

Sizing for Estimating, Measurement and Benchmarking



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Abstract:

This presentation will talk about how software sizing can be a normalizing factor for both estimating, measurement and benchmarking.

It will introduce size measure for both functional as well as non-functional size -utilizing the IFPUG method Function Point Analysis (FPA) as well as Software non-functional Assessment Process (SNAP).

The presentation will take the view from estimating to measurement for projects as well as benchmarking for organizations utilizing industry data as the competitive comparison.

The presentation will touch on issues with requirement and how to utilize FPA and SNAP to mitigate this incl. Accuracy levels of size assessment for estimating. In addition, High-level view of other data then size that a measurement program should include, and recommendation for repository and reporting of data.

The presentation is not intended to be a full introduction into any process or method - but a end2end roadmap.

Keyword:

Sizing, FPA, SNAP, Requirement gathering, scope management, IFPUG, ISBSG, estimating, measurement, Benchmark

Event: IT Confidence

Place: Tokyo, Japan

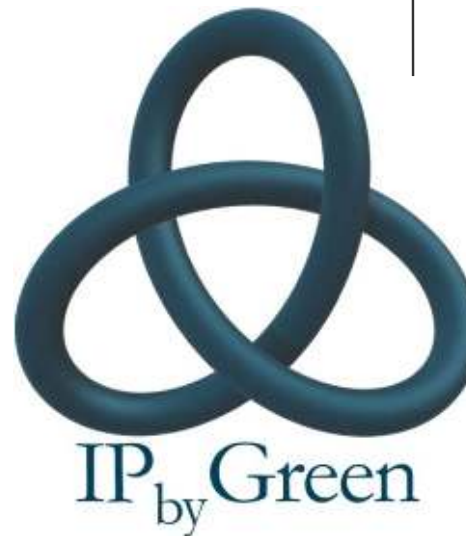
Time: 22nd of October 2014

Host Org: ISBSG & JFPUG

Sizing for Estimating, Measurement and Benchmarking

Focus on Sizing Benefit

Christine Green



Goals of the presentation

- G1. Size as a normalization factor
- G2. Process from scope to strategic decision
- G3. Selling size measurement and analysis
- G4. Process for measuring project risk

An introduction to Christine Green

Key works Function Point, SNAP Points, Measurement & Analysis, Process - CMMI, ISO, PMI, Estimating models and tools, Benchmark – Internal & External



HP Employee with focus on support, rollout, definition and development of Sizing, Estimating, measurement & Benchmarking Process and tools for +10 years



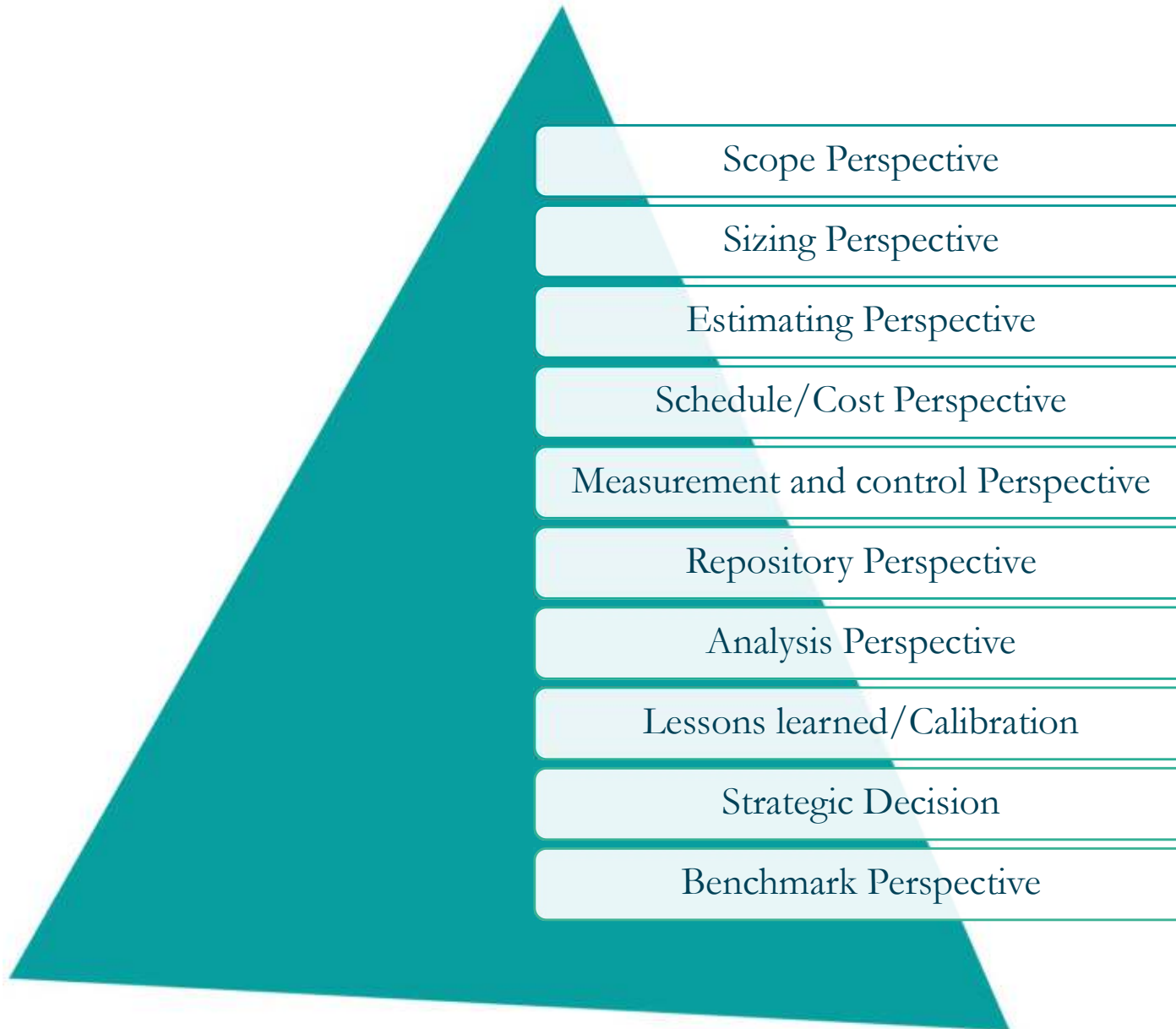
IFPUG Board Member, Director of Applied Programs (Non-Functional Sizing Standard Committee & Innovation Program)



