Benchmarking –
Lessons You Don’t Want to
Learn the Hard Way

By : Ewa Wasylkowski
Senior Consultant

Total Metrics
Definitions

“Benchmarking is the process of continuously comparing and measuring an organisation with business leaders anywhere in the world to gain information which will help the organisation take action to improve its performance.”

American Productivity and Quality Centre
Benchmarking Management Guide

“Benchmarking is the process of determining a metric baseline for an organisational or functional unit for the purpose of comparison”

Total Metrics – Metrics Glossary of Terms
# Benchmarking Process Model

## PLAN
1. **Determine Benchmark Purpose**
2. Determine Benchmark Method & Frequency
3. Select Benchmarker
4. Identify Quantitative Measures & Qualitative Information
5. Identify Project Set
6. Identify Benchmarking Peers

## DO
7. Filter, Map & Validate Data
8. Normalise Against Peer Data
9. Derive Benchmark Performance Indicators
10. Determine Gap
11. Benchmark Report - Recommendations

## CHECK
12. Monitor Progress
13. Review Result
14. Resolve Disputes

## ACT
15. Recalibrate Benchmarks
Benchmarking Purposes

- Establish market position among peers
- Demonstrate competitiveness & continuous improvement in pricing & service levels
- Identify ‘Best Practice’
- Identify process improvement opportunities
- Set competitive range for metrics baseline
- Decision making re outsourcing
Benchmarking Method

➢ **Year-on-Year**
  – On-going annual reporting of performance measures
  – Assesses trends - rate of improvement
  – Internal Benchmarking
  – Require 2-4 years data before suitable base for comparison is available

➢ **Point in Time**
  – Assesses performance against peers
  – External Benchmarking
  – Must ensure benchmark period is representative of past and/or future periods
IT Benchmarking Area

- Applications Development
- Maintenance & Support
- Network
- Data Centre
- Help Desk
- Desktop/LAN Server
- Charge Back Practices
Benchmarking Lessons - Planning

- There are no ISO (or other) standards for IT benchmarking.

- Benchmarking is an imprecise tool as it is not possible to find directly comparable:
  - Organisations
  - Contracts
  - Benchmark Periods

- The method and underlying assumptions must be transparent and auditable.
Criteria for Selecting Benchmarker

- Relevant Experience
  - Within Region e.g. Australia, Asia/Pacific
  - Within Industry Sector
  - With Organisations of similar size

- Nature and Extent of Benchmark Database for selected metrics
  - Attributes & Measures Collected
  - Segmentation by Industry
  - Australian/regional data
  - Projects by project type
  - Currency of data
  - Data integrity and validation
  - Comparable Peers !!!!!!!
Criteria for Selecting Benchmarker (cont.)

- **Methodology Proposed**
  - Extent to which a customised solution is possible (if required)
  - Sampling techniques (if proposed)
  - Sample findings, reports & conclusions

- **Logistics**
  - Required resource commitments
  - Ability to meet project timetable

- **Cost**
Metrics/Performance Indicators

➢ Applications Development
  – Productivity
    • Hours per Function Point delivered
    • Function Points delivered per Full Time Equivalent (FTE)
  – Cost Effectiveness
    • $ Cost per Function Point delivered

➢ Maintenance & Support
  – Productivity
    • Function Points maintained per FTE
  – Cost Effectiveness
    • $ Cost per 1000 FPs maintained.
Benchmarking Lessons – Planning cont.

- Effective benchmarking begins at the contract stage.
- Capabilities and costs of benchmarking organisations vary widely.
- It is naïve to expect a single result that factors in all the complexities of the systems development & business environment.
Identify Project Set

- Benchmark period determines candidate projects.
- Sample set vs entire population
- For sample set:
  - Sampling techniques
    - Systematic
    - Stratified
    - Cluster sampling
  - Sample set size
- Categorise projects by type
A & D Project/Activity Types

Function Point Generating

Development
- New Custom Built
- Enhancement
  - Custom Built
  - Quarterly Release
  - Package Customisation

Pre-Development
- Estimates
- Feasibility Studies
- Business Cases

Non-Function Point Generating

Cancelled, Withdrawn, On Hold

Packages ‘Vanilla’

Non Development
- PM / Consulting only
- DB Conversion & Tuning
- Project Deployment/Impl.

Productivity Metrics
- Hrs per FP delivered
- FPs delivered per FTE
- $’s per FP delivered

Profile Metrics
- % Effort Expended
- % Cost Expended
  (by category)
Lesson 7 !!!!

