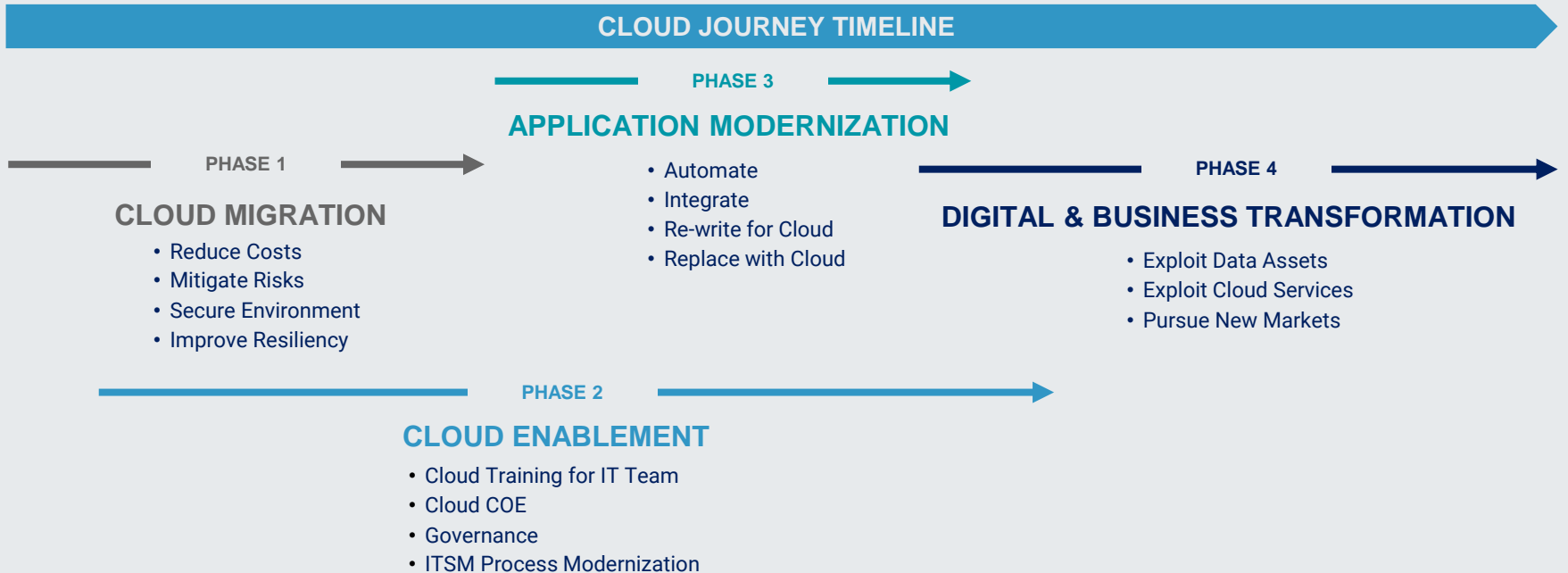Database

Operating System

Virtual Machine

Servers

Storage

Cloud Stack	Administration	Monitoring	Patching	Backups	Refreshes
Storage	Customer	Customer	ORCL	ORCL	NA
Network	Customer	Customer	ORCL	ORCL	NA
OS (VM)	Customer	Customer	Customer	Customer	NA
Database	Customer	Customer	Customer	Customer	Customer
Middleware	Customer	Customer	Customer	Customer	Customer
Applications	Customer	Customer	Customer	Customer	Customer

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Migration Methodology & Approach

