



Q/P MANAGEMENT
GROUP, INC.

Baseline Studies – The Myths, The Methods, The Magic

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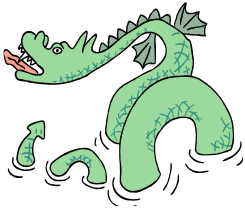
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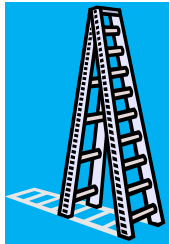
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Presentation Objectives



- Myths – Dispel the misconceptions that come with the idea of completing a baseline study

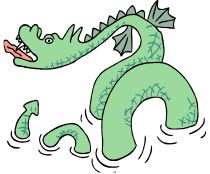


- Methods - Discuss methods for conducting a baseline study that will insure success



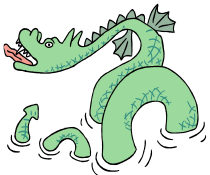
- Magic – Show example baseline results and discuss how the information can be used

Baseline Studies – The Myths



“It will take too much time and will impact resources”

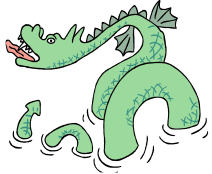
- Planning with keep the process efficient
- Resources will be impacted, but education up front can limit the impact
- Cost/benefit must be considered



“We know what we need to do, so let’s just get started”

- Goals/objectives may differ between groups
- Without measurement an organization really doesn’t know where they stand and what to focus on

Baseline Studies – The Myths



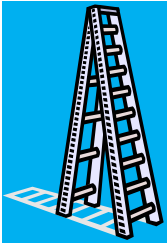
“We are going to do things differently in the future so a baseline study will not help us”

- Will not be able to change over night so work will continue following current methods
- Can use benchmark data to plan for ‘future’ activities
- Will have data to determine if changes have had a positive impact