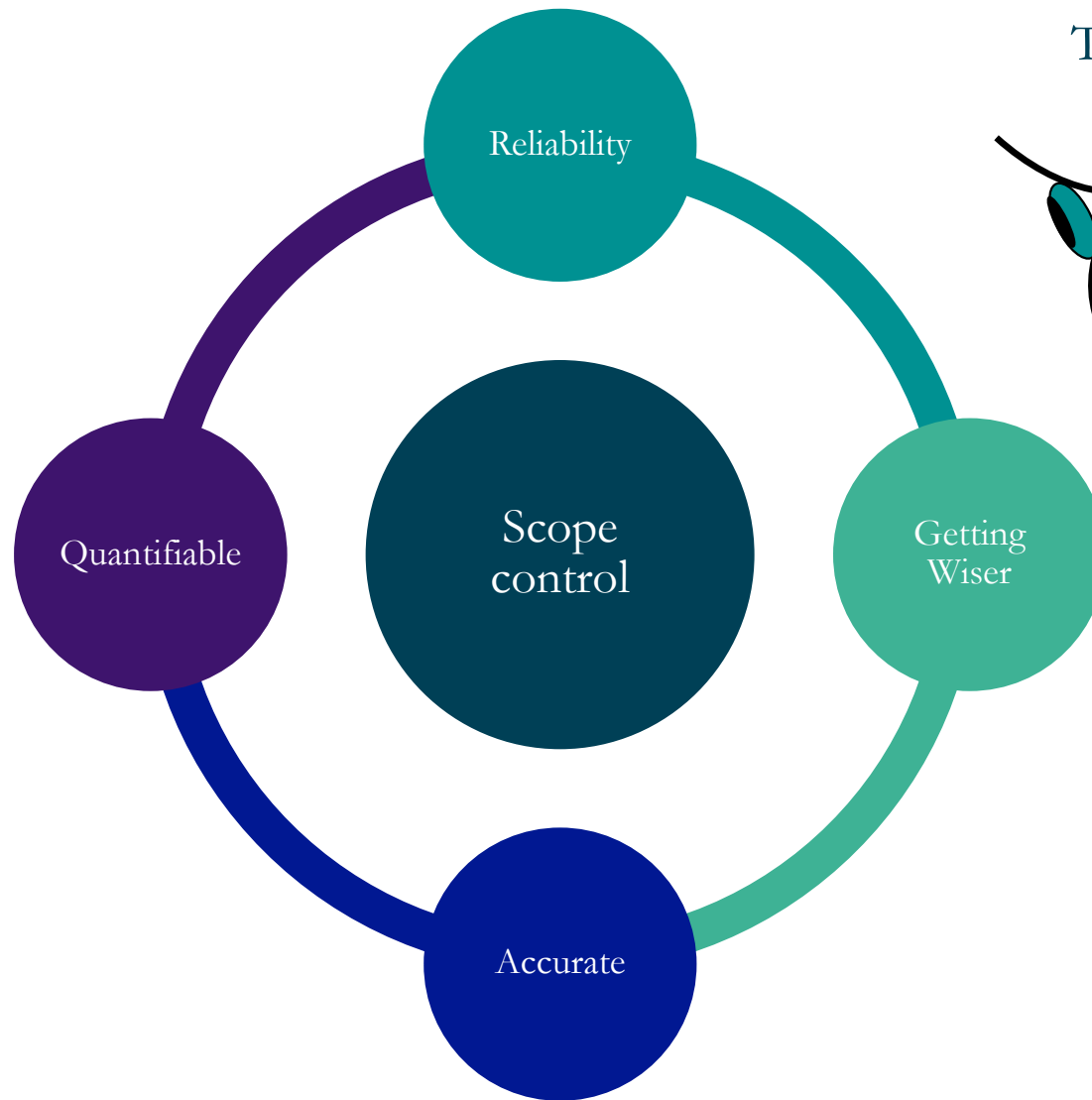
ISBSG Board Member, Treasure and Advisory director

