

estimate

estimate • analyze • plan • control

Estimation – The next level

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COSMIC Functional Size Measurement Method
International Advisory Committee
- Dutch Association of Cost Engineers (DACE)
WG Parametric Estimation

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Cost Estimating



- The process of collecting and analyzing historical data and applying quantitative models, techniques, tools, and databases to predict the future cost of an item, product, program, or task

Purpose of cost estimating:

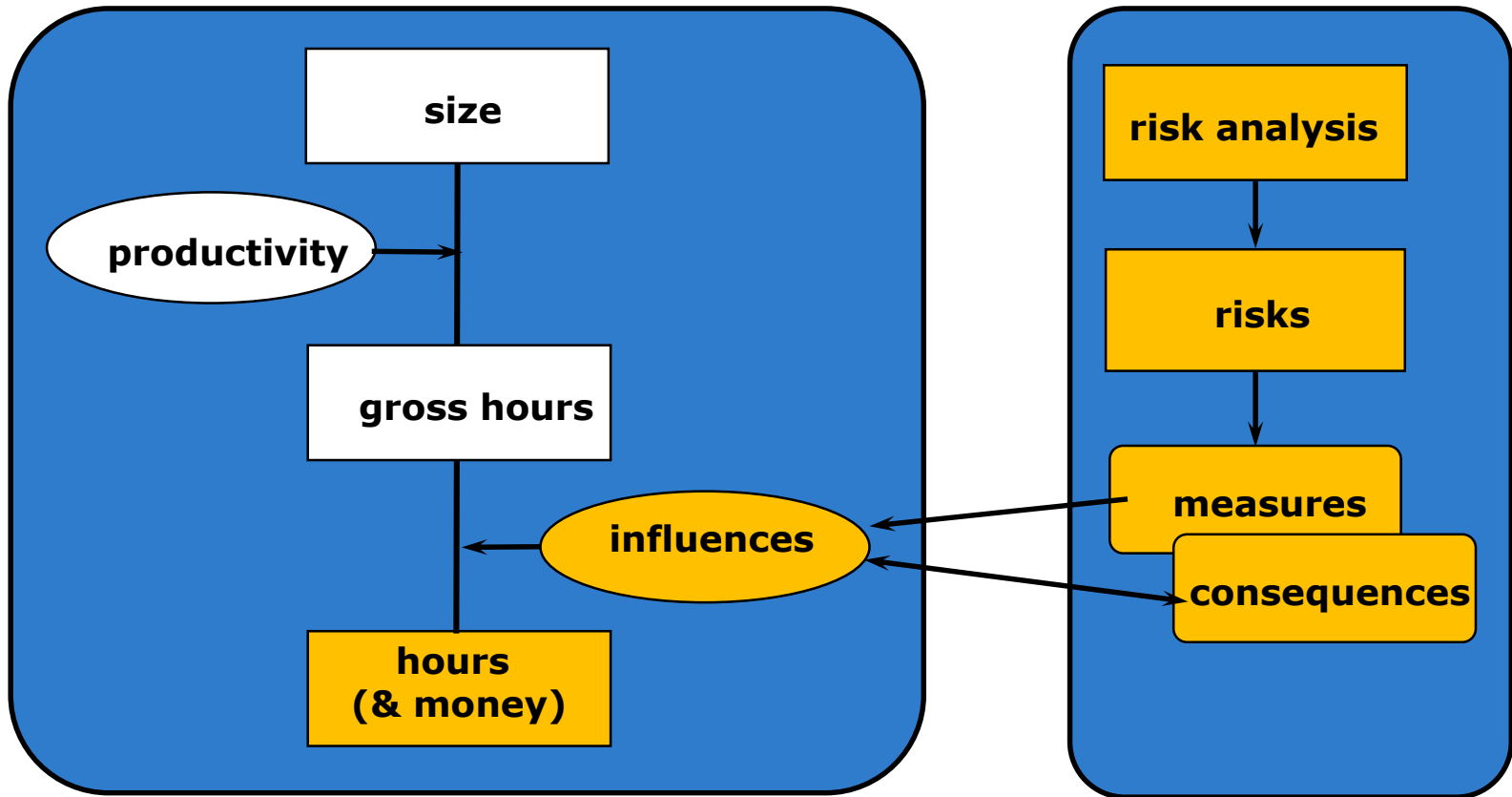
- Translate system/functional requirements associated with programs, projects, proposals, or processes into budget requirements
- Determine and communicate a realistic view of the likely cost (effort, schedule) outcome, which can form the basis of the plan for executing the work