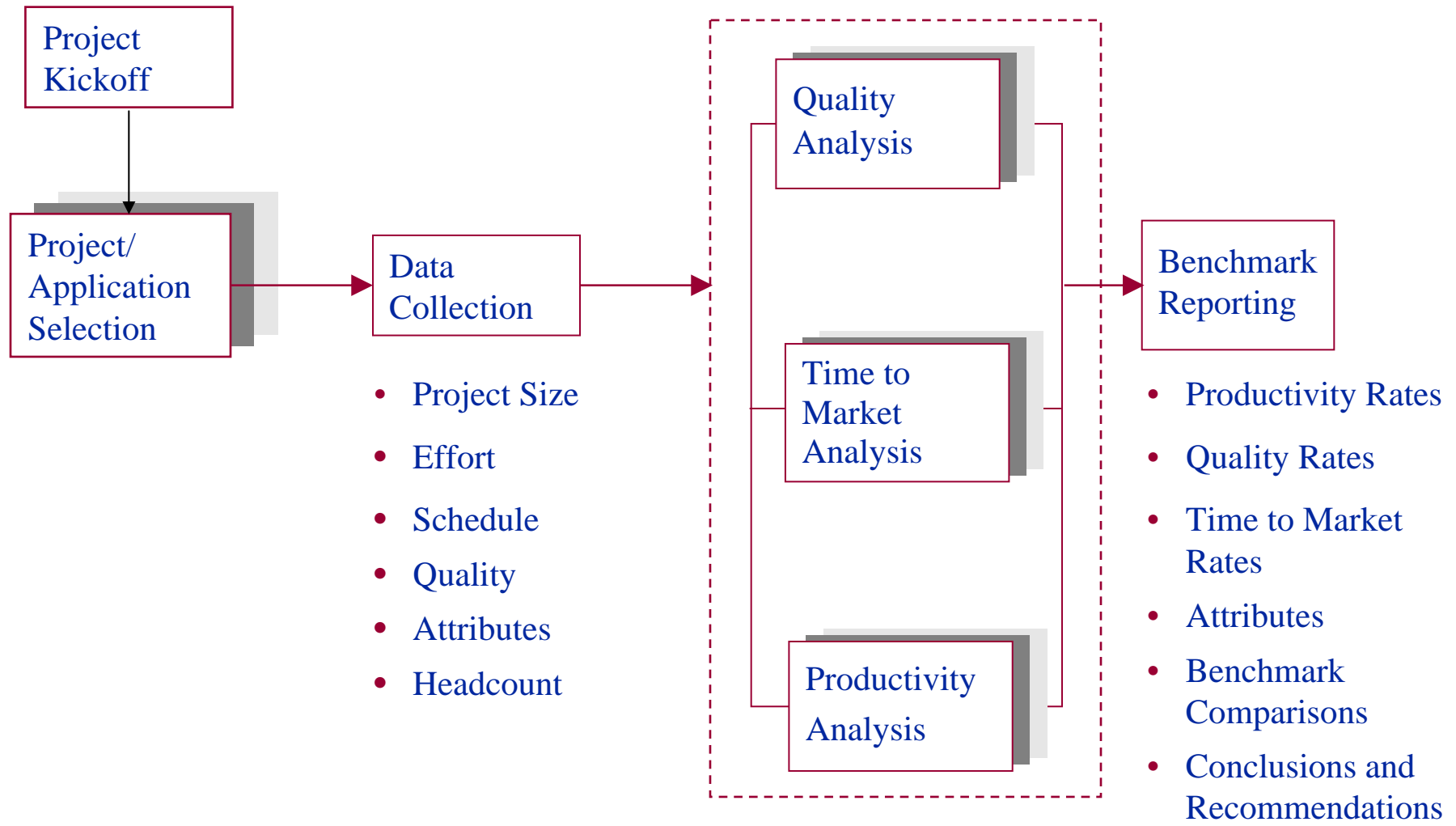


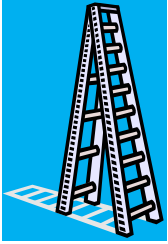
“We didn’t track all of the data accurately in the past so the baseline study will be useless”

- Whatever has been tracked can be used
- Often data can be adjusted based on what has been tracked
- Can still analyze information if the issues are known



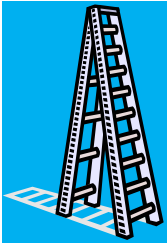
Baseline Studies – The Methods





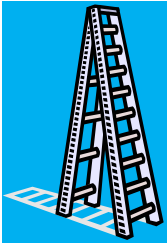
Baseline Project Kickoff

- Provide appropriate education to multiple audiences
 - Report recipients
 - Data collection participants (e.g. Subject Matter Experts for FP counting sessions, ‘other’ data providers)
- Develop overall plan for data collection and insure availability of necessary resources
- Obtain Sponsorship and communicate priorities to all participants



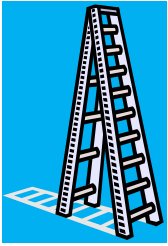
Baseline Project Selection

- Selection criteria from total list – group by criteria, do not make the groups too small
- Should pick from each category as a percentage of the total (if 10% of the total, then 10% of the sample)
- Selection should be random to be unbiased
- Some projects will have to be eliminated (e.g. no effort, no SME, not representative)



Baseline Data Collection Recommendations

Data Required	Data Definition
Project Size	Function Points
Effort	Productive hours recorded against the project from start of requirements through first deployment
Attributes	Description, platform, and type
Quality (if available)	Defects reported within the first 90 days of deployment
Schedule	Start date of the project First deployment date
Headcount	Number of Full time and Part time staff charging time to the project

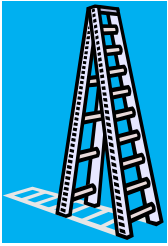


Baseline Data Analysis

Data Analysis involves examining the data across projects and measures to identify trends for the organization

The following are recommended measures for an initial baseline analysis:

- Quality
- Time to Market
- Productivity
- Analysis of Project Attributes (platform, development type, project type)



Benchmark Reporting

Benchmarks should be utilized to understand industry standards

Recommended measures for benchmarks:

- Productivity (FP/Hour)
- Quality (Defects/FP)
- Schedule Days

Individual benchmarks should be provided as appropriate by:

- FP size category
- Platform
- Development type (new and enhancement)
- Industry average and best in class/top quartile



