Mace - Hertford Office

Programme Management

2004
BACKGROUND - INTRODUCTION

• Hertfordshire County Council

• Contract to deliver Capital Works Programme (for projects over £100,000) based on anticipated HCC annual capital expenditure £20-30m / year

• Total number of projects currently under Mace management - 250

• Total value of projects under Mace management - £100million

• Projects allocated to 6No Framework Contractors each having a 5-year partnering agreement with HCC through Mace (consultancy project completed ahead of Mace’s formal commission start in March 2003)

• Complete Best Practice Programme in place for Mace and Contractors
GATEWAY PROCESS - Initiation

- Terms of Reference
- Team Briefing Workshop – Problem, Objectives, Requirements, Options
- Initial Studