



# Predictive Maintenance Solutions



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Assessment

Solution Deployment

Ongoing Operations

# How Fractal Meets Your Resourcing Needs

## Talent Services



### Right Resources, right now

Our services include sourcing, paid advertising, screening, interviewing, and reference checking. We partner with our clients to understand their core business objectives so that we can align the right resource plan.

### Result:

Best resource delivered on time in the right model.

## Time & Materials

Hourly resources staffed to resolve a problem with a time commitment and hourly rate.

## Project-Based

Fixed deliverable schedule with resourcing determined by Fractal Analytics to best fit the project

## Reserved Teams

Retained team of dedicated size with flexible skills sets available to adjust to workstreams.

## Talent Focus

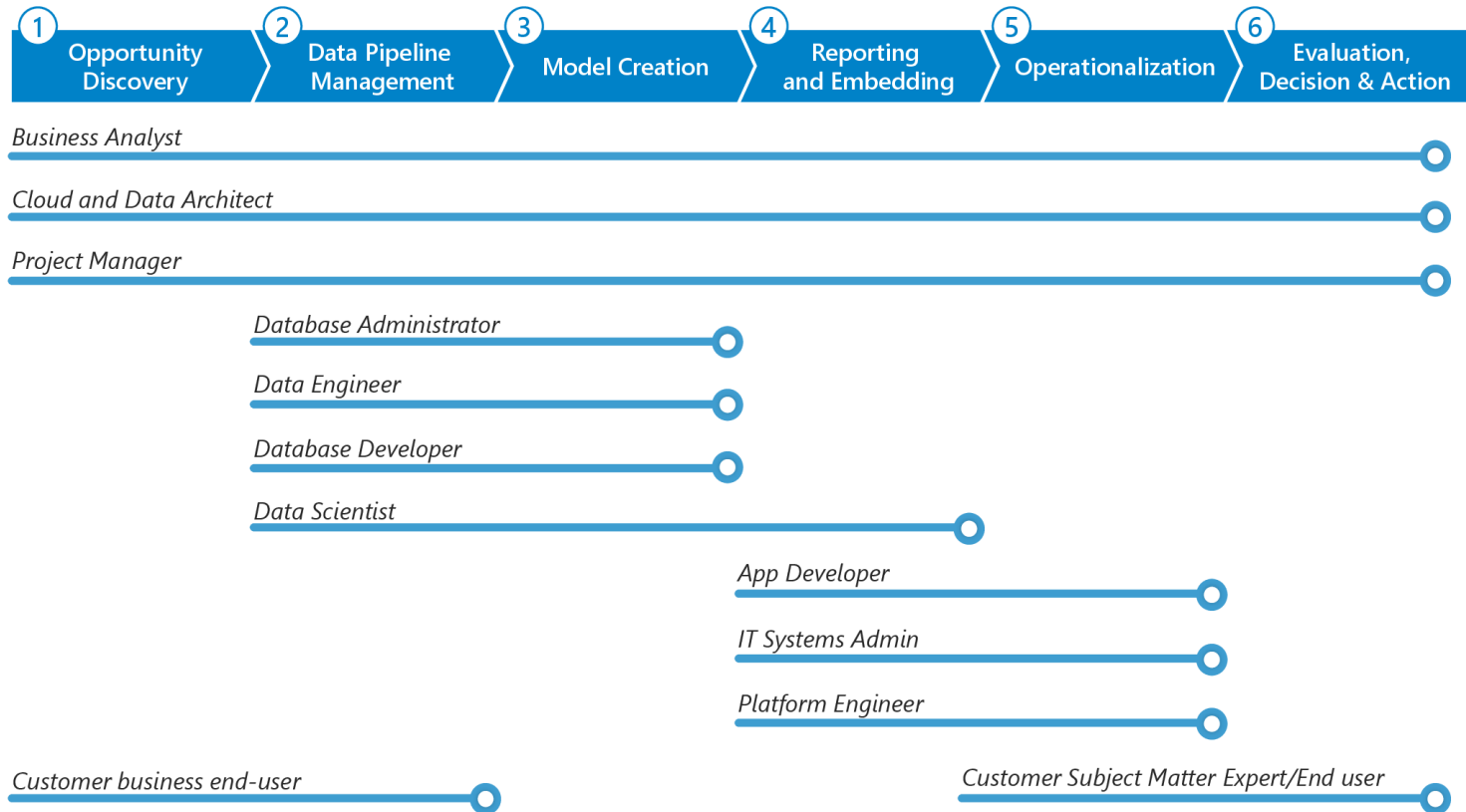
### Technology Expertise

- Azure Developers & Architects
- Azure Data Scientists & Quants
- Business Analysts & PMs
- App Dev/Test
- BI and Reporting
- Cloud Marketers
- Tech Recruiters
- UI / UX Designers
- Systems Admins / Infosec

