**From PMBOK Guide 6th Edition / Processes Flow:**

**Initiating Process: 4.1 Integration & 13.1 Stakeholder**

**4.1 Integration: Develop Project Charter**

**Section 1. Charter Introduction**

1.1 Document change control:

**1.2 Executive summary:**

1.3 Authorization:

**Section 2. Project Overview**

**2.1 Project summary:**

**2.2 Project goals, objectives, and business outcomes:**

**2.3 Project scope:**

**2.4 Milestones:**

**2.5 Deliverables:**

2.6 Project cost estimate and sources of funding:

**2.7 Dependencies:**

**2.8 Project risks, assumptions, and constraints:**

**13.1 Stakeholder: Identify Stakeholders**

**From EMC’s Data Science and Big Data Analytics Framework:**

**Chapter 2 • Data Analytics Lifecycle**

**2.2 Phase 1: Discovery:**

**2.2.1 Understand aspects of the business domain that are relevant to the project**

**2.2.2 Identify resources available to support project**

**2.2.4 Identify stakeholders**

**2.2.5 Interview the project sponsor**

2.2.6 Developing initial hypotheses

**2.2.7 Identifying potential data sources**

2.3 Phase 2: Data Preparation

2.3.1 Prepare the analytic sandbox

2.3.2 Perform ETLT

2.3.3 Learn About the Data

2.3.4 Data Conditioning

2.3.5 Survey and Visualize

2.3.6 Common Tools for the Data Preparation Phase

2.4 Phase 3: Model Planning

2.4.1 Data Exploration and Variable Selection

2.4.2 Model Selection

2.4.3 Common Tools for the Model Planning Phase

2.5 Phase 4: Model Building

2.5.1 Common Tools for the Mode/Building Phase

2.6 Phase 5: Communicate Results

2.7 Phase 6: Operationalize

**Overview of PMBOK Processes:**

**Initiating:**

* **4 Integration:**
  + **4.1 Develop Project Charter**
    - Charter
    - Assumptions
* **13 Stakeholder:** 
  + **13.1 Identify Stakeholders**
    - Stakeholder register
    - Change requests
    - Project management plan updates
    - Project document updates

**Planning:**

* **4 Integration:**
  + **4.2 Develop Project Management Plan**
    - Project management plan
* **5 Scope:** 
  + **5.1 Plan Scope Management**
    - Scope management plan
    - Requirements management plan
  + **5.2 Collect Requirements**
    - Requirements documentation
    - Requirements traceability matrix
  + **5.3 Define Scope**
    - Project scope statement
    - Project documents updates
  + **5.4 Create WBS**
    - Scope baseline
    - Project documents updates
* **6 Scheduling:**
  + **6.1. Plan Schedule Management**
    - Schedule management plan
  + **6.2 Define Activities (including *Rolling Wave Planning*)**
    - Activity list
    - Activity attributes
    - Milestone list
    - Change requests
    - Project management plan updates
  + **6.3 Sequence Activities**
    - Project schedule network diagrams
    - Project documents updates
  + **6.4 Estimate Activity Duration**
    - Duration estimates
    - Basis of estimates
    - Project document updates
  + **6.5 Develop Schedule (including *CPM* and *Agile Release Planning)***
    - Schedule baseline
    - Project schedule
    - Schedule data
    - Project calendars
    - Change requests
    - Project management plan updates
    - Project documents updates
* **7 Cost:**
  + **7.1 Plan Cost Management**
    - Cost management plan
  + **7.2 Estimate Costs**
    - Cost estimates
    - Basis of estimates
    - Project document updates
  + **7.3 Determine Budget**
    - Cost baseline
    - Project funding requirements
    - Project documents updates
* **8 Quality:**
  + **8.1 Plan Quality Management**
    - Quality management plan
    - Quality metrics
    - Project management plan updates
    - Project documents updates
* **9 Resource:**
  + **9.1 Plan Resource Management**
    - Resource management plan
    - Team charter
    - Project documents updates
  + **9.2 Estimate Activity Resources**
    - Resource requirements
    - Basis of estimates
    - Resource breakdown structure
    - Project documents updates
* **10 Communications:**
  + **10.1 Plan Communications Management**
    - Communications management plan
* **11 Risks:**
  + **11.1 Plan Risk Management**
    - Risk management plan
  + **11.2 Identify Risks**
    - Risk register
    - Risk report
    - Project documents updates
  + **11.3 Perform Qualitative Risk Analysis**
    - Project documents updates
  + **11.4 Perform Quantitative Risk Analysis**
    - Project documents updates
  + **11.5 Plan Risk Responses**
    - Change requests
    - Project management plans updates
    - Project documents updates
* **12 Procurement:**
  + **12.1 Plan Procurement Management**
    - Procurement management plan
    - Procurement strategy
    - Bid documents
    - Procurement statement of work
    - Source selection criteria
    - Make-or-buy decisions
    - Independent cost estimates
    - Change requests
    - Project documents updates
    - Organizational process assets updates
* **13 Stakeholder:**
  + **13.2 Plan Stakeholder Engagement**
    - Stakeholder engagement plan

