Metrics Based Project Governance

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TOTAL METRICS

SMEF 2006

“Without objective data you are just another person with an opinion”
“harnessing the capabilities of your metrics team to minimise project risk”
Attributes of “Scope Manager”

Excellent skills in:
- Business analysis
- Metrics and Function points
- Communication
- Management Reporting

Report to:
- Project Board / Project Sponsor

Paid by:
- Project Budget/client/supplier

Independence
Governance

**Corporate Governance**
- Board of Directors

**IT Governance**
- CFO
- CEO
- CIO

**Project Governance**
- Project Board
- Project Sponsor
- IT Project Director
- Business Project Manager
- Development Project Manager
- Project Team

"Scope Manager"
Project Activities – Metrics Based Governance

Business Case

Feasibility Study

Approval

FPA Size “Estimate”

Effort, Cost and Duration Estimate

Budget allocation

ISBSG Industry Productivity Data

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BENEFIT - Independent project estimates based Industry data from ‘best practice’ experience or reality check on client budget.
Will the software be delivered in time and be worth the Business Value?

- ✔ 300 ~ 500 function points
- ✔ Delivery ~ 7 to 9 months
- ✔ Cost ~ $390k to $580k

Develop Requirements / RFT

Budget Approval
Project Activities – Metrics Based Governance

Requirements Specification

- Functional Analysis
  - Requirements Assessment & Refinement
  - Requirements Functional Size
  - Requirements Function & Data Catalogued List + Profiles

BENEFIT – Independently reviewed, auditable, quantified, traceable list of requirements

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Baseline List of Individual Requirements
Profile and Quantify Requirements

Core Functions selectively identified and selectively sized = 300fps of total of 450 fps
## Re-Estimate – Java, J2EE

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
<tr>
<td>Function Points</td>
<td>400</td>
<td>550</td>
</tr>
<tr>
<td>PDR hrs/fp</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Effort hours</td>
<td>5,442</td>
<td>7,197</td>
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<tr>
<td>Duration months</td>
<td>9.0</td>
<td>11.4</td>
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<tr>
<td>Cost</td>
<td>$642,108</td>
<td>$849,255</td>
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<tr>
<td>Cost $/fp</td>
<td>$1,167</td>
<td>$2,123</td>
</tr>
</tbody>
</table>
Project Activities - Metrics Based Governance

Tender Response Evaluation

- %Match against RFT Function & Data Catalogue Lists
- Compare against Initial Effort, Cost and Duration Estimate
- Estimates Reality Check

Suppliers Functional Solution
- Suppliers Price Dollars per FP
- Suppliers total cost and schedule

Select Supplier

BENEFIT – Independent evaluation suppliers price and schedule estimates. Quantitative match of supplier functional proposal

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Suppliers Solution Mapped to Requirements

Quantify % Match = 205 out of core 300 function points can be delivered without change by the Suppliers Package Solution.
Evaluate Suppliers Responses for Reasonableness

<table>
<thead>
<tr>
<th>Estimates</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td><strong>Duration months</strong></td>
<td>9.0</td>
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<td>$1,167</td>
<td>$2,123</td>
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<tr>
<td>Supplies Bids</td>
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<tr>
<td>Supplier A</td>
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<tr>
<td>Supplier B</td>
<td>✓</td>
<td>$1,563</td>
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<tr>
<td>Supplier C</td>
<td>X</td>
<td>$987</td>
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</tbody>
</table>
**Project Activities – Metrics Based Governance**

- **Functional Changes**
- **Specification Assessment & Refinement**
- **Budget and schedule constraints**
- **Quantify size of Change for Pricing**
- **Update Baseline Functional Size**
- **Estimates Reality Check**

**Implement Change**

**BENEFIT** – Independent objective assessment of the extent of change and assistance with pricing. Quantify impact on planned schedules and budgets.

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Quantified Traceable Changes Against Requirements
Project Activities – Metrics Based Governance

Project Progress Reporting

Earned Value - FPs delivered versus planned schedule.

Map User Acceptance Testing Test Cases against Functional Catalogue

Identify and quantify Test Case coverage, hot spots for defects

Revise Strategy

ISBSG Industry Project Activity Profile

BENEFIT – Independent assessment of project status by quantifying percent delivered.

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Project Activities – Metrics Based Governance

**Project Implementation**

- **Validation, collation, analysis and submission of Project Metrics.**
- **Project Productivity and Quality Assessment Report**

**Contract Signoff**

**BENEFIT – Independent assessment project productivity and process. Expert to assist in the collation of data for submission to the ISBSG Repository and interpretation of results.**
Case Studies

Case 1- Win / Win

✓ Complete functional requirements
✓ Successful implementation, on time, on budget and all requirements
✓ Good Productivity rates
✓ Ongoing good relationship
Case Studies

Case 2 – Confictive

- Supplier estimates unrealistic
  - Early warning of potential over runs

- Supplier status reporting not reflective true situation
  - Quantitative assessment of functionality delivered to UAT

- Requirements not all implemented
  - Quantitative assessment of functionality omitted for price negotiations
Which Projects Need Governance?

- High risk
- New / inexperienced project management
- High profile
Cost / Benefit Analysis

✅ Cost ? = 1 – 3 % of software cost
  • depending on:
    • level of activities
    • Size of project
    • Internal or external consultant

❌ Cost of not having it?
  • 0 – >100% of project cost
Key Success Factors?

- FSM is a standardised, structured method to identify, classify and quantify functionality to be delivered
- Independence of Scope Manager
- Certification of Scope Manager
- Reporting at Project Board Level
- Commitment both Client and Supplier
- Customisation of method to suit Project
- Transparency of the process
- Availability of relevant ISBSG data
Thank You

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