Private Three kids – 22, 7 & 4 (Balance in life), Lives in Odense, Denmark

Process complexity



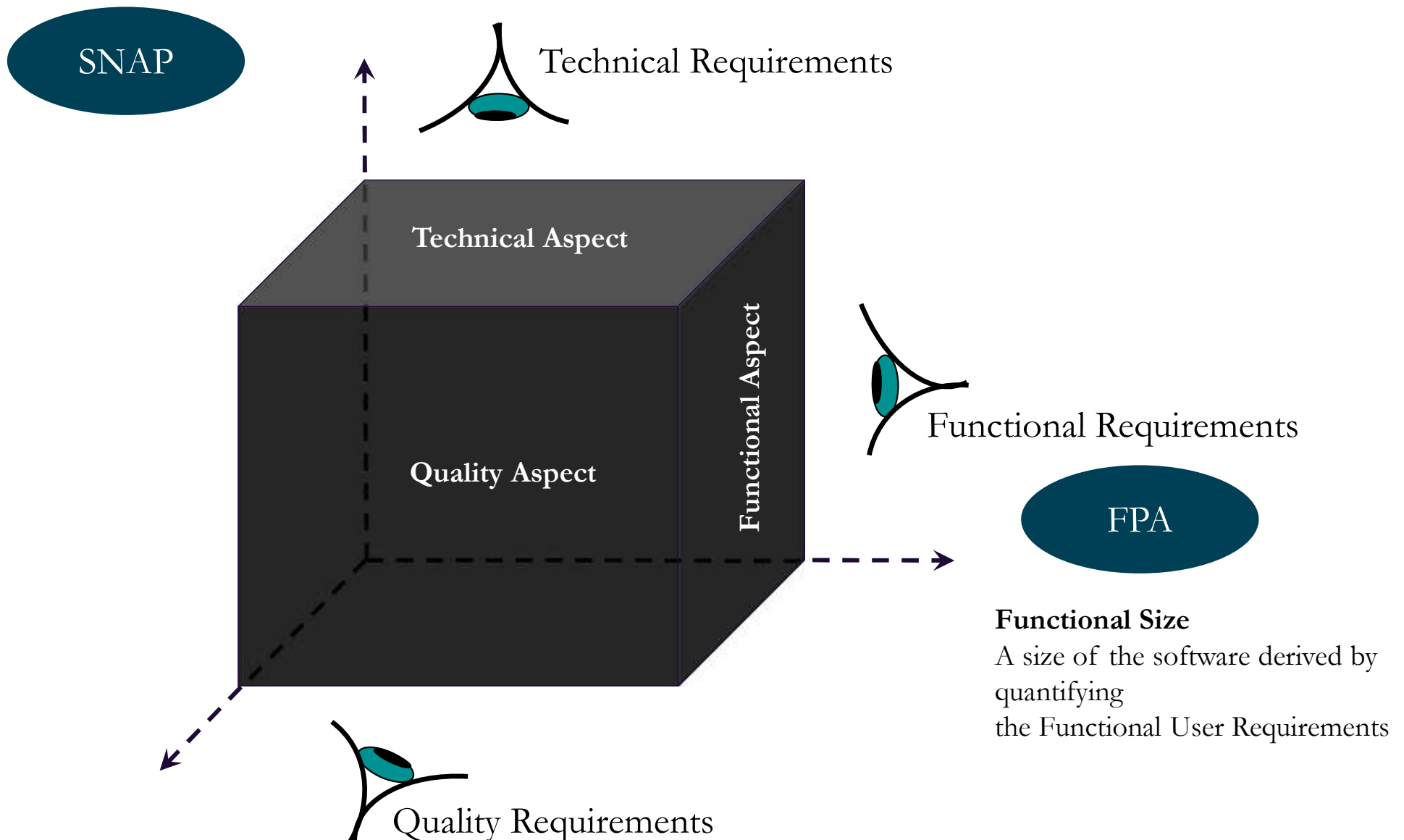
1000 Feet – Scope Control



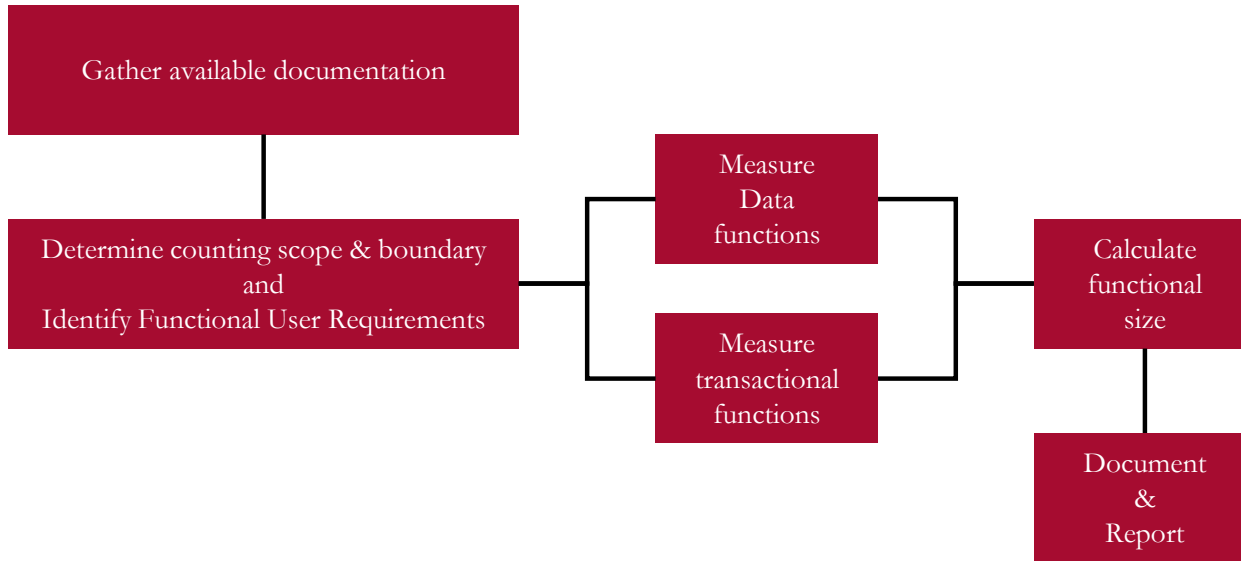
The view of the organization



Scope – the black box



FPA – 1000 Feet



Function Point Analysis

Function Points

Internal Logical File (ILF)

- Logical Group of data maintained by the application (e.g., Employee file)

External Interface File (EIF)

- Logical Group of data referenced but not maintained (e.g., Client information)

External Input (EI)

- Maintains ILF or passes control data into the application

External Output (EO)

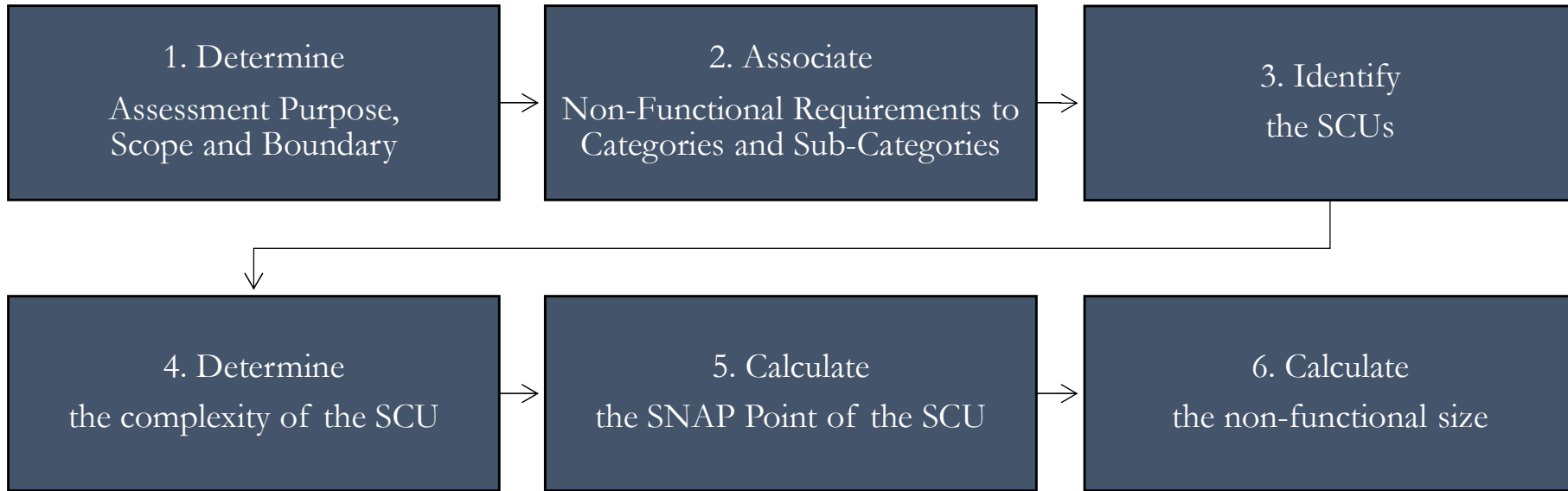
- Formatted data sent out of application with added value (e.g., calculated totals)

External Inquiry (EQ)

