**Executive Summary**

**Objective:**

To establish a secure, scalable, and collaborative Business Intelligence (BI) strategy that integrates data across R&D, Manufacturing, Sales, and Regulatory departments. The goal is to deliver a unified view of operations without disrupting existing systems, while addressing stakeholder concerns around data security, compliance, and operational continuity.

**Stakeholder Priorities & Challenges:**

* R&D: Protect intellectual property, ensure data accuracy, minimize governance overhead.
* Manufacturing: Maintain system uptime, require real-time operational dashboards.
* Sales: Achieve a single source of truth for sales performance, leverage Salesforce investments.
* Regulatory Affairs: Ensure compliance with FDA/EMA, audit-ready data lineage.
* Finance: Need consistent and reconciled financial metrics.
* IT/Platform: Deliver a cost-effective, secure, and scalable solution.

**Potential Conflicts**:

* R&D vs. Sales on data sharing levels (sensitivity vs. transparency).
* Manufacturing’s need for real-time vs. IT’s concern about stability.
* Sales’ Salesforce dependency vs. enterprise push for unified data lake.

**Phased Roadmap (6 Months):**

Phase 0 (Weeks 0–2): Discovery & Alignment

* Stakeholder interviews, data source inventory.
* Quick win: build mock KPI dashboard with anonymized data.

Phase 1 (Weeks 3–8): Foundation

* Establish centralized data catalog & governance board.
* Deliverable: working catalog + 2 pilot dashboards.

Phase 2 (Weeks 9–16): Integration

* Connect Sales & Manufacturing data (read-only).
* Build data lake (S3 with raw → curated → presentation layers).
* Deliverable: federated sales dashboard (single source of truth).

Phase 3 (Weeks 17–24): Expansion & Governance

* Integrate R&D and Regulatory systems with anonymization.
* Enable automated audit trails & compliance monitoring.
* Deliverable: cross-department executive dashboard.

**Federated Data Architecture:**

* Ingestion: Non-intrusive connectors pull from ERP, Salesforce, R&D databases.
* Data Lake (AWS S3): Raw → Staging → Curated → Presentation.
* Processing: AWS Glue (ETL), Athena/Redshift for query.
* BI Layer: Power BI/QuickSight dashboards with row-level security.
* Governance: Role-based access, audit logging, data catalog.

**Change Management Strategy:**

* Assign **Data Champions** per department.
* Weekly demos + hands-on training for end users.
* Tailored communication of benefits (e.g., Sales = faster forecasting, Manufacturing = better stock control).
* Early wins to build trust and demonstrate value.

**ROI & Resource Plan:**

* Estimated Budget: **$150K (6 months)**
* Resourcing: 1 Data Engineer, 1 BI Developer, governance support from IT.
* Anticipated Benefits:
* Sales forecasting accuracy ↑ 3–5%
* Manufacturing downtime ↓ 10–15%
* Regulatory audit prep time ↓ 50%
* Expected Payback: **9–12 months** through time savings & reduced compliance risk.

**Key Deliverables:**

* Executive dashboard (cross-department view)
* Centralized data catalog & governance framework
* Stakeholder adoption metrics
* Risk assessment & compliance documentation