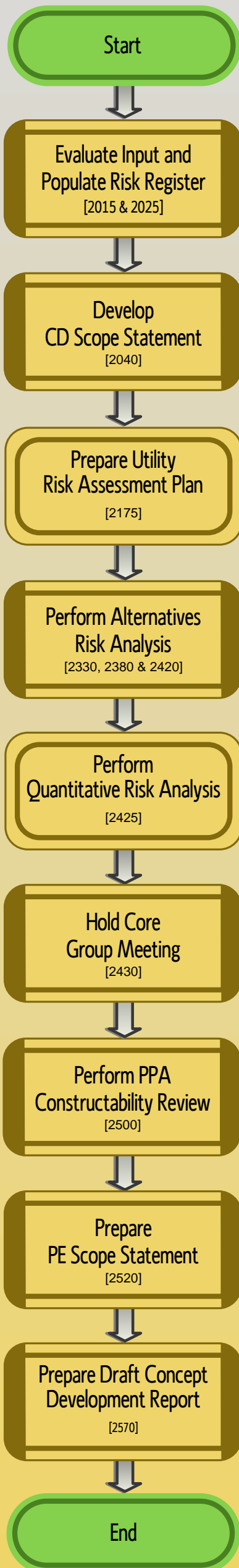


# Risk Management in Concept Development



During Concept Development Initiation, the Project Manager populates the Risk Register with any project specific risks from Management Systems information and/or stakeholder input. If a Risk Register has not been created, the Project Manager creates it.

The Project Manager identifies the appropriate level of risk analysis to be performed in Concept Development based on specific project characteristics and includes appropriate risk analysis activities within the CD Scope Statement.

Note: The CD Scope Statement may or may not include Quantitative Analysis depending on the programmatic risk assessment results.

Utilizing data obtained during the field inventory, the Designer prepares the Utility Risk Assessment Plan. The Utility Risk Assessment Plan highlights potential high risk utility impacts and notes those impacts on the plan. This plan will be utilized to complete the utility section within the Project Fact Sheet. The Designer should consult with the utility companies to prepare the Utility Risk Assessment Plan.

Based upon the Impact Assessment, the Designer identifies major risks specific to each alternative being presented to the Core Group and includes them within the Alternatives Matrix.

For projects over \$100 million and if approved by the Project Manager and concurred with by the Program Manager, the Designer performs quantitative risk analysis for each risk that has high probability of occurrence and high magnitude of impact. Quantitative risk analysis provides the Project Manager and Core Group with additional cost and schedule impact information when selecting the Preliminary Preferred Alternative.

The quantitative risk analysis is documented in the Quantitative Risk Analysis Report. The risk strategy and plans will be used in the development of the PE Scope Statement.

Once a draft PPA is selected by the Core Group, the Project Manager instructs the Designer to populate the Risk Register with the associated risks for the draft PPA. The Designer should also utilize the Sample Risk List when populating the Risk Register.

Constructability personnel review the Risk Register for any previously identified constructability risks. If new risks or changes to existing risks are identified, the PM updates the Risk Register.

Utilizing the Risk Strategies and Responses documented in the Risk Register, the Project Manager identifies specific impacts to Preliminary Engineering scope and schedule and includes in the PE Scope Statement. This may include modification to typical PE activities and may include creation of additional risk specific PE activities to address specific risk response.

The Designer summarizes the Risk Analysis performed during CD within the CD Report. The Risk Register and Quantitative Risk Analysis results, if performed, are included as attachments to the CD Report.