- Formatted data sent out of application without added value

SNAP – 1000 Feet

SCU: SNAP Counting Unit

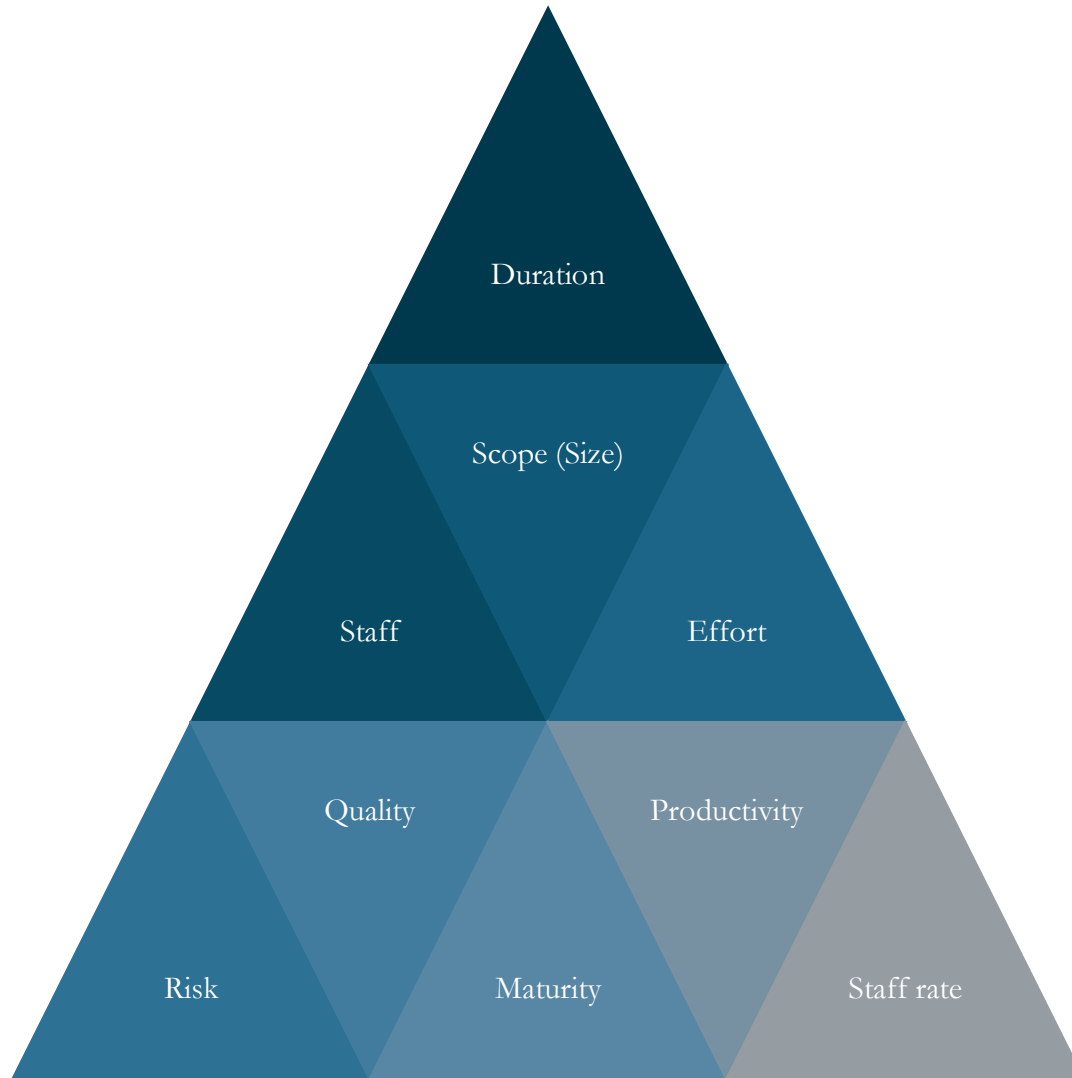


Non-Functional Size Measure

SNAP Point

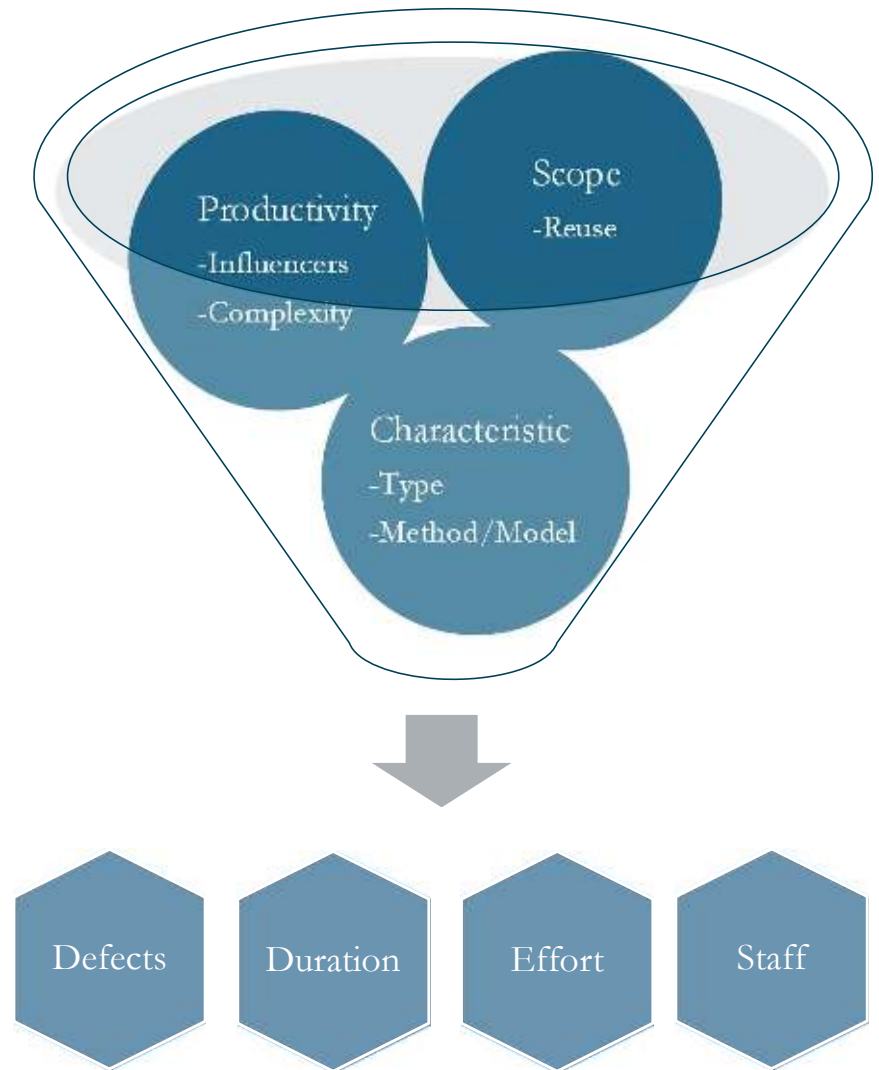
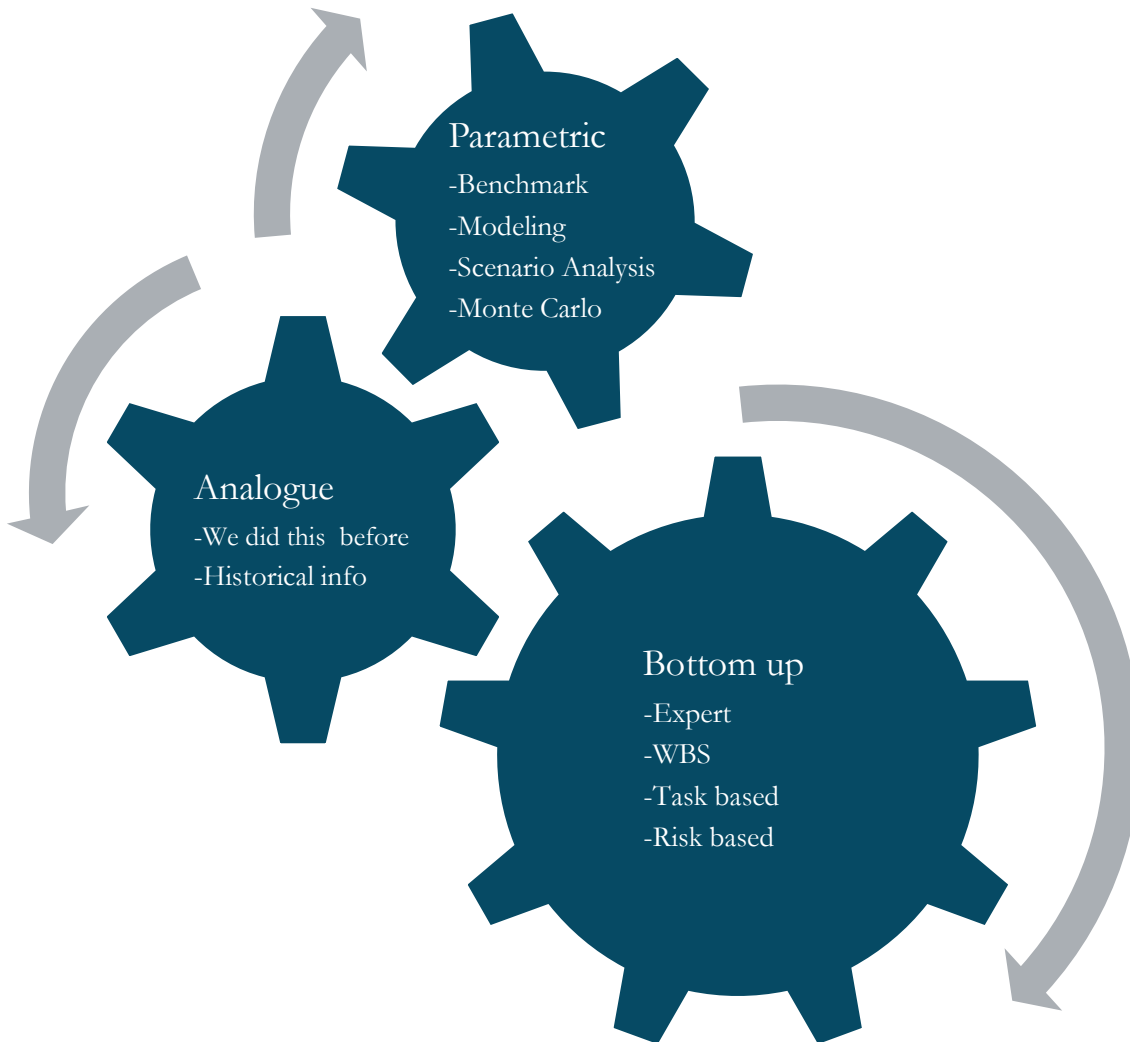
Data Operations	Interface Design	Technical Environment	Architecture
1.1 Data Entry Validation	2.1 User Interfaces	3.1 Multiple Platforms	4.1 Component based software
1.2 Logical and Mathematical Operations	2.2 Help Methods	3.2 Database Technology	4.2 Multiple Input / Output Interfaces
1.3 Data Formatting	2.3 Multiple Input Methods	3.3 Batch Processes	
1.4 Internal Data Movements	2.4 Multiple Output Methods		
1.5 Delivering Added Value to Users by Data Configuration			