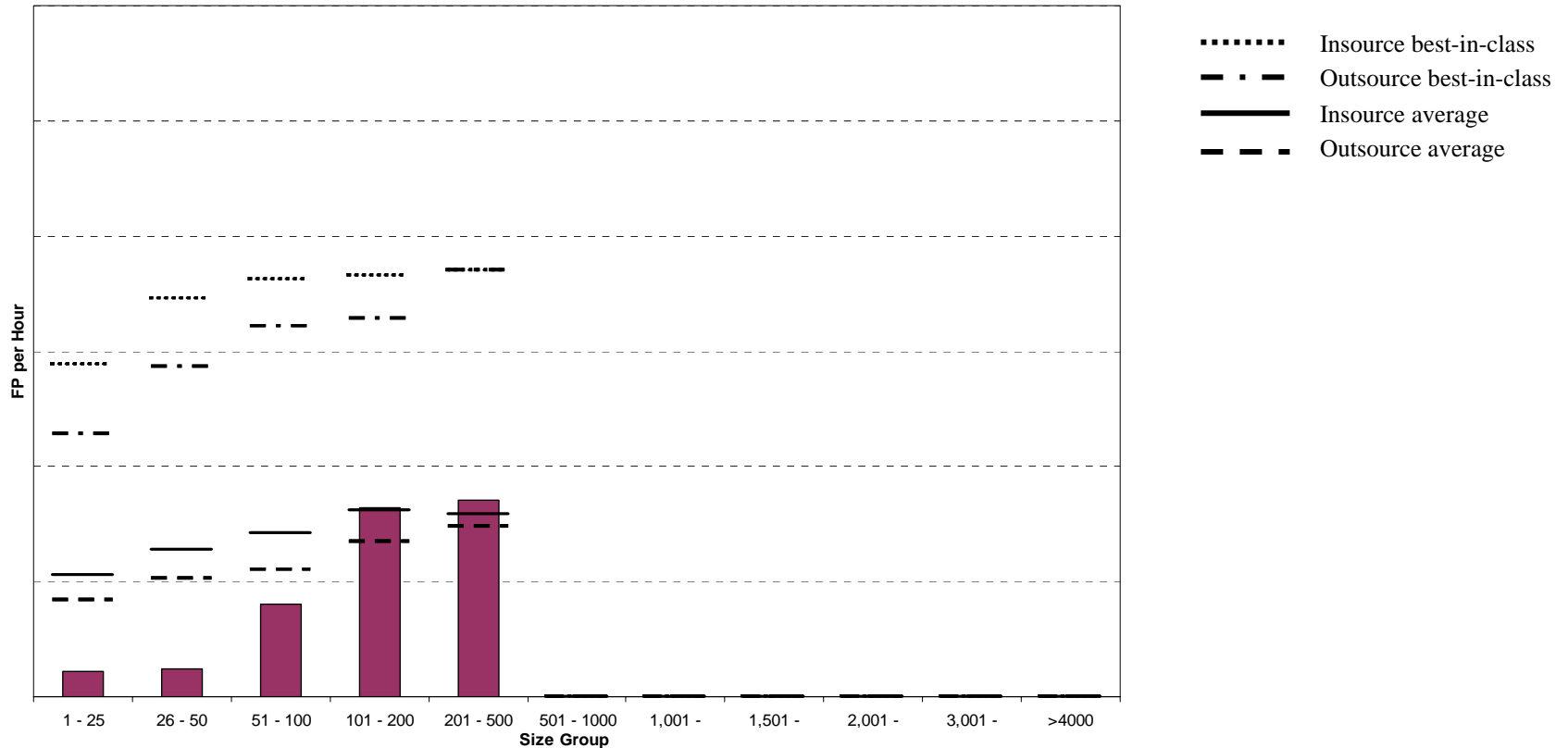
Baseline Studies – The Magic

- Provides a measure for the current state of the organization
- Enables reasonable goal setting to occur
- Provides comparisons for process improvement initiatives
- Assists in outsourcing negotiations and/or setting future development expectations
- Allows for information exchange and better decision making