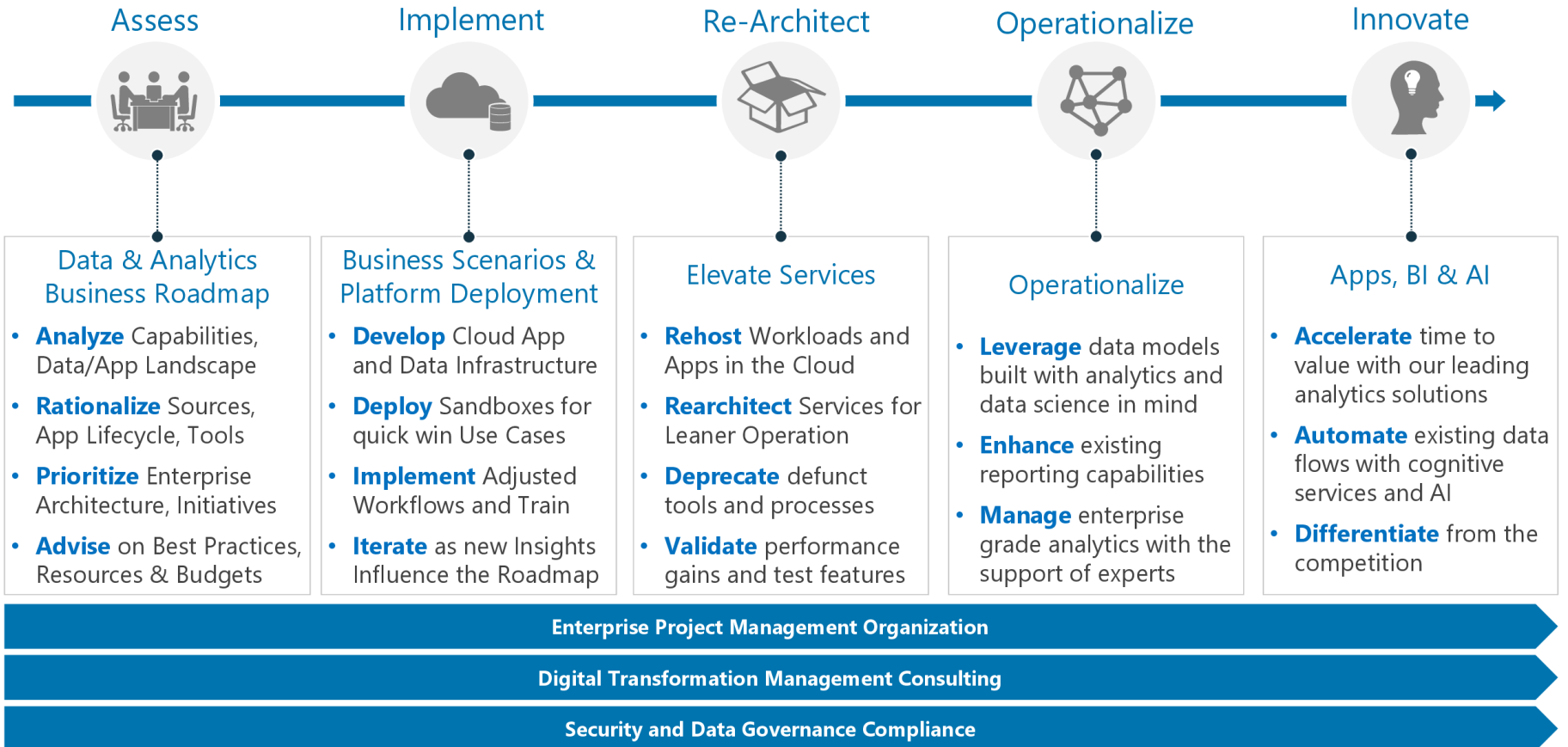
### Non-Technology Expertise

- Project and Program Managers
- Management Consulting

# Value Chain for Delivering Analytics Insights and Automation



# Data Estate Modernization



# Developing A Data Estate Modernization Roadmap



	PLAN	INVESTIGATE	DESIGN	PRESENT
<b>Activities</b>	<ul style="list-style-type: none"> <li>Application &amp; Data Inventory</li> <li>Assessment</li> <li>Strategy</li> </ul>	<ul style="list-style-type: none"> <li><b>Analyze</b> <ul style="list-style-type: none"> <li>Portfolio Prioritization</li> <li>Financial Justification</li> <li>Benchmarking &amp; Testing</li> </ul> </li> <li><b>Prioritize</b> <ul style="list-style-type: none"> <li>Remediation</li> <li>Upgrade</li> <li>Enhancement</li> </ul> </li> <li><b>Rationalize</b> <ul style="list-style-type: none"> <li>Risk Identification</li> <li>Operational Process Mapping</li> <li>Technology &amp; Architecture</li> </ul> </li> <li><b>Advise</b> <ul style="list-style-type: none"> <li>Vendor Consolidation</li> <li>Mergers &amp; Acquisition</li> <li>Outsourcing</li> <li>Licensing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Upgrade</li> <li>Migrate</li> <li>Enhance</li> <li>Consolidate</li> <li>Remediate</li> <li>Re-Architect</li> <li>Operationalize</li> <li>Decommission</li> </ul>	<ul style="list-style-type: none"> <li>Deployment Roadmap</li> <li>Business Case</li> <li>Ops</li> <li>IT</li> <li>Finance</li> <li>Sales</li> </ul>
<b>Deliverables</b>	<ul style="list-style-type: none"> <li>Workshop with key stakeholders</li> <li>Application portfolio</li> <li>Data landscape inventory</li> </ul>	<ul style="list-style-type: none"> <li>Application portfolio analysis and cloud assessment</li> <li>Rationalization of priorities</li> <li>Leveled per app / data source assessment</li> </ul>	<ul style="list-style-type: none"> <li>Architectural Recommendations</li> <li>Application &amp; Data Service Roadmap V1</li> <li>Master Data Management, Data Governance, and Security Analysis</li> </ul>	<ul style="list-style-type: none"> <li>Final roadmap &amp; reference architecture</li> <li>Business case justification &amp; ROI for Deployments</li> </ul>