CLOUD JOURNEY
MIGRATE, MANAGE, AND MODERNIZE

CLOUD JOURNEY TIMELINE

PHASE 3

APPLICATION MODERNIZATION

- Automate
- Integrate
- Re-write for Cloud
- Replace with Cloud

PHASE 1

CLOUD MIGRATION

- Reduce Costs
- Mitigate Risks
- Secure Environment
- Improve Resiliency

PHASE 4

DIGITAL & BUSINESS TRANSFORMATION

- Exploit Data Assets
- Exploit Cloud Services
- Pursue New Markets

PHASE 2

CLOUD ENABLEMENT

- Cloud Training for IT Team
- Cloud COE
- Governance
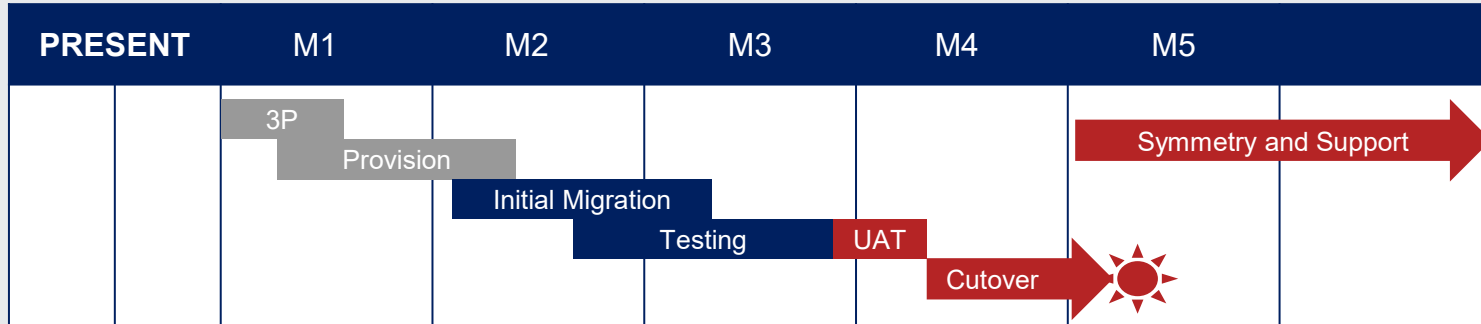- ITSM Process Modernization

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CLOUD MIGRATION TIMELINE

- 3P (Pre-Planning Preparation)
- Project Kickoff
- Establish Connectivity
- Provision All Servers in Cloud
- Install App Environments

- Establish MPLS
- Mock Cutover #1
- Application Unit & Integration Testing
- Application Testing
- Mock Cutover #2

- User Acceptance Testing
- Production Cutover
- GO LIVE
- Post Go LIve Support
- Symmetry

PRESENT		M1	M2	M3	M4	M5	
		3P				Symmetry and Support	
		Provision					
			Initial Migration				
				Testing	UAT		
					Cutover		

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Database Migration Strategy (All Oracle Databases)

- Initial migration (CRP1) taken from rman or cold backup of source system

- Subsequent migrations (CRP2, UAT etc.) rman backup of source system

- Production cutover

  - Rman backup of source system 1-2 weeks before production cutover

  - Migrated database recovered as a standby database to allow archive log transfer

  - Transfer archive logs from source system via a scripted process to apply to standby

  - At cutover shutdown source database, transfer and apply final archive logs

  - Activate and configure migrated database

  - Transfer additional deltas of artifacts (integration folders, etc.)

Application Migration Strategy (EBS)

- All migration iterations taken as full file system backups of the application file systems

- Restore and configure application tier with standard oracle clone process

- Production cutover

  - Restore full backup of source application file system 1-2 weeks before production cutover

  - Implement code freeze until after production cutover to prevent file system changes

  - At cutover after database recovery configure application tier with standard oracle clone process

  - Startup and validate services

  - Transfer additional deltas of artifacts (integration folders, concurrent processing files, etc.)

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Application Migration Strategy (OBI, SOA, Hyperion, etc.)

- Typically two options
  - Backup / Restore / Configure
    - Requires custom scripting that we have developed
    - Typically done as a single iteration and reconfigured with each subsequent iteration
    - Requires a code / configuration freeze in source system earlier in the process
    - Migrate artifacts at production cutover (rpd files, composites, etc.)
  - Reinstall of Application
    - Provides opportunity to upgrade version / change configurations
    - Typically done as a single iteration and reconfigured with each subsequent iteration
    - Migrate subset of artifacts at production cutover (rpd files, composites, etc.)

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Migration Considerations

- These could elongate the cutover timeline

  - Inability to copy archive logs from source system / provider

  - Upgrades of applications or database (versions or point releases)

  - Platform migrations (Solaris to Linux, etc.)

- Additional risks that could impact success

  - Upgrades of applications or database (versions or point releases)

  - Implementation of new functionality or configuration changes

  - Customizations with hard coded environment details (paths, hostnames, ports, passwords, etc.)

  - Emergency changes in source systems after code freeze that need to be migrated

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Cloud Momentum in the Market – Market Validation

PUBLIC CLOUD JOURNEY

The Time is NOW but Hazards Abound - An Expert Guide is an Essential Part

Public cloud platform used to be considered risky by enterprise IT. They have now matured and are far more secure and resilient than private clouds

- The strategic benefits of public clouds are driving significant adoption but challenges and dangers are abound

- Done right, the cloud journey will help *transform IT from firefighters and a cost center to an agile enabler and a business partner of the digital journey*

- Cloud Migration is the 1st phase of the journey, followed by modernization and digitization. Cloud Migration sets the stage for the entire transformation and it is where most enterprises stumble

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STRATEGIC ROLE OF PUBLIC CLOUD

Public Cloud is the Biggest IT Disrupter Since the Internet

AGILITY

Speed, Consumption Model

RESILIENCY

Allows IT to Focus on Future

COST

30-50% Reduction.