Enhancement Project Productivity – Client Server

Example

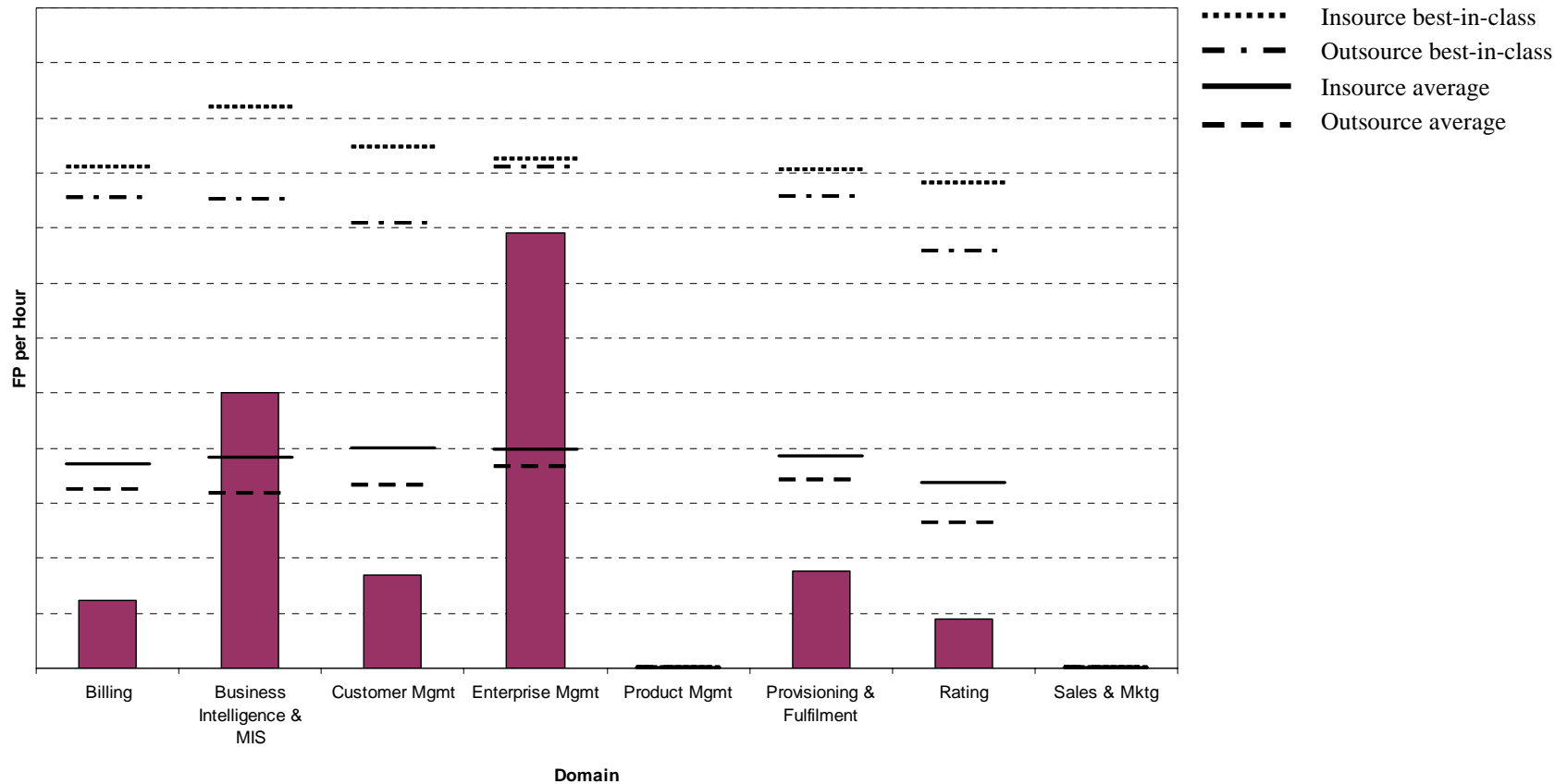


- The trend of Client Server enhancement productivity is generally consistent with the industry
- Client Server project productivity is below all Insource and Outsource benchmarks for projects smaller than 100 function points
- The productivity of Client Server projects larger than 100 function points is better than the industry average benchmarks



