6.4 Estimate activity duration

- **How much time will each activity take**
  Estimators should be those doing the work

- **Estimate time & cost**
  - No padding
    - Undermines the social responsibility of PM
  - Range of overall P duration
    - 1. Sum of all activities on critical path
    - 2. Sum up variances of each activity
    - 3. Take square root of "Activity Variance" Sum
    - 4. EAD ± σ

- **Determine critical path**

- **Involves**
  - Providing enough information to estimators
  - Let team know how refined est. must be
  - Complete sanity checks
  - Prevent Padding
  - Formulate a reserve (RM)
  - Record assumptions made

- **Tools/Techniques**
  - Expert Judgement
  - Analogous Est.
  - Parametric Est.
  - 1-Point Est.
    - Forces people to pad
    - Decreased buy-in
    - Estimators work against PM
  - 3-Point Est. (PERT)
  - Reserve Analysis

- **Input**
  - Activity List
  - Activity Attributes
  - Activity Resource Req's
  - Resource Calendar
  - Project Scope Statement
  - EEF
  - OPA

- **Output**
  - Activity Duration Est.
  - Updt. P doc's

PMBOK_KA_time mgmt.mmap