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# Productive Edge 5 Week Rapid Modern Data Architecture Assessment

Outcomes: Data Architecture Solution BluePrint, Roadmap and Timelines

# Shift to A Modern Data Platform Approach

| Analytic Workflow Component | Traditional BI Platform | Modern Data Platform |
|---|---|---|
| Data sources | Relational, on-premises | → Relational, Hadoop, semi-structured, NoSQL, streaming, flat files, APIs<br>→ On-premises and/or cloud |
| Data movement | Requires duplication of data | Move once use often |
| Data model | Upfront dimensional modeling required (IT-built star schemas and/or cubes) | Upfront modeling not required (flat files/flat tables), ability to model data at time of need or logical modeling of data through data virtualization |
| Data ingestion and preparation | IT-produced | IT-enabled with built in data governance |
| Content authoring / Querying | Primarily IT staff, but also some power users, largely SQL based querying | Business users and automated through automated insights, mix of querying options |
| Analytics | Predefined, ad hoc reporting based on a dimensional model | Free-form exploration and visualization, with in context data manipulation, Natural language and automated insights |
| Insight delivery | Distribution and notifications via scheduled reports or a portal | Sharing and collaboration, storytelling, chat bots, and open APIs |
| Advanced Analytics (Machine Learning) | Lacking or independent siloed effort with little or no operationalization | IT Enabled Analytics Sandbox, Adoption of Automated Machine Learning, Embedding of AI within experiences and MLOps |
| Data Governance | Afterthought and rigid with a focus on providing Truth | Forethought and flexible with a focus on providing Trust |

# The 5-Week Rapid Data Architecture Assessment and Recommendations

A tightly scoped 5-week fixed cost engagement with a full execution plan that puts you on your path to building your next generation modern data foundation

## WHY

Organizations embarking on customer-centric and transformative journeys end up realizing that the **key inhibitor for meeting digital ambition is the lack of a modern data foundation**. A data foundation that is flexible, available to all, elastic and can evolve over time
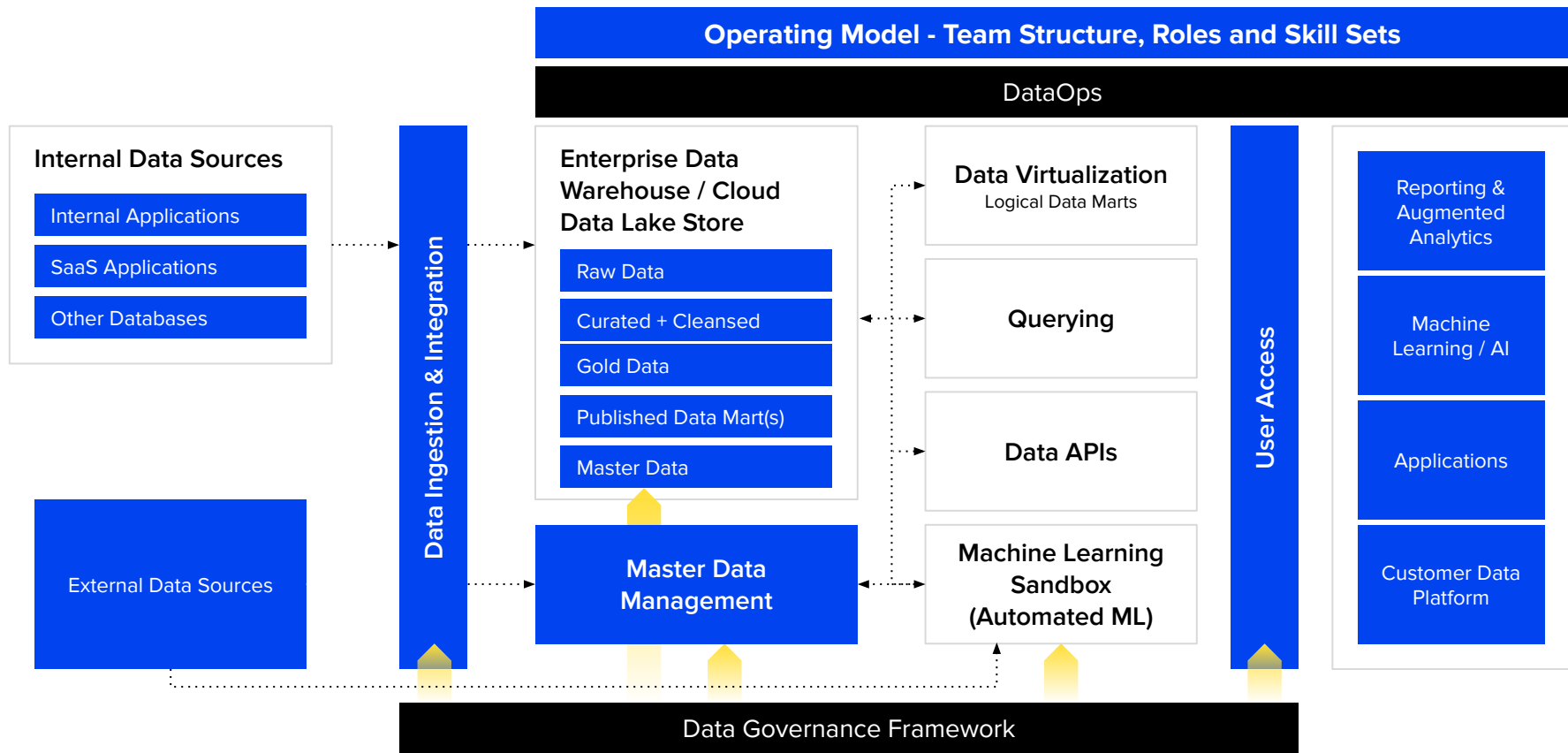
## HOW