**Executing:**

* **4 Integration:**
  + **4.3 Direct and Manage Project Work**
    - Deliverables
    - Work performance data
    - Issue log
    - Change requests
    - Project management plan updates
    - Project documents updates
    - Organizational process assets updates
  + **4.4 Manage Project knowledge**
    - Lessons learned register
    - Project management plan updates
    - Organizational process assets updates
* **8 Quality:**
  + **8.2 Manage Quality**
    - Quality reports
    - Test and evaluation documents
    - Change requests
    - Project management plan updates
    - Project documents updates
* **9 Resource:**
  + **9.3 Acquire Resources**
    - Physical resource assignments
    - Project team assignments
    - Resource calendars
    - Change requests
    - Project management plan updates
    - Project document updates
    - Enterprise environment factors updates
    - Organizational process assets updates
  + **9.4 Develop Team**
    - Team performance assessments
    - Change requests
    - Project management plan updates
    - Project document updates
    - Enterprise environment factors updates
    - Organizational process assets updates
  + **9.5 Manage Team**
    - Change requests
    - Project management plan updates
    - Project document updates
    - Enterprise environment factors updates
* **10 Communications:**
  + **10.2 Manage Communications**
    - Project communications
    - Project management plan updates
    - Project document updates
    - Organizational process assets updates
* **11 Risks:**
  + **11.6 Implement Risk Responses**
    - Change requests
    - Project documents updates
* **12 Procurement:**
  + **12.2 Conduct Procurement**
    - Selected sellers
    - Agreements
    - Change requests
    - Project management plan updates
    - Project document updates
    - Organizational process assets updates
* **13 Stakeholder:**
  + **13.3 Manage Stakeholder Engagement**
    - Change requests
    - Project management plan updates
    - Project documents updates

**Monitoring and Control:**

* **4 Integration:**
  + **4.5 Monitor and Control Project Work**
    - Work performance reports
    - Change requests
    - Project management plan updates
    - Project documents updates
  + **4.6 Perform Integrated Change Control**
    - Approved change requests
    - Project management plan updates
    - Project documents updates
* **5 Scope:**
  + **5.5 Validate Scope**
    - Accepted deliverables
    - Work performance information
    - Change requests
    - Project documents updates
  + **5.6 Control Scope**
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents updates
* **6 Schedule:**
  + **6.6 Control Schedule**
    - Work performance information
    - Schedule forecasts
    - Change requests
    - Project management plan updates
    - Project documents updates
* **7 Cost:**
  + **7.4 Control Costs**
    - Work performance information
    - Cost forecasts
    - Change requests
    - Project management plan updates
    - Project documents updates
* **8 Quality:**
  + **8.3 Control Quality**
    - Quality control measurements
    - Verified deliverables
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents updates
* **9 Resource:**
  + **9.6 Control Resources**
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents update
* **10 Communications:**
  + **10.3 Monitor Communications**
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents updates
* **11 Risks:**
  + **11.7 Monitor Risks**
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents updates
    - Organizational process assets updates
* **12 Procurement:**
  + **12.2 Control Procurements**
    - Closed procurements
    - Work performance information
    - Procurement documentation updates
    - Change requests
    - Project management plan updates
    - Project documents updates
    - Organizational process assets updates
* **13 Stakeholder:**
  + **13.4 Monitor Stakeholder Engagement**
    - Work performance information
    - Change requests
    - Project management plan updates
    - Project documents update

**Closing:**

* **4 Integration:**
  + **4.7 Close Project or Phase**
    - Project documents updates
    - Final product, service, or result transition
    - Final report
    - Organizational process assets updates