# Example PMO Assessment Deliverables

## Onsite Workshop

### Data Strategy Workshop

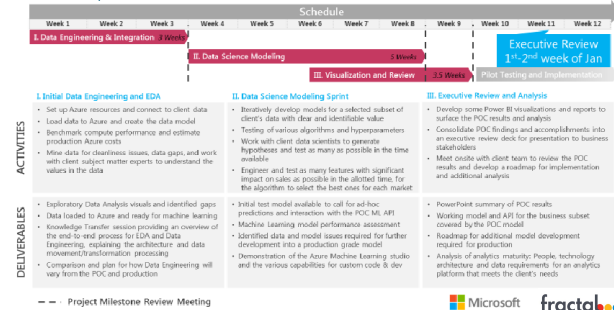
Day 1	Activity	Participants	Day 2	Activity	Participants
<b>Morning Session: Digital Thought Leadership</b>					
8:30 AM	Introductions and Setup	N/A	8:30 AM	Introductions and Setup	N/A
9:00 AM	Workshop Overview & Objective Setting Current State of Business	Client • Leadership • IT & Analytics Teams Near Analytics SMEs	9:00 AM	Defining Data Modernization Initiatives	Client • Leadership/Ops/Infra • IT & Analytics Teams Near Analytics SMEs
10:00 AM	Modern Data Estate Overview with Best Practices, DevOps	Client • Leadership • IT & Analytics Teams Near Analytics SMEs	10:00 AM	Estimation of Effort, Cost, and Benefit	Client • IT & Analytics Teams Near Analytics SMEs
11:00 AM Break			11:00 AM Break		
11:30 AM	Cloud Technology & Reference Architectures	Client • Leadership • IT & Analytics Teams Near Analytics SMEs	11:30 AM	Mapping out Core Infrastructure Pillars and Draft Architecture for the Defined Initiatives	Client • IT & Analytics Teams Near Analytics SMEs
12:00 PM LUNCH			12:00 PM LUNCH		
<b>Afternoon Session: App &amp; Data Inventory</b>					
1:30 PM	Data Estate Inventory	Client • Analytics Team • IT Team Near Analytics	1:30 PM	Scenario Evaluation and Prioritization	Client • Leadership • IT & Analytics Teams Near Analytics
3:00 PM Break			3:00 PM Break		
3:30 PM	Application Portfolio Assessment	Client • IT Team Near Analytics	3:30 PM	Roadmap Development	Client • All Near Analytics
5:00 PM	Day 1 Wrap Up	All	5:00 PM	Day 2 Wrap Up	All

#### You Need to Bring

- **Business Stakeholders**
  - CXO Sponsors
  - VP & Director Roles
- **IT Leadership**
  - VP & Management
  - Data Expert
  - Application Expert
- **Analytics/BI Leads** (if any)
  - Analytics/BI Leads
- **Data & Security Docs**
  - Existing Arch Diagram
  - Security Technologies
  - Data Governance Plan

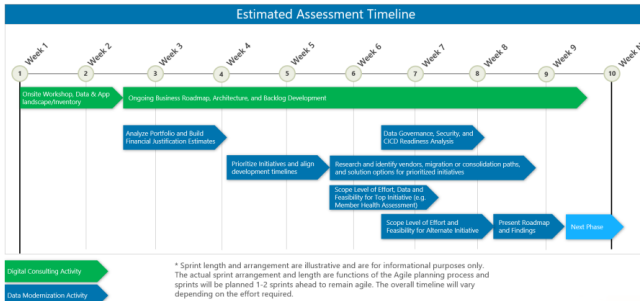
## Infrastructure Development Roadmap

### Development Timeline



## Sprint Plan

### Reference Data Estate Modernization Assessment Sprints\*



## Backlog Prioritization & Analysis

### FP&A: Overall Opportunity Prioritization



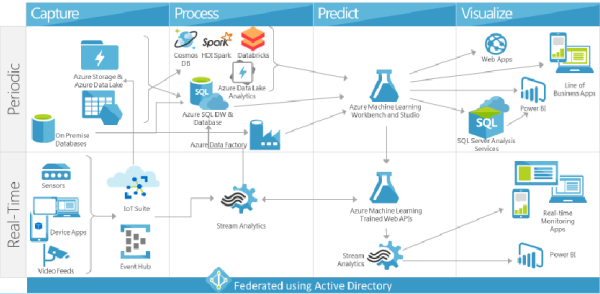
## Description

- These deliverables are a combination of face to face consulting and completed business analysis and engagement design delivered in PowerPoint
- These deliverables are part of an overall framework but will vary from engagement to engagement depending on the needs of each customer