Association for the Advancement of Cost Engineering - International

- A not-for-profit organisation
- Internationally oriented
- Recommended Practices a.o.
 - 17R-97: Cost Estimate Classification System
 - 34R-05: Basis of Estimate
 - 40R-08: Contingency Estimating: General Principles
 - 42R-08: Risk Analysis and Contingency Determination Using Parametric Estimating
- Certification a.o.
 - Certified Cost Consultant™ (CCC™)
 - Certified Cost Engineer™ (CCE™)
 - Certified Estimating Professional™ (CEP™)
- www.aacei.org



Simplified Estimation Model



- Basis of Estimate
 - **Quantity Metrics:** excavation and backfill quantities, concrete volumes, piping quantities, ...

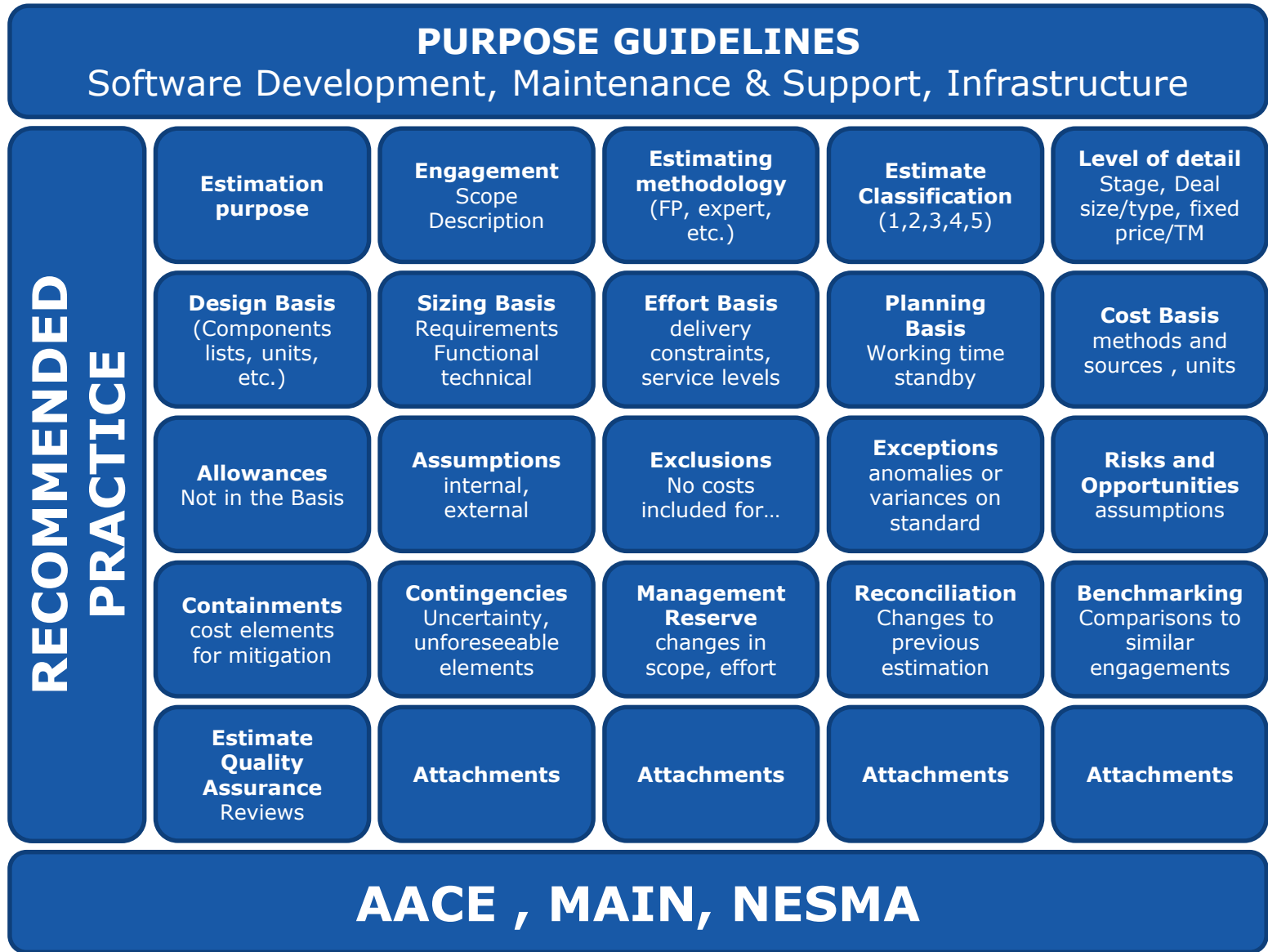
These may be organized by facilities, process train or manufacturing unit.

