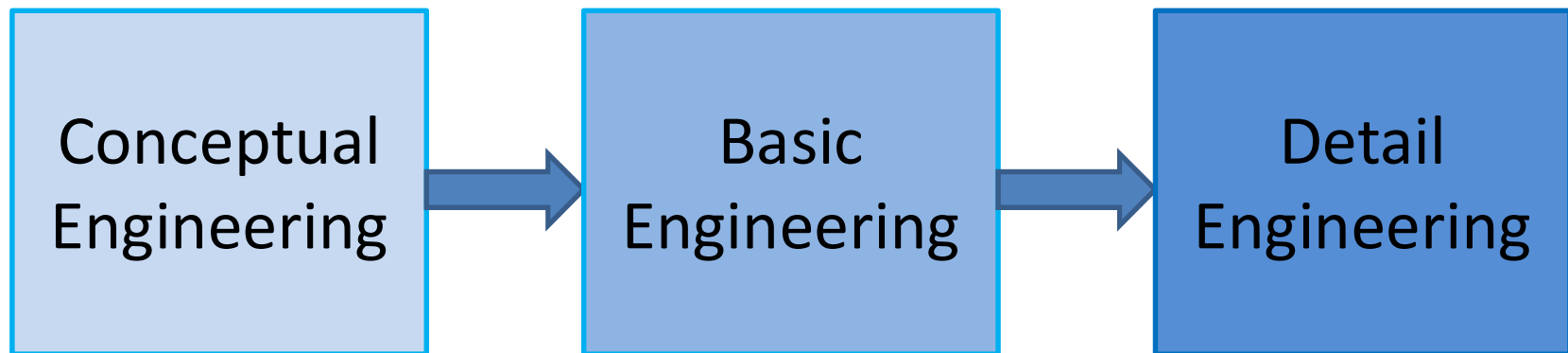


Project Design Flow (Typical)

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Project Design Flow (Typical)

- Conceptual Engineering
 - Identifying multiple concepts / opportunities
 - Perform High level feasibilities (Safety, Techno-Commercial reviews)
 - Select most promising

Project Design Flow (Typical)

- **Basic Engineering**
 - Work to start based on the selected concept
 - Focus to support for procurement
 - Developing
 - Key design deliverables
 - Specifications & datasheets for long lead items
 - Request For Quotation (RFQ)
 - 3D modelling

Project Design Flow (Typical)

- Detail Engineering
 - Focus to support for construction / installation / commissioning
 - Manufacturer data reviews
 - Developing
 - Detailed drawings
 - Detailed 3D modelling
 - BOQs for auxiliary items
 - Operating manuals

Typical Deliverables - Electrical

- **Conceptual Engineering**
 - Electrical load list / schedule (Normal / Emergency)
 - Key Single line diagram
 - Selection / identification of power source
 - Deliverable register / schedule for Basic / Detail Engineering

Typical Deliverables - Electrical

- Basic Engineering
 - Design Basis
 - Electrical Load List
 - Equipment Sizing calculations
 - Power system study
 - Equipment specifications & datasheets
 - RFQs for major equipment
 - 3D modelling -preliminary

Typical Deliverables - Electrical

- Detail Engineering
 - Manufacturer data reviews
 - Update power system studies
 - Prepare detailed
 - Single line diagrams / Schematics
 - Layouts
 - Installation details
 - Interconnection diagrams
 - Operating manual