Estimating Fit - 1000 feet



- Promote confidence, understanding, acceptance
 - Confidence is based on
 - Accurate
 - Achievable
 - Competitive
- lead to informed project planning decisions
- facilitate effective project tracking & oversight
- increase product quality
- increase process quality

Estimating Techniques



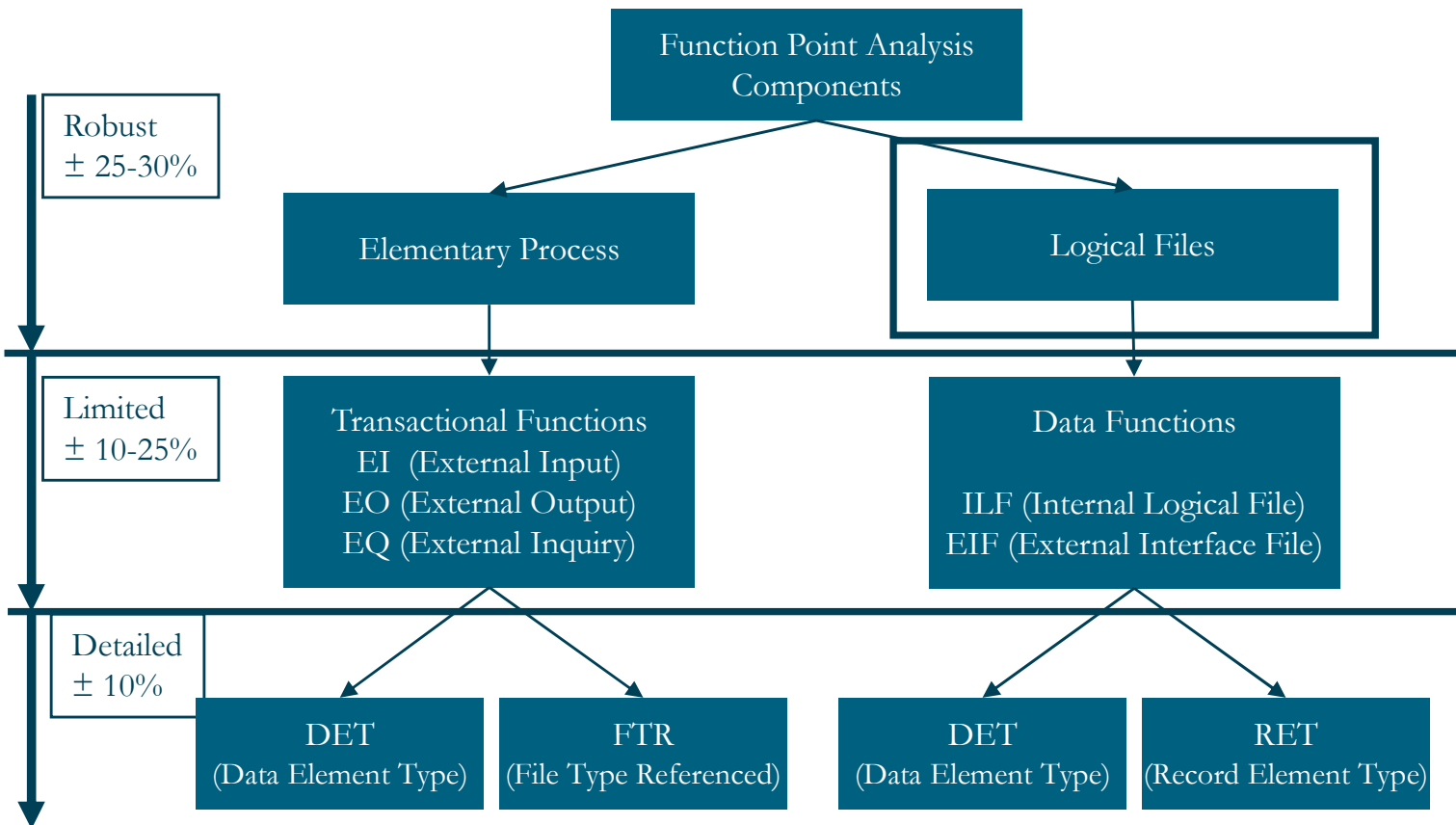
Estimating Process - Accuracy

Accuracy depends on

- The reliability of scope definition.
- The quality of the documentation.
- The assumptions/constraints that will have an impact
- The reliability of the historical information
- The uniqueness of the project