- Basis of Estimate – Software Services

- **Requirements:** number of use cases, number of backlog items, ...
- **Functional size:** Function points
Measurement methods: IFPUG, NESMA, COSMIC, FiSMA, ...
- **Technical size:** (source) lines of code, number of interfaces, modules, ...
- **Service size:** number of incidents, tickets, users, locations, ...

These may include expected error range, level of accuracy and method of 'measuring' (e.g. "Backfired", detailed)

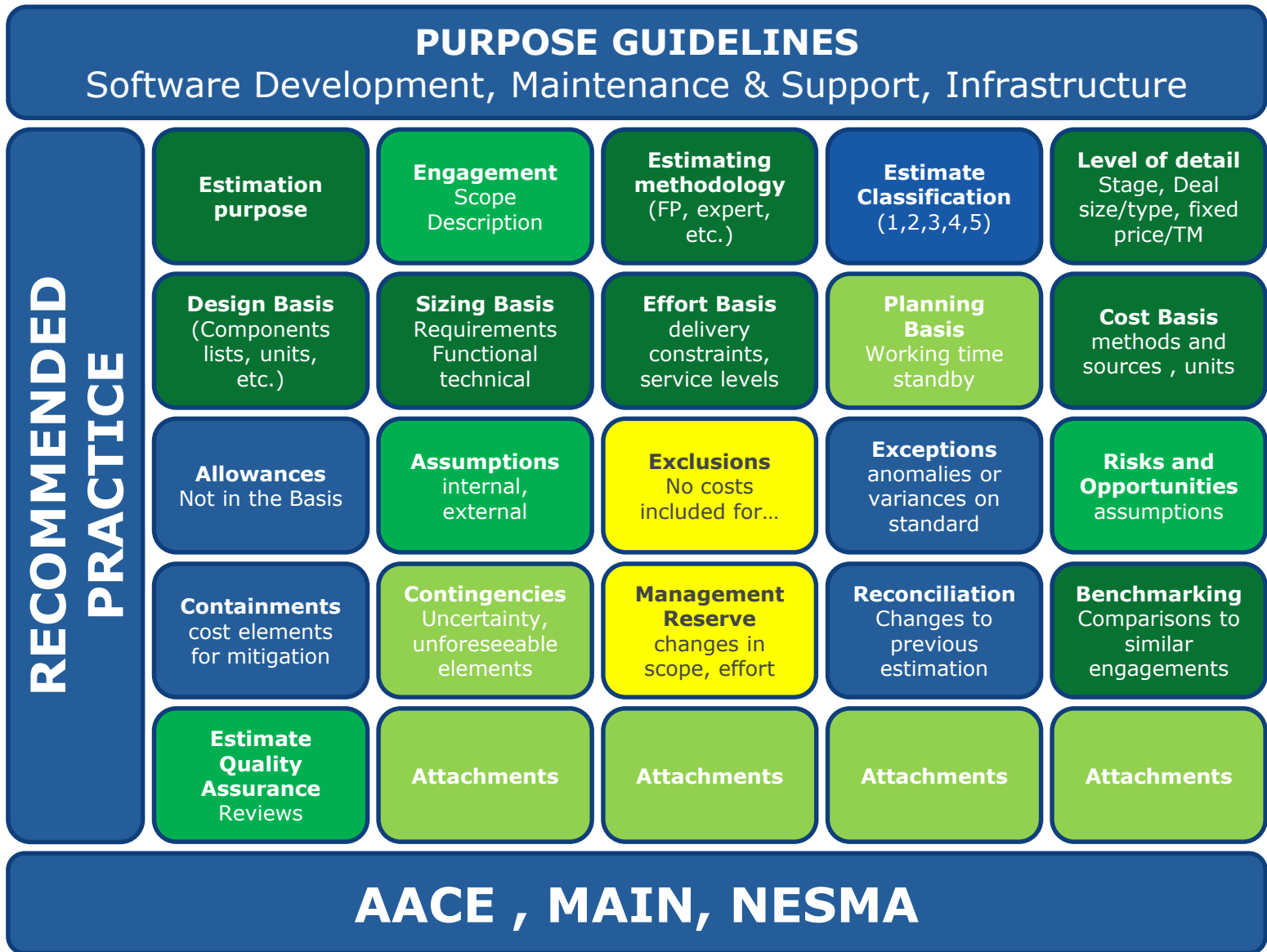
Basis of Estimate – Software Services



The Tax System Case Study



Basis of Estimate – Software Services



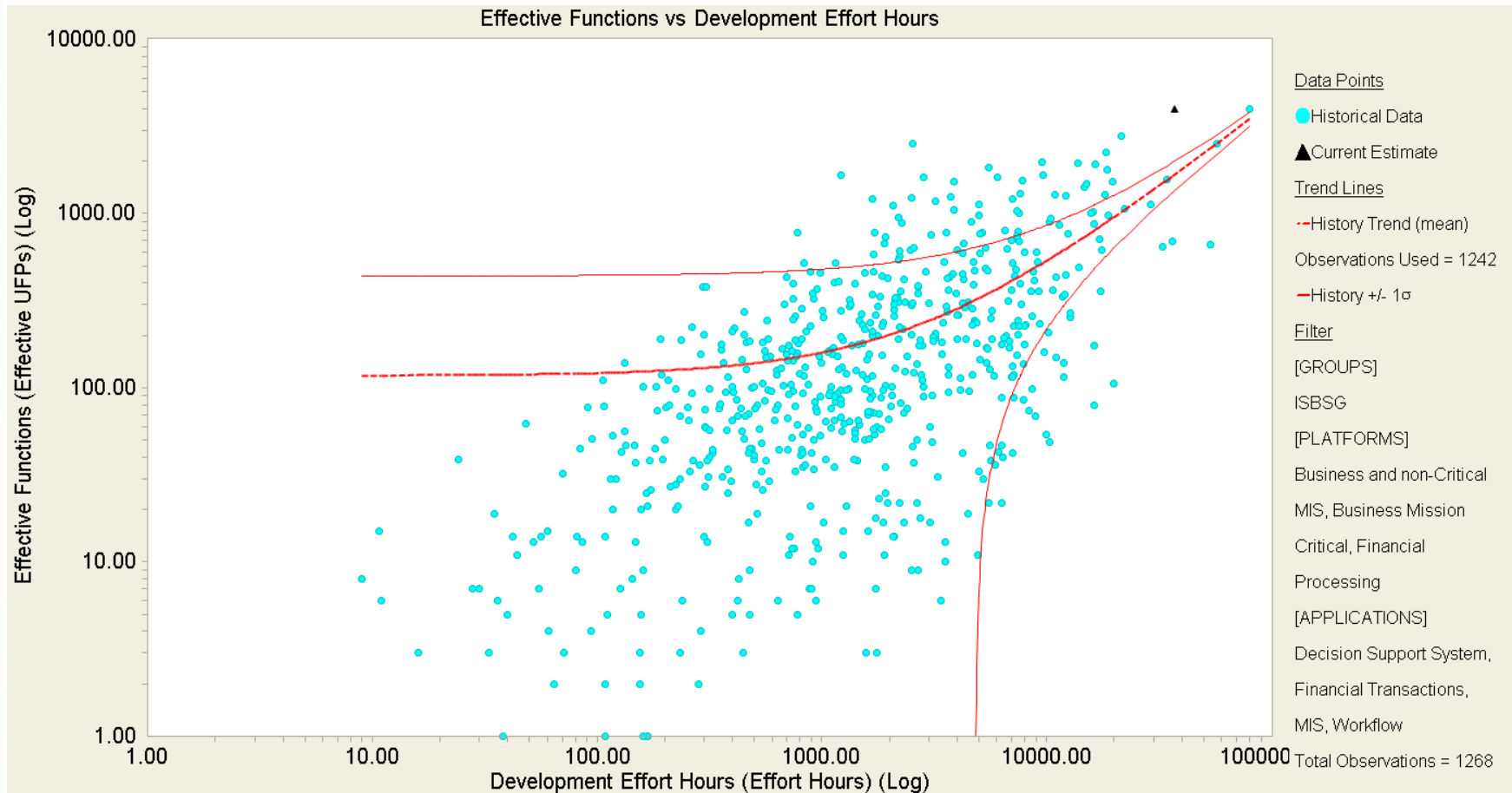
Good

- H
- A
- L
- na
- L
- A
- H

Poor

External Validation (III)

- Benchmark estimate with ISBSG



Q & A