Enhancement Productivity by Domain

Example

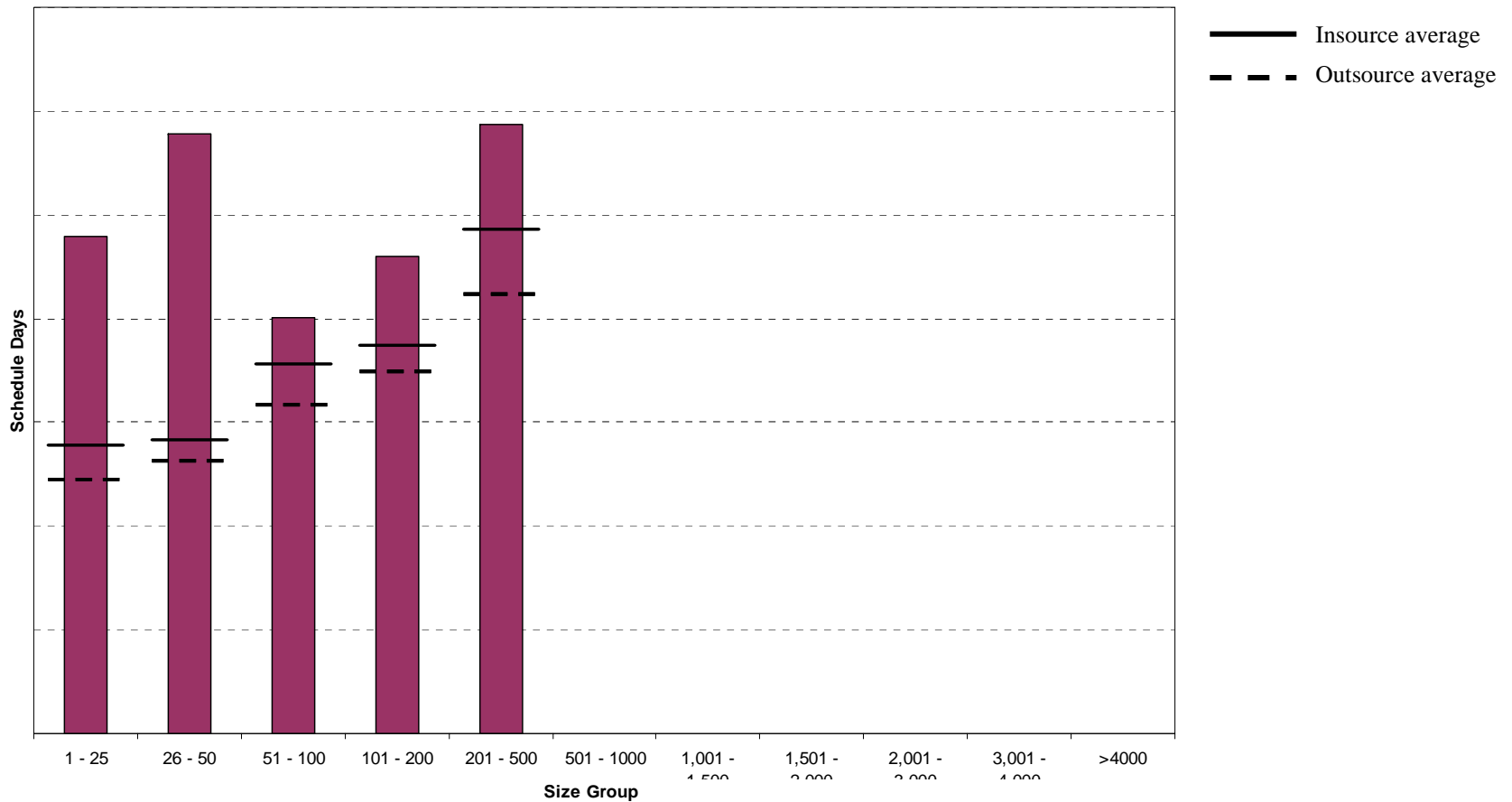


- The productivity of the Enterprise Management domain is better than the Average benchmarks and approaching the Best-in-Class benchmarks
- Business Intelligence productivity is better than the industry average benchmarks
- The productivity of the remaining domains are well below all Insource and Outsource benchmarks