Through a **tightly scoped fixed cost 5-week engagement, Productive Edge works with your team through a series of short workshops** to gain understanding of future ambitions, assess current technology and define desired maturity across people, process and technology
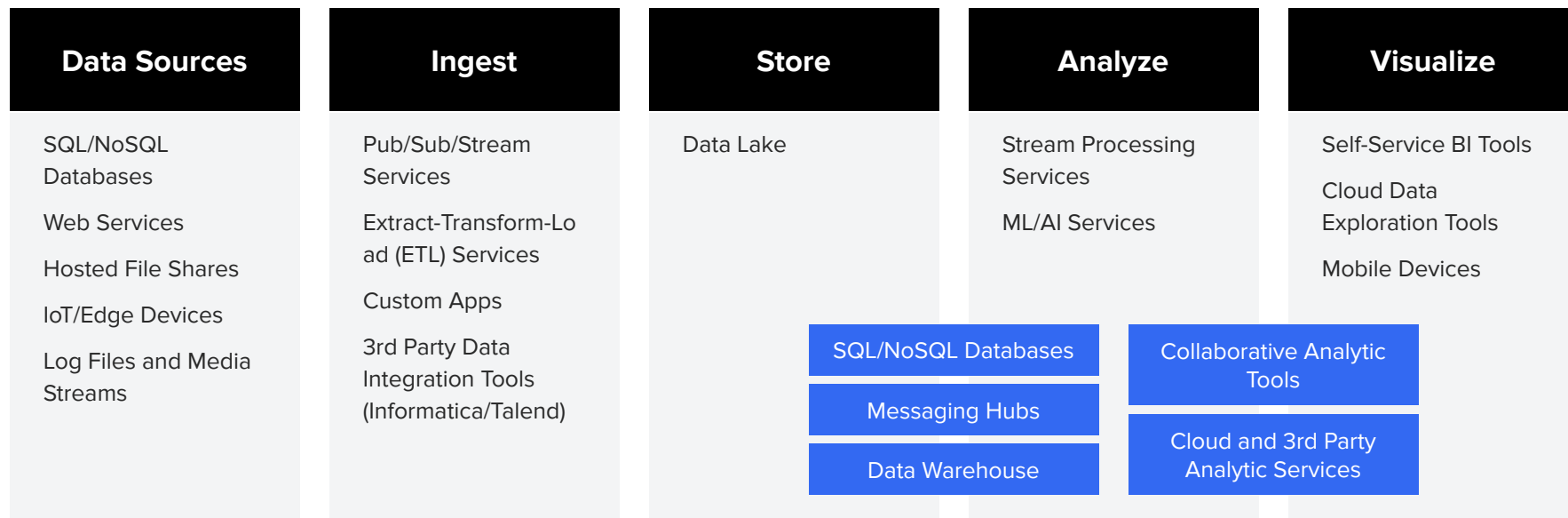
## WHAT

**The result of the assessment is a recommended execution focused blueprint** that provides the people, process and technology definition and roadmap required to build and sustain the modern data foundations that will power your digital strategy

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# Productive Edge Framework for a Foundational Modern Data Platform

**Operating Model - Team Structure, Roles and Skill Sets**

DataOps

**Internal Data Sources**

Internal Applications

SaaS Applications

Other Databases

External Data Sources

Data Ingestion & Integration

**Enterprise Data Warehouse / Cloud Data Lake Store**

Raw Data

Curated + Cleansed

Gold Data

Published Data Mart(s)