Only projects that deliver FP’s should be included in A&D Productivity metrics
M & S Project/Activity Types

Maintenance & Support
- Production Support
- Software/Hardware Upgrades
- Capacity Planning & Management
- Corrective Maintenance
- Perfective Maintenance
- Decommissioning
- Production Control & Scheduling
- Application Security/Access Control
- Daily Operations Support
- Support of Production Environment
- Table Updates
- Help Desk Support

Non-Function
Point Generating

M & S Metrics
- Software Portfolio Size
- FP’s maintained per FTE
- $ Cost per 1000 FP’s Maintained
Identify Project Set

Effort & Cost Invoiced

Clearly “In” Projects

Start Benchmark Period

End Benchmark Period
Representative Benchmark Year?

- Must establish whether benchmark period project set is typical of past and indicative of future

- Changes in proportion of effort expended may arise from
  - Planned changes in project type mix
  - Altered demands of project types
  - Altered productivity & efficiency
Identify Benchmarking Peers

- Selecting benchmarking peers & Benchmarker are synonymous.
  - A valid benchmark must be based upon comparable data
- Be pro-active in selecting benchmarking peers.
  - Profile your organisation and/or contract.
- Establish representative set of peers
Benchmarks Lessons
– Planning cont.

- Inclusion/exclusion rules for projects that span benchmark period boundaries must be clearly defined and equitable.
# Data Filtering, Mapping & Validation

<table>
<thead>
<tr>
<th>Measure</th>
<th>STANDARDS</th>
<th>MEASUREMENT METHOD</th>
<th>DATA VALIDATION</th>
</tr>
</thead>
</table>
| **EFFORT**          | *Project Chart of Accounts*  
*Project Phases*  
*Project Activities*  
*FTE Definition*  | *Time Recording Method*  
*Resource Levels*  
*Uncollected Work Effort*  
*Normalised Effort*  
*Re-work Effort*  | *Internal Validation*  
*Benchmark Validation ?*  |
| **COST**            | *Project Cost Model*  
*Direct Labour Cost only?*  | *Actual vs Invoiced $ Spend Calculation*  | *Financial Audit*  
*Benchmark Validation ?*  |
| **FUNCTIONAL SIZE** | *FSM Standard*  
*Adjusted/Unadjusted FPs*  | *Measured Result*  
*Default Counts*  
*Derived From PDR*  
*Approximated “Back-fired”*  | *Internal Review*  
*External Audit*  
*Benchmark Validation ?*  |
Data Normalisation

- Financial Factors
  - Cost of Living
  - CPI Adjustments
  - Exchange Rates
- Industry Sector and Size
- Operating Environment
  - Differing Awards
  - Regulatory Constraints
- Scope of Services
- Technology Platforms
- Data Currency
Data Normalisation cont.

- Service Levels
- Application Type & business environment
- Project Mix
- Software Delivery Methods
  - Custom built
  - COTS
- Regional Markets
- Other contract unique
Benchmarking Lessons – Analysis

- Benchmarking primarily involves data mapping not data collection.
- Data submitted must be uniformly validated to ensure comparability.
- Effort & Cost data must be correctly mapped to FPs delivered.
- The data normalisation method must be transparent and auditable.
Impact Factors

- Identify factors that impact benchmark results which are beyond the control of supplier:
  - Industry Sector
  - Technology Environment
  - Project Type Mix
  - Rework due to requirements instability
  - Non-standard systems software
  - Other
Review Results

- Review by benchmarker before issuing draft report.
- Report presentation
- Client & Supplier Review
- Update based upon feedback
- Approval
- Final Report
Resolve Disputes

- Detail dispute resolution mechanism in contract.
  - Report review feedback
  - Internal dispute resolution
    • Tie-breaker mechanism
  - Arbitration - Independent person
    • Formal notice in writing
    • Benchmarker must co-operate
    • Benchmarker right of response
  - Legal resolution
Benchmarking Lessons – Review

- At outset agree process by which report is issued, reviewed & approved.
- In contract include provision for appointment of ‘Independent Person’.
- A “dispute” may be simply the failure of two reasonable parties to reach agreement upon a possible range of outcomes.
Recalibrate Benchmarks

- Benchmarker to specify competitive range
- Identification of “New Metrics”
- Adjustment of Contract Metrics to New Metrics
- Removal of work from contract scope
Benchmarking Lessons – Act

➢ **Remember the primary purpose of benchmarking is process improvement.**

➢ **Agree next benchmark period and benchmarking process improvements.**

➢ **Benchmarking is not a replacement for regular performance reporting.**
Summary

- Benchmarking should strengthen rather than divide the relationship between client and supplier.
- All parties should understand and acknowledge the limitations of the benchmarking process.
- The true benefits of benchmarking lie in the discovery of process improvement opportunities.
Thank You and Good Luck with your Benchmarking!

Total Metrics Pty Ltd
Suite 1 / 667 Burke Road
Camberwell Victoria 3124

Phone (03) 9882 7611
Fax (03) 9882 7633
Email Ewa@Totalmetrics.com