Enhancement – Schedule Days – Client Server

Example

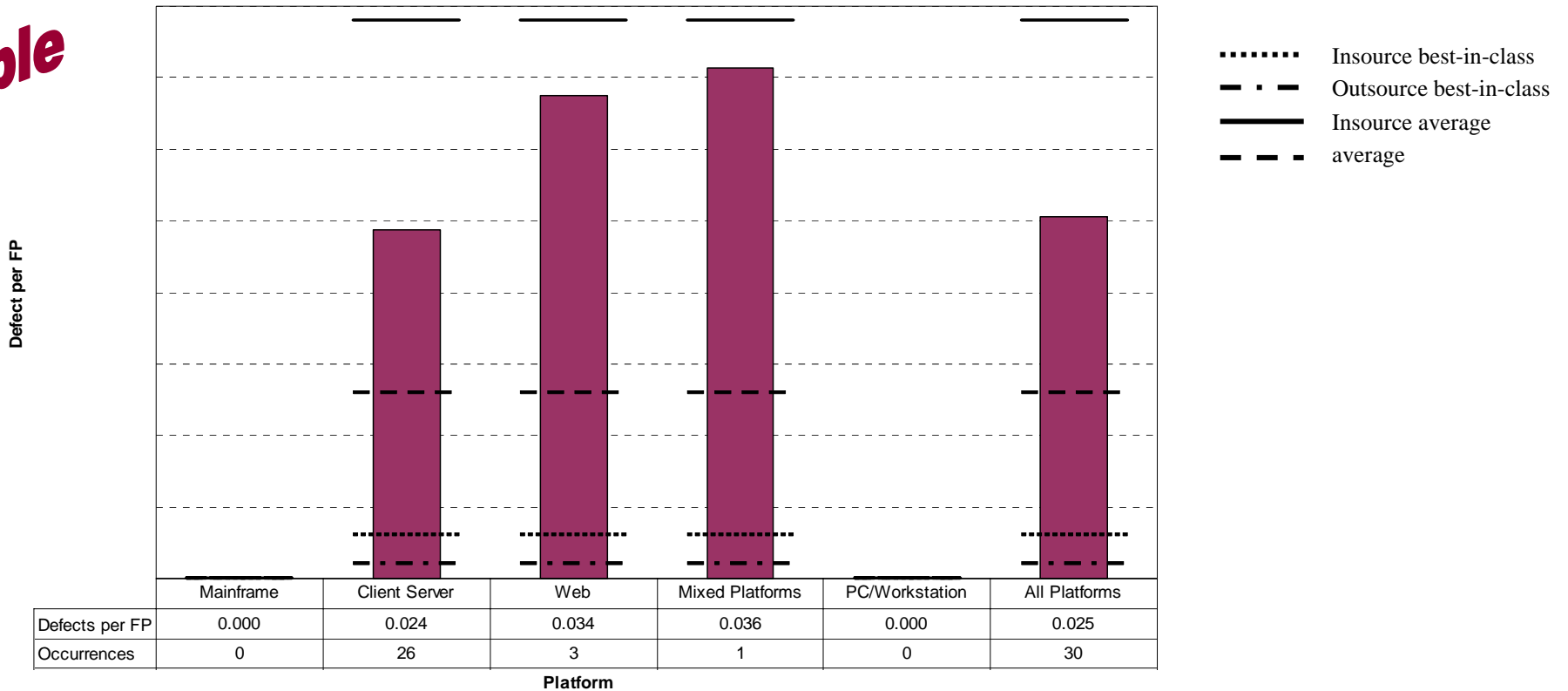


- The duration of Client Server projects is significantly longer than the Insource and Outsource Average benchmarks in most size categories