Master Data

**Master Data Management**

**Data Virtualization**
Logical Data Marts

**Querying**

**Data APIs**

**Machine Learning Sandbox (Automated ML)**

User Access

Reporting & Augmented Analytics

Machine Learning / AI

Applications

Customer Data Platform

Data Governance Framework

**Data Modernization Governing Committee / Enterprise Communication**

# Modern Data Platform Architecture Components

| Data Sources | Ingest | Store | Analyze | Visualize |
|---|---|---|---|---|
| SQL/NoSQL Databases | Pub/Sub/Stream Services | Data Lake | Stream Processing Services | Self-Service BI Tools |
| Web Services | Extract-Transform-Load (ETL) Services | | ML/AI Services | Cloud Data Exploration Tools |
| Hosted File Shares | Custom Apps | | | Mobile Devices |
| IoT/Edge Devices | 3rd Party Data Integration Tools (Informatica/Talend) | | | |
| Log Files and Media Streams | | | | |

**Store:**
- SQL/NoSQL Databases
- Messaging Hubs
- Data Warehouse

**Analyze:**
- Collaborative Analytic Tools
- Cloud and 3rd Party Analytic Services
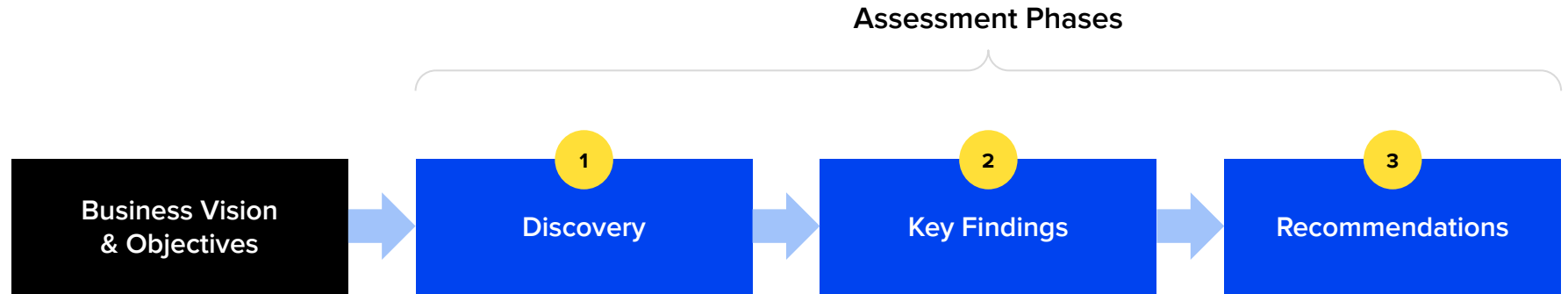
**Orchestration and DataOps** — Achieve consistency, speed, and accuracy through automation
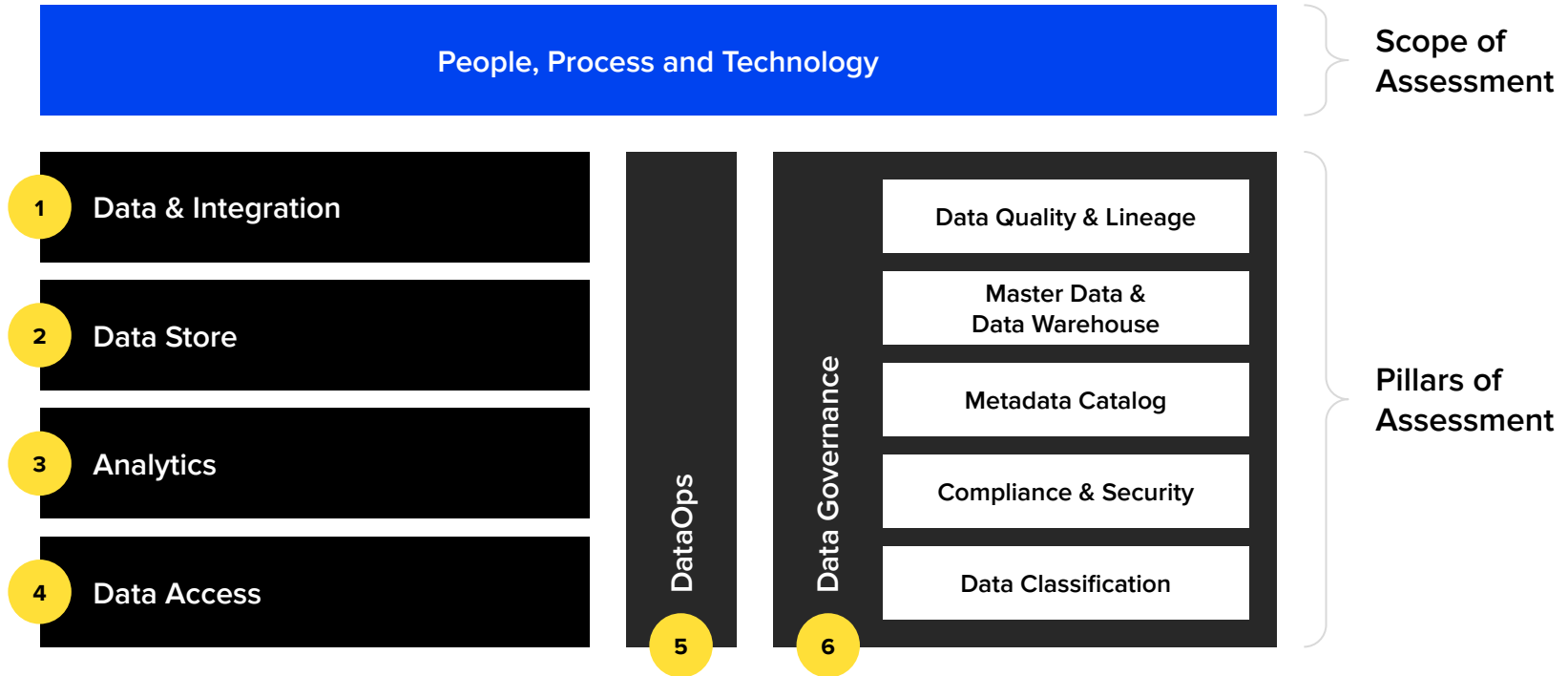
**Data Governance** — Data management, discovery, quality and security for more freedom of use

