

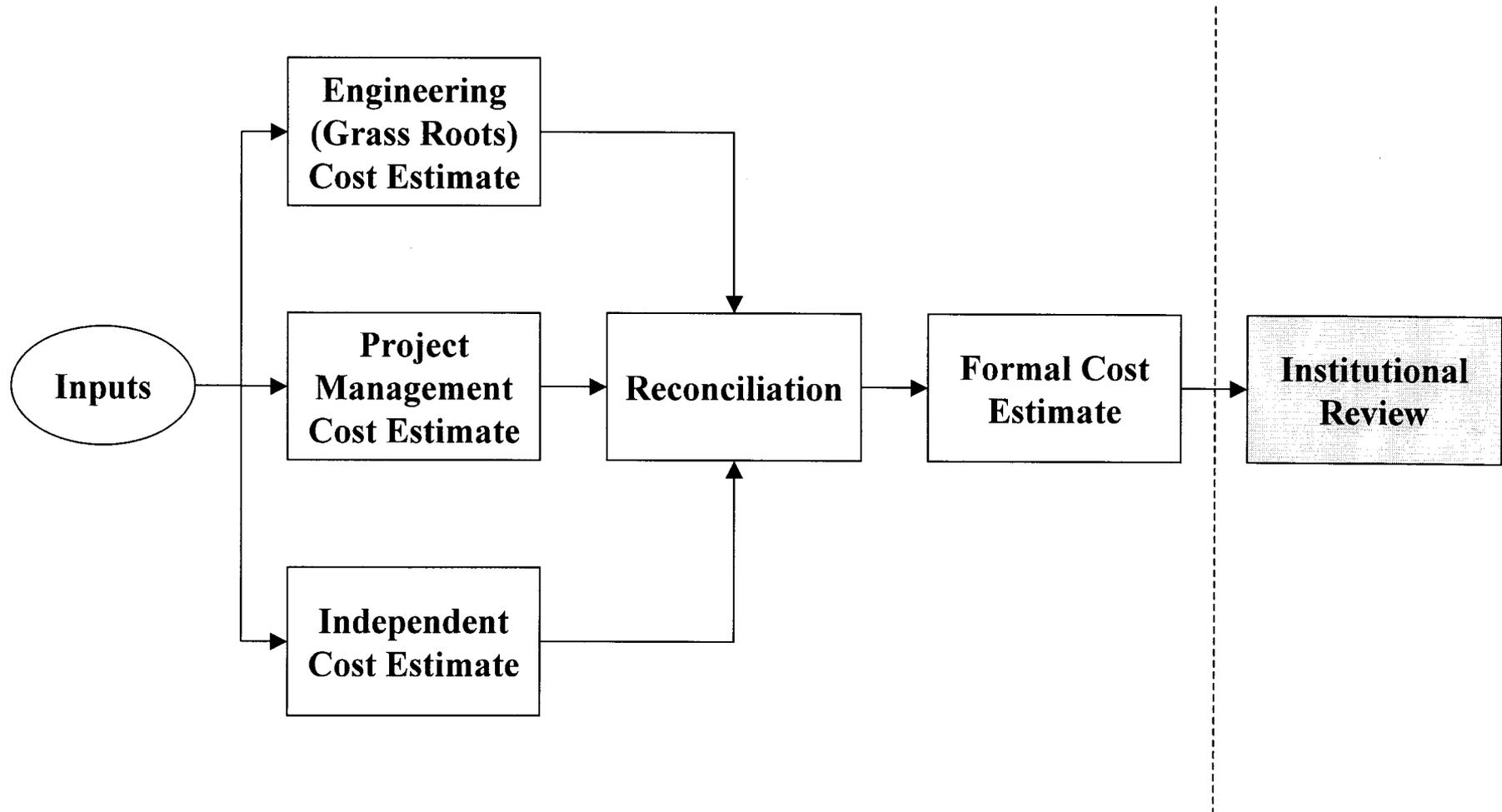
# **Cost Estimation Process**

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# JPL Internal Process

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# Grass Roots

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- Engineering cost estimate
- Produced by people who will work on the project
- Cost inputs
  - Workforce (FTE)
  - Travel
  - Services (Technical, Administrative, Facilities)
  - Procurement (Subcontracts and Materials)
  - Reserves

# JPL Parametric Tools

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- Parametric Mission Cost Model (PMCM)
  - Full mission cost model
  - Estimates cost at the subsystem level
  - Used for earth orbiting and planetary mission
- Pre-Phase A Cost Model
  - Full mission cost model
  - Estimates cost at the system level
  - Used for planetary mission
- Advanced Project Design Team Instrument Cost Model (APDTICM)
  - Instrument cost model
  - Usable on a wide variety of NASA science instruments

# Other Parametric Tools

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- Aerospace Small Satellite Cost Model (SSCM)
  - Spacecraft cost model
  - Estimates cost at the subsystem level
  - Applies to Earth-orbiting buses only
- NASA developed cost models
  - NASA/Air Force Cost Model (NAFCOM)
  - Multivariable Instrument Cost Model (MICM)
  - Scientific Instrument Cost Model (SICM)
- Commercial tools
  - PRICE
  - SEER

# Analogy

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- JPL Spacecraft Mission Database
  - 20 Earth and planetary missions
  - Limited analogy data down to the subsystem level
- JPL Instrument Database
  - 95 instruments
  - Instruments flown from 1988 to 1998
  - Data at full instrument level
- Rapid Spacecraft Development Office (RSDO) Catalog
  - GSFC database of spacecraft buses from Indefinite Delivery/Indefinite Quantity (IDIQ) contracts