# Example Technical Assessment Deliverables

## Custom Designed Architectures

### Azure Lambda Reference Architecture



## Scenario Canvases

### Scenario Canvas: Right Product Recommendations

Scenario	Questions Answered	Analysis/Development Required	Definition of Success
<b>Scenario</b> Understand current customer behaviour and preferences to improve relevance and timeliness of our offers to drive revenue uplift.	<ul style="list-style-type: none"> <li>What customer segmentation exists based on purchase preferences?</li> <li>What media / channels are the most effective for communicating offers to each customer?</li> <li>What are customer needs in the future?</li> <li>What next best offer actions will improve customer experience and profitability based on future customer needs?</li> </ul>	<b>Data Engineering</b> <ul style="list-style-type: none"> <li>Connect to the Client DW environment</li> <li>Create ADZ pipeline to import data into Azure and pre-process data for machine learning</li> </ul> <b>Data Science</b> <ul style="list-style-type: none"> <li>Identify customer segments using clustering techniques (Factor K-means, Two-step, etc.)</li> <li>Identify customer media preferences based on Next Logical Purchase (NLP) and Next Best Action (NBA)</li> </ul> <b>Data Visualization</b> <ul style="list-style-type: none"> <li>Create Power BI interface to detail individual customer and peer group characteristics</li> <li>Create predictive recommendations based on NBA operations based on covered data</li> </ul> <b>App / Data Integration</b> <ul style="list-style-type: none"> <li>Create a feed for the results data either directly to the application or into a database which can be read by the downstream application (Marketing Automation, Mobile Apps, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Product recommendations which drive increased revenue via holistic sample in the same market</li> <li>Increased engagement with recommendations</li> </ul>
<b>Business Rationale</b> Increase revenue and decrease inefficiencies in outreach efforts by precisely understanding / predicting high-probability outcomes.	<b>Deliverables</b> <ul style="list-style-type: none"> <li>Automated customer segmentation engine based on machine learning</li> <li>Power BI visualization detailing customer group characteristics and purchase trends</li> <li>Model to recommend Next Logical Purchase for a portfolio customer</li> <li>Promotion offer matching engine based on customer characteristics and purchase preferences</li> <li>Integration with marketing automation tools</li> </ul>	<b>Client Feasibility</b> Feasibility Score: 5 Timeline: 4 months Feasibility Rank: 1	<b>Need Effort</b> <ul style="list-style-type: none"> <li>Data Science: 800+ Hours</li> <li>Data Engineering: 900+ Hours</li> <li>Project Management: 200+ Hours</li> </ul>
<b>Operationalization</b> Adapt targeted campaigns by customer Push notifications of the recommendations through mobile app and online services in real time.			



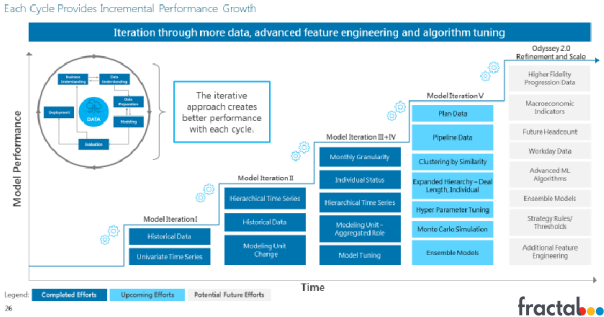
## Data/App Inventory

### Data Inventory and Mappings



## Technical Development Plan

### ML Models require an Iterative Development Approach



## Description

- These deliverables are more involved and are developed following the workshop through collaboration with technical teams to analyze the deeper requirements of the business goals identified in the workshop
- The result is the formulation of an actionable scope of work to begin modernization around top priority use cases
- To summarize our technical approach in one sentence... we start by demonstrating the business value via a sandbox architecture which through iteration and expansion will serve as the foundation of the eventual production platform