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# Assessment Phases

A tightly scoped 5-week fixed cost engagement with a detailed execution plan to build your next-generation modern data foundation with a focus on data governance, data lake, ML sandbox, and DataOps

Assessment Phases

**Business Vision & Objectives** → **1 Discovery** → **2 Key Findings** → **3 Recommendations**

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# Scope and Pillars of Assessment

**People, Process and Technology**

Scope of Assessment

| 1 | Data & Integration |

| 2 | Data Store |

| 3 | Analytics |

| 4 | Data Access |

**DataOps** 5

**Data Governance** 6

Data Quality & Lineage

Master Data & Data Warehouse

Metadata Catalog

Compliance & Security

Data Classification

Pillars of Assessment

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# PE 5 - Week Rapid Modern Data Platform and Analytics Assessment

Productive Edge suggests the use of workshops for driving discussions and scope for various workstreams

| Workshop Description | Suggested Customer Participants | Duration |
|---|---|---|
| **Workshop 1:** Understand and document key analytics and AI use cases | Business Team | 1 workshop, 2 hours |
| **Workshop 2:** Discuss internal data source integration, access and systems | Business Team, IT | 1 workshop, 2 hours |
| **Workshop 3:** Define master data needs and target maturity | Business Team, IT | 1 workshop, 1 hour |
| **Workshop 4:** Define data governance scope and target maturity | Business Team, IT | 1 workshops, 2 hours each |
| **Workshop 5:** Define physical data lake components to be used, system and versioning considerations, design and architecture to support overall approach | IT | 1 workshop, 2 hours |
| **Workshop 6:** Define users, user access needs, roles and entitlements | Business Team, IT | 1 workshop, 1 hours |
| **Workshop 7:** Define target DataOps process, roles and responsibilities | Business Team, IT | 1 workshop, 1 hours |

# PE 5 - Week Modern Data Platform and Analytics Strategy

| | Deliverables |
|---|---|
| 1 | Business goals and representative use cases |
| 2 | Data integration strategy for key data sources aligned with priority along with example data pipeline |
| 3 | Master data  scope definition |
| 4 | Target modern data architecture for ingesting raw data, rules around data cleansing, data curation, managing gold data and querying through data virtualization and other querying methods |
| 5 | An iterative data governance scope and roadmap |
| 6 | Physical data lake design and architecture  to adopt modern data architecture principles |
| 7 | User access, user access needs, roles and entitlements |
| 8 | DataOps process, roles and responsibilities |
| 9 | Overall roadmap and suggested timeline |
| 10 | Recommendations and architecture blueprint |

# Productive Edge Consultant Roles

Our plug'n play team brings the right expertise at the right time

| Role | Responsibilities |
|---|---|
| **Digital Strategist** | Current and future state map, prioritization, roadmap creation, aligning strategic goals to technology needs, defining KPIs and ROI |
| **Cloud Data Architect** | Design and architect modern data platform using current and emerging technologies. Lead teams and execute. |
| **Data Engineer** | Develop data pipelines, data cleansing, DataOps enablement |
| **Machine Learning Engineer** | Assist in developing machine learning models with a focus on data and feature engineering |
| **Data Analyst** | Interpreting data, generating insights and analyzing results using statistical techniques |
| **Data Visualization Analyst** | Building dashboards, reports, and creating visual stories |

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# Thank you!

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