Enhancement – Defects/FP by Platform

Example



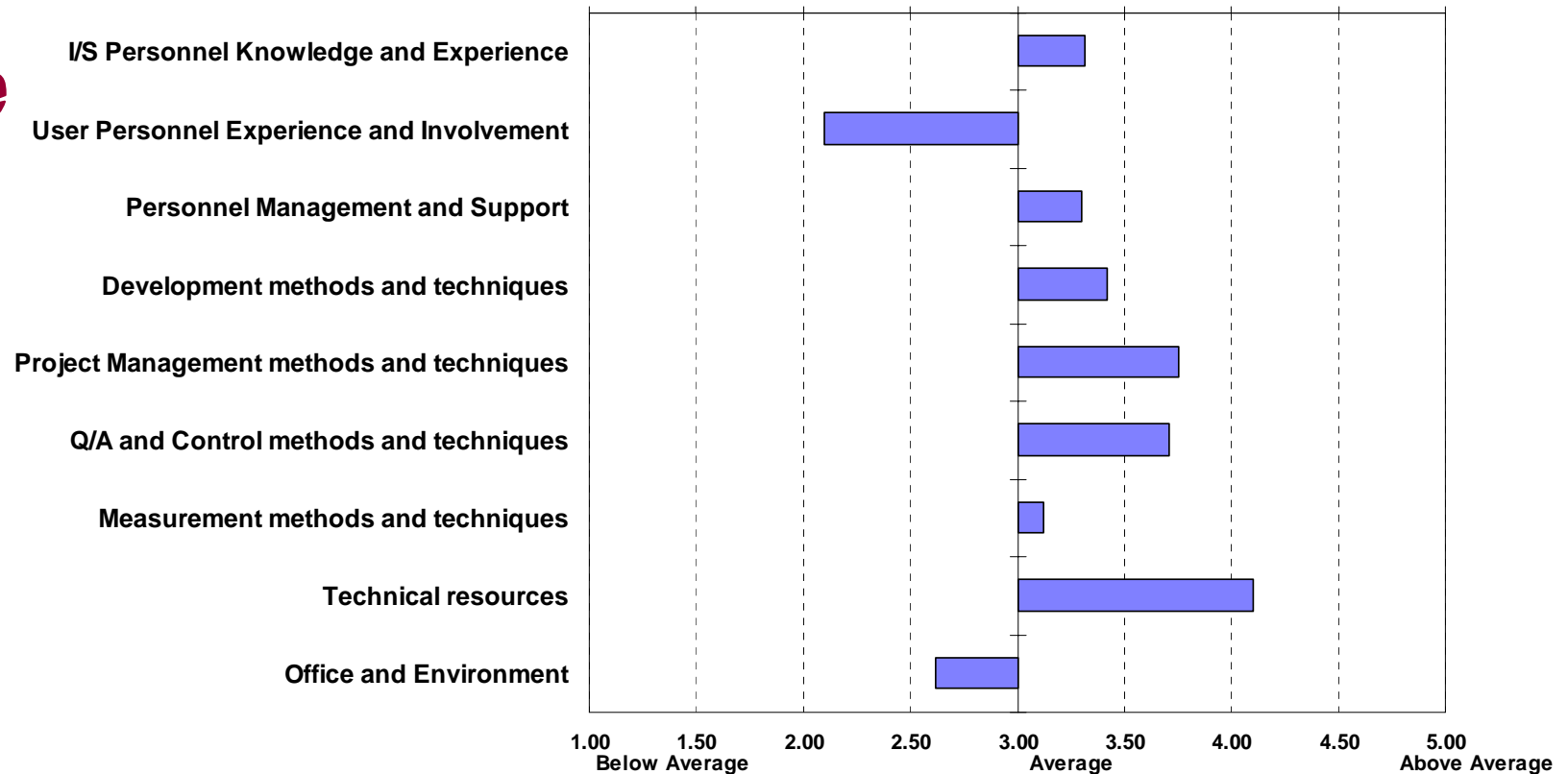
- The quality of Client Server, Web and Mixed platform projects is better than the Insource Average benchmark but not as good as the Outsource Average benchmark

Note: Categories displaying benchmark lines without any bars indicate zero defects



Project Attributes can Impact Productivity, Cost, Schedule, and Quality

Example



- Project attribute assessments help to identify organizational strengths and weaknesses
- The assessment results are critical to accurately interpreting the results from software measurement
- The results can be used as input into a process improvement program



Conclusions

Example

- Project productivity is generally below the industry average benchmarks
 - Several factors may have a negative impact on project productivity
 - Extended project schedules can have a negative impact on productivity
 - Over staffing of projects can have a negative impact on productivity
- There were limited data points provided for defect analysis, therefore, the quality of the projects being delivered is inconclusive



Recommendations

Example

- Conduct a detailed analysis of projects with excessively long schedules to determine if the organization of the project (multiple teams) is what is driving the schedule
- Analyze project staffing by multiple vendors to determine alternatives to avoid the inconsistent and excessive staffing of projects
- Conduct a detailed analysis of effort recorded against projects by Phase, Activity, and Role to understand where the majority of effort is being expended
- Utilize the baseline information to help negotiate and contract with Vendors based on performance measures
- Develop a productivity matrix similar to the following example to support performance based contracts



Projected Productivity Example

Projecting Productivity Rates from Benchmark Trends

Example

Range	Actuals		Projected FP/Hr	Benchmark FP/Hr	Delta between BMs
	FP/Hr	Occurrences			
1 - 100	0.036	55	0.036	0.034	147.64%
101 - 500	0.026	25	0.026	0.023	67.73%
>500	0.023	0	0.009	0.020	86.27%

- A productivity rate colored in "Black" represents the actual productivity rate for that size category
- A productivity rate colored in "Blue" has been calculated by multiplying the adjoining actual productivity rate by the "Delta Between Benchmark" rates
- Projecting the productivity rate is necessary when the sample does not contain enough data to populate all cells.

Myth or Magic?