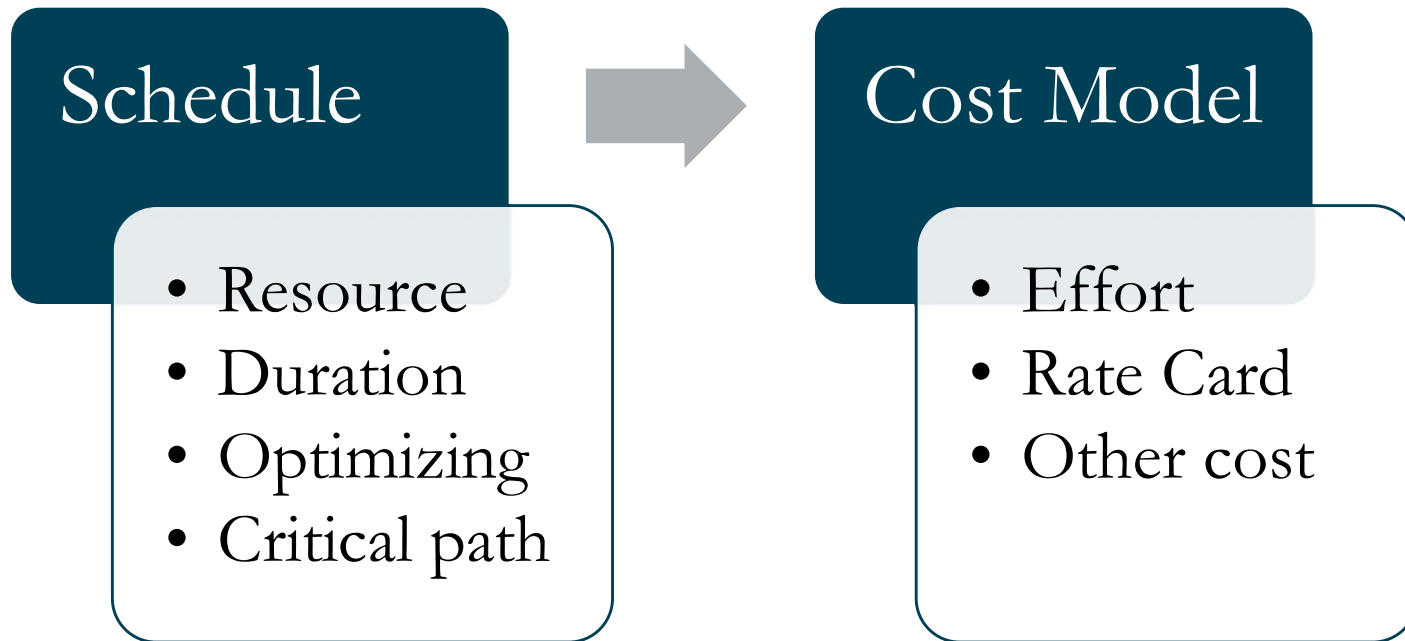
Accuracy is important in order to evaluate the level of control of the estimates needed

The Accuracy and Reliability of the Scope using FPA



- Impact on accuracy and risk
 - Scope quality
 - Size Accuracy
 - Estimating techniques and risk

Schedule/Cost Perspective



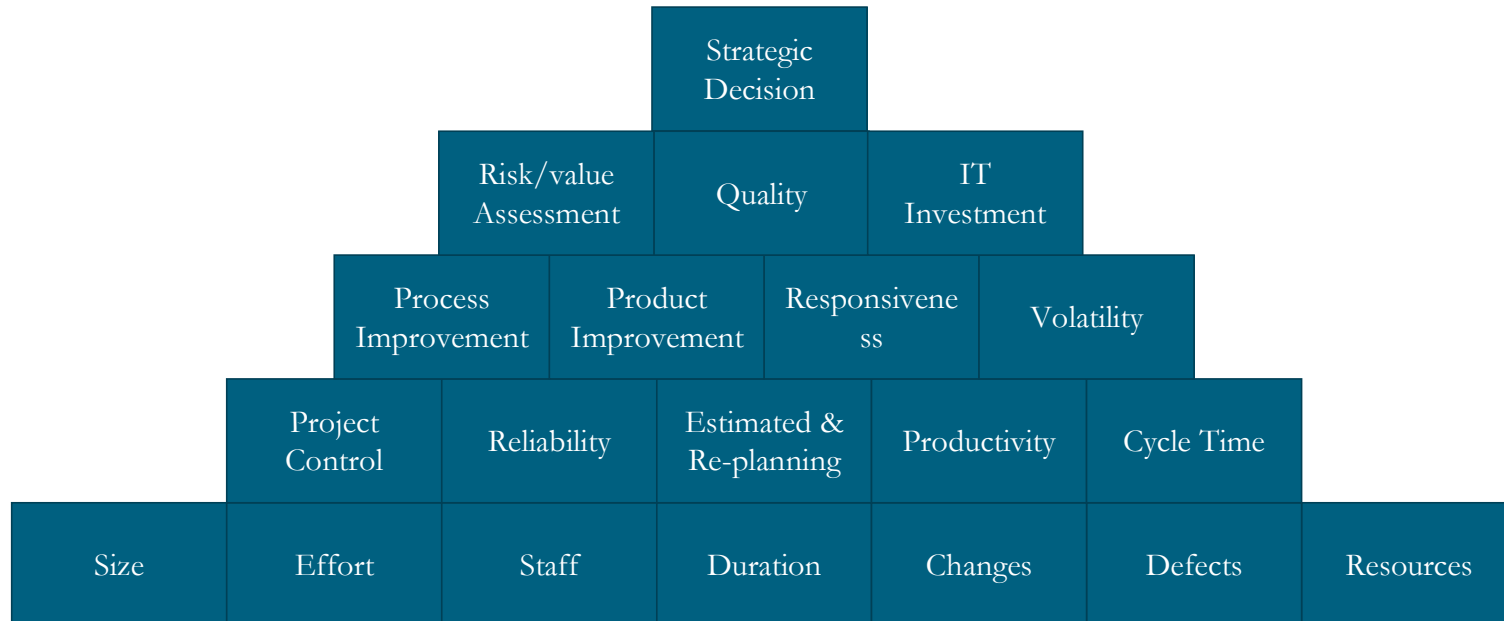
Measurement and control Perspective

Size is the most important primitive metrics.

Size are often used as decision input in:
planning, change management, contract
management etc.

