DATA-DRIVEN CLOUD MIGRATION

Actionable insights on your application portfolio drive faster cloud migration
AGENDA

• Where Cloud Fits
• Problem Solved
• Case Study
• Unique Approach
• Demo of Platform
• Migration Factory Support
• Where from Here
Digital Transformation in a Nutshell

INNOVATION

Business

Digital Transformation

Better Processes

Agile Culture

Org Change

Modern Software Development

Cloud Strategy

DevSecOps

CI/CD

“70% of Transformation projects fail”
McKinsey & Company

Hard to Hear - Migration Findings

- 96% are migrating applications to the cloud with 4% already completed their migration.
- 62% of initial migration projects are more difficult than expected or fail.
- 73% expect the application migration project to take a year or longer.
- 64% of application projects took longer to complete than planned.
- 55% exceed the application migration project budget.
- 47% believe their organizations are not moving to the cloud on schedule.

Why Are Application Migration Projects Late and Over Budget?, Dimensional Research, September 2017
Cloud and Complexity in IT, MIT Technology Review Insights, June 2020
Cloud Migration Bubble

Cost

Time

➔ Discovery
➔ Assessment
➔ Planning
➔ Training
➔ Duplicate Environments
➔ Consultants/Tools
➔ Lease Penalties

Operation & Optimization
Cloud Migration Bubble

- Discovery
- Assessment
- Planning
- Training
- Duplicate Environments
- Consultants/Tools
- Lease Penalties

Operation & Optimization
Traditionally...
Tidal-ly...
A CASE STUDY

Highlights

- Vertical: Public Sector - State/Provincial Government
- Compelling Event: Hardware Refresh Avoidance
- Previous technology stack: AIX, Solaris, Windows, Mainframe
- Previous spend on hosting: $2,070,000 per year
- Hardware refresh project: $15 mil avoided

Modernization process:
- Rationalize applications, and migrate J2EE to serverless
- Remove over 100 Critical + High CVEs
- Refactor core applications that have high-levels of technical debt first, to enable faster transformation

Budgeted 2 years for Lift and Shift
Transformative in just 15 months

Results

30 Apps Analyzed

- Refactored: 20
- Replatformed: 5
- Rehosted: 1
- Repurchased: 2
- Retired: 2

OpEx to: $80,000 p.a.
Tidal Application-centric Best Practices

**DISCOVER**
1. Review Company Objectives
2. Identify Discovery Sources
3. Organizational Skills Assessment
4. Application Inventory

**PLAN**
8. Transition Wave Planning
7. Transition Requirements

**ASSESS**
6. Deep Dive Source Code + DB Assessment
5. Preliminary Application Assessment

**EXECUTE**
9. Retire, Repurchase, Rehost
10. Refactor, Replatform Retain
11. Policy Automation + Enforcement
12. Stabilization
IT-centric vs Business-first Approach

Infrastructure-centric

DISCOVER  6+ months ASSESS  40 hrs per app* PLAN EX.

Application-centric**

DISCOVER ASSESS PLAN EXECUTE

Migrate faster, with better results.

*AWS Consulting average application assessment time
**Based on portfolio of 100 applications
Application Portfolio Assessment

**DISCOVER**

- Project Goals
- Application Inventory
- Dependency Mapping
- Skills Assessment
- Business Value

**ASSESS**

- Project Goals
- Application Inventory
- Dependency Mapping
- Skills Assessment
- Business Value

**Basic Insights**

- Classification
- Prioritization

**6 R’s**

- Refactor
- Replatform
- Rehost
- Repurchase
- Retain
- Retire

**Premium Insights**

- Source Code
- Database Analysis

CONTINUOUS RATIONALIZATION
Database Premium Insights

Deep analysis & insights

- Configuration compatibility
- Application dependencies
- Licensing savings
- PL/SQL conversion
- Cloud-native migrations
- What-if scenarios
Discover applications that connect to your databases and map the dependencies with one-click.

Rapidly identify the volumetrics required across your database portfolio, and measure the relative complexity to migrate from Oracle or SQL Server to cloud-native databases.
Easily drill down into individual columns, functions and features that your team should focus on when migrating from Oracle to cloud-native databases.

Perform detailed what-if analysis for migrations from Oracle and SQL Server to cloud-native database options.

*Shown here: Azure SQL*
Source Code Premium Insights

Software Intelligence

- Roadblock identification
- Framework detection
- Vulnerability insights (CVEs)
- Measure migration difficulty with 200+ code patterns
- Cloud-native migrations

Focuses your efforts on what matters
Rank your applications by migration difficulty to cloud-native architectures.

Source Code Analysis

Use Tidal Tools source code analysis feature to measure your application code bases for cloud PaaS migration difficulty. With your source code analyzed, the low-hanging fruit appear at the top of the list here. Migrating these to cloud-native platforms first allows your team to build momentum and demonstrate cloud competency.

1. Download, install and login to Tidal Tools
2. Run `tidal analyze code --app-id [app_id] /path/to/source`

Application Analysis Progress

Refactor: 10
Replatform: 15

<table>
<thead>
<tr>
<th>App</th>
<th>App Owner</th>
<th>Transition Type</th>
<th>Migration Difficulty</th>
<th>Roadblocks</th>
</tr>
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<tbody>
<tr>
<td>Alexa website</td>
<td></td>
<td>replatform</td>
<td>Easy (83.8%)</td>
<td>12</td>
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<td>Japan Airlines</td>
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<td>replatform</td>
<td>Easy (79.8%)</td>
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<td>Easy (72.1%)</td>
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<td>Easy (68.0%)</td>
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<tr>
<td>Truebill</td>
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<td>replatform</td>
<td>Medium (65.6%)</td>
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</tbody>
</table>
Identify issues before you migrate. Down to the source code files that your team should focus on.
Tidal Migrations platform | tools

UNDERLYING TOOLS

Tidal Tools

DNS Tools

3rd Party Tools

Discover/Reporting
APM

Service Management

Automations

RED HAT
ANSIBLE
Automation

rivermeadow

DEVICE42
MOVERE

Migration

RISC Networks

Microsoft
Hyper-V

vmware
vSphere

dynatrace

HP Universal CMDB

servicenow

bmc
Remedy
6 R’s
Transformation Management

- Refactor
- Rehost
- Retain
- Repurchase
- Retire
- Replatform
- Containers
- Serverless
- Refactor
- Rehost
- Retain
- Repurchase
- Retire
- Replatform
- Containers
- Serverless
- Refactor
- Rehost
- Retain
- Repurchase
- Retire
- Replatform
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- Rehost
- Retain
- Repurchase
- Retire
- Tidal Migrations Platform
Layered Approach to Discovery | Demo

Database Server Imports
Server Inventory Imports and Integrations
Hypervisor Cluster Imports

Source Code Analysis
Interview Application Owners
DNS Discovery and URL Analysis
Application Inventory Imports
Database Analysis

Application Centric

Infrastructure

Discovery Order
Two Factories

- Replatform
- Repurchase
- Rehost
- Refactor
- Retire
- Retain
- Repurchase
- Application Assessment Factory
- Database Admins
- DevOps Engineers
- Server Admins
- Software Development
- Network Engineers
- Business Evaluators
- Application Migration Execution Factory
WHERE FROM HERE?

PROOF OF VALUE PROJECT

➔ Workshop with knowledge transfer to baseline the team
➔ Try the approach and the process on a limited number of applications in the portfolio
➔ Make recommendations as to categorization and prioritization utilizing the data
➔ Application Assessment report

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