DEMOCRATIZE IT

Rich, Open Source, Industrial Strength IT Plumbing

TRANSFORM
YOUR BUSINESS

COMPLIANCE

Comprehensive Audited Reports

SECURITY

1000's of Security Engineers

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BENEFITS OF PUBLIC CLOUD

COST
- **No Capex:** No Data Center Investment required
- **Cost:** Free Internal Resources To Work On Strategic Projects

SPEED
- **Scalable & Elastic:** Expand as you need
- **Speed:** Access To Newer Technologies

RISK
- **Reduced Risk: Skills / Global Reach:** Global Skills/Data privacy
- **Reduced Risk: Enhanced Security:** Shared Security Model
- **Risk:** Governance & Compliance – GDPR

TRIGGERS FOR MOVING TO PUBLIC CLOUD

BETTER SECURITY AND LESS RISKY OPTION

IT ACCOUNTABLE FOR BUSINESS OUTCOMES	SECURITY THREATS & COMPLIANCE	MERGERS & ACQUISITIONS	DATA CENTER REFRESH	SOFTWARE & HARDWARE REFRESH	END OF LIFE SUPPORT
Need **Agility, responsiveness and Innovation** to partner with business	**Security breaches** and Governance /Compliance – Spectre – GDPR	**Consolidations** & Spins offs – Provides Huge Opportunities to consolidate on Public Cloud	**Data Centers** need complete refresh every 10-15 years	**Software & Hardware** refresh is expensive	**Software End of Support** EOL – (SQL Server/ VMware)
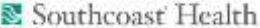
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VELOCITY'S CUSTOMERS TRIGGER EVENTS

ACCOUNT	APPLICATION	TRIGGER-1	TRIGGER-2	TRIGGER-3	TRIGGER-4
INNIO	EBS	Divestiture	Lack of Skill Sets	Data Center Downsizing	Executive Changes
Brown & Root	JD Edwards	Divestiture	New ERP	Data Center Downsizing	Executive Changes
CANFOR	JD Edwards	Executive Changes	Data Center Downsizing		
CHANGE HEALTHCARE	SAP, Oracle EBS	M&A	Lack of Skill Sets	App Upgrade	
TRUGREEN Live life outside.	JD Edwards	New ERP	Lack of Skill Sets	Data Center Downsizing	Executive Changes
Southcoast Health	PeopleSoft / Kronos	Disaster Recovery Requirements	Lack of Skill Sets	Current Partner Dissatisfaction	
SIEMENS	SAP/EBS	App Upgrade	Lack of Skill Sets	Executive Changes	Aging Infra
John Soules Foods	Infor M3	App Upgrade	Lack of Skill Sets	Poor Experience with Previous MSP	

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Use Cases

CANFOR

Canfor Corporation is an integrated forest products company with $3.3 billion in revenue.
Canfor is pursuing a growth strategy through acquisitions, international expansion and new products

BUSINESS CHALLENGES

- High Growth through acquisitions

- Avoid significant capex investment - free cash to support business growth

- Skills gaps & resource constraints

CANFOR DECISION CRITERIA

- Speed : Needed to exit a data center before end of term

- Complexity & Agility: Complex ecosystems of Enterprise Workloads - needed an experience partner with focus on complex enterprise apps

- No Disruption to the business

BUSINESS OUTCOMES

- Successful migration to much more performing and resilient platform at AWS

- Significant improvement in uptime of critical systems and performance

- Allowed Canfor IT team to focus on IT systems consolidation and modernization

"We used to have significant challenge keeping our critical systems up and constantly fire fighting. After the migration to AWS with Velocity, we had almost no availability issues and performance has been great. The migration was a "non-event", one of the smoothest in my experience. This allowed our team to focus on consolidating and modernizing our systems while we continue to acquire and grow the business"
— David Trent - CIO

CHANGE HEALTHCARE

Change Healthcare is a key catalyst of a value-based healthcare system – working alongside their customers and partners to accelerate the journey toward improved lives and healthier communities. Based in Nashville, TN, Change employs more than 10,000 across its healthcare system.

BUSINESS CHALLENGES

- Divestiture required rapid access to IT infrastructure and complex enterprise systems

- Divested entity lacked skills and resources to migrate, and run those systems

- Parent company Transition Support Agreement (TSA) was expensive and short in duration

CHANGE HEALTH DECISION CRITERIA

- **Speed:** Very aggressive migration timeline of very large complex Enterprise system landscape

- **Experience:** Migrated systems run the core of the company operations

- **Security:** HIPAA and PHI requirements demanded a much higher level of data security

- **Flexibility:** Change was modernizing their applications and needed elasticity of infrastructure, applications and service structure

KEY BUSINESS OUTCOMES

- Go from project initiation to completion within 9 months including cloud transformation for complex enterprise application (SAP/Oracle EBS) 'bolt-on's and other 3rd party application software landscape

- Completed the project ahead of the TSA deadline

- Delivered a TCO advantage of 40%+ compared to Private Cloud or an On Premise solution

"Velocity came in with a prescriptive approach based on years of experience running and managing complex enterprise apps. This meant faster, more secure and higher quality migration through automation and experienced DevOps/Cloud team. We were able to migrate large, complex footprint ahead of schedule and with no significant issues. Velocity is now our key partner to run / operate those environments while we focus on modernizing our application landscape."
— David Eckert – SVP, Global Applications

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Questions

Thank You