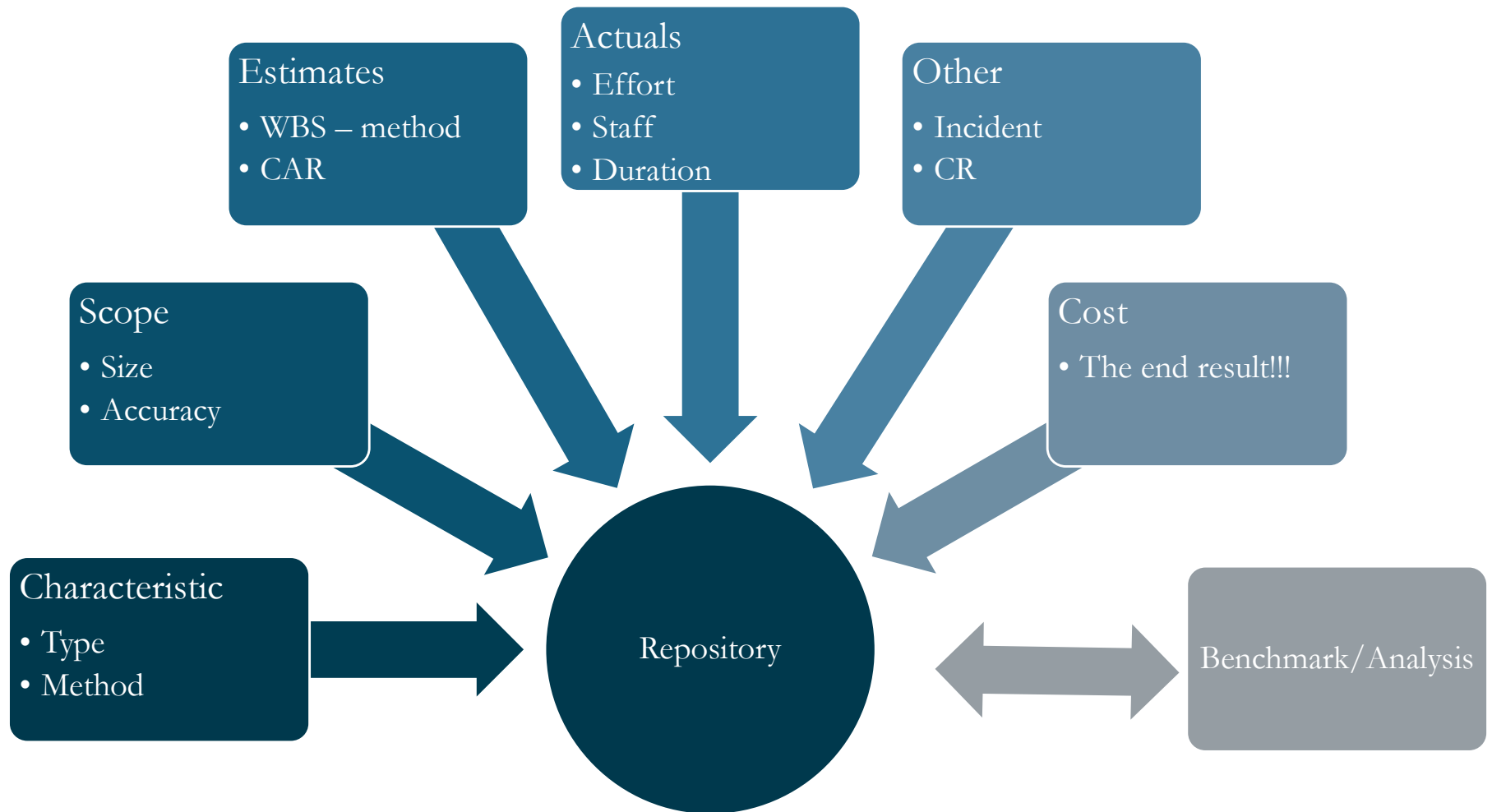
90% of all Performance Indicators
should include Size.

The way to compare projects and
organizations, is to include SIZE

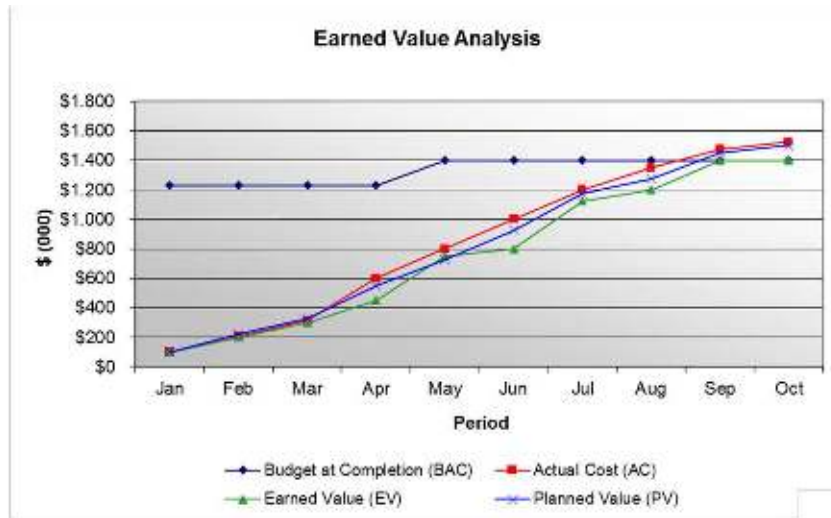


Repository

1000 Feet Perspective

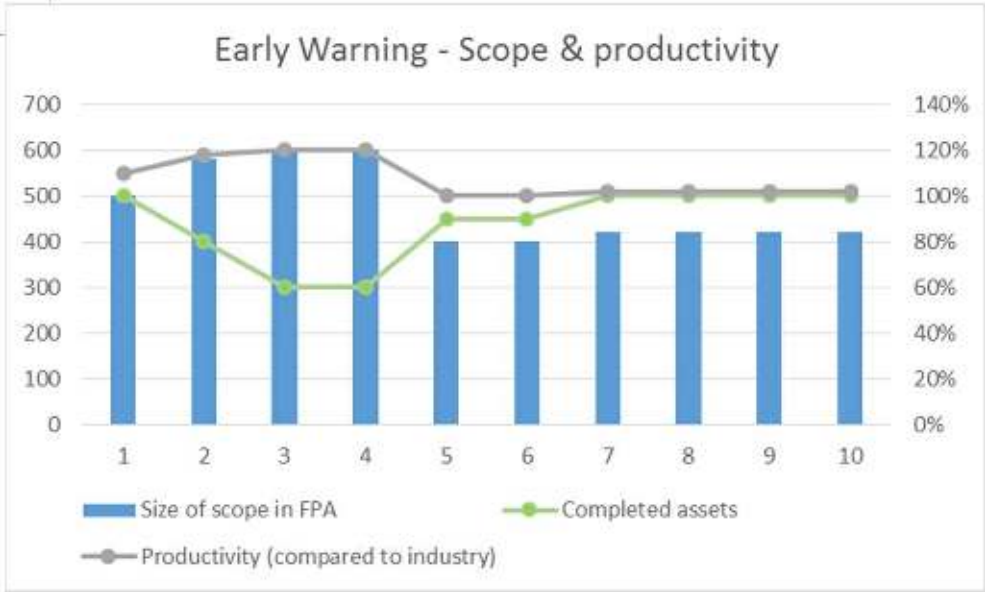


Project Monitoring

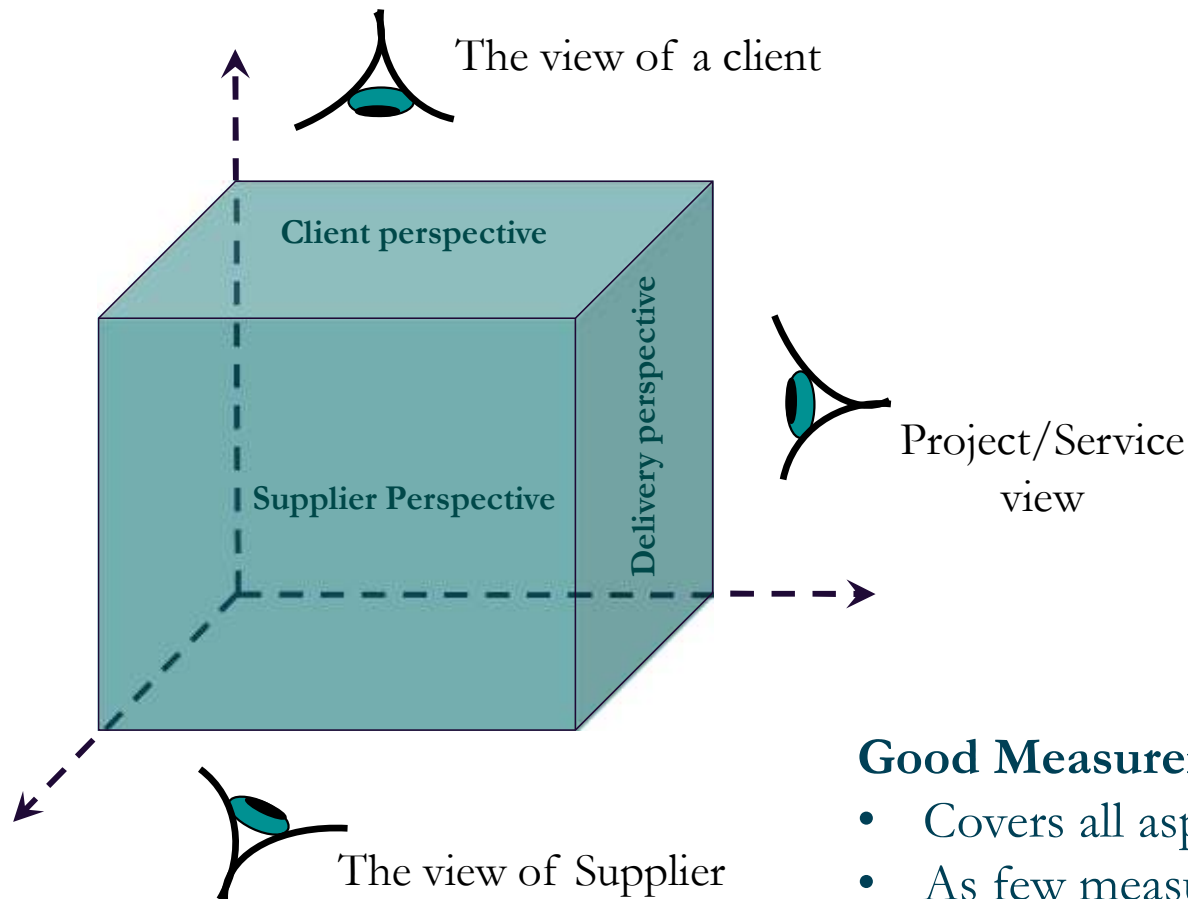


Good project
Meeting cost (almost)

Bad project
Optimistic from day one
Never delivered the
planned scope



The Measurement Perspective

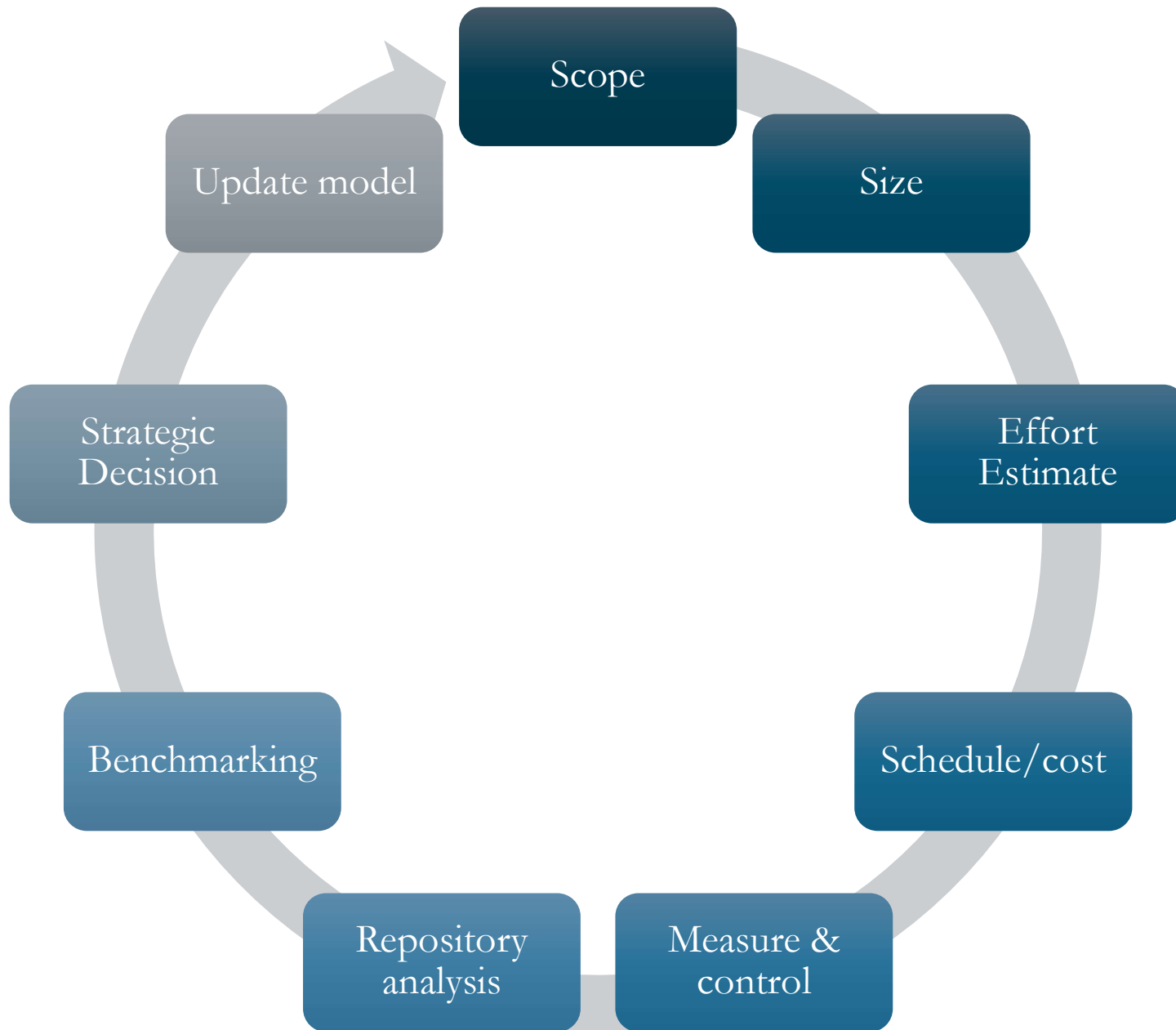


- Multiple views
- Multiple KPI
- KPI over time
- Acceptance criteria
- Focus on early warning
- Not backlog view

Good Measurement:

- Covers all aspect & perspectives
- As few measures as possible
- All measures natural output or input for process
- A simplification of the “real” world – but not too simplified

Iterative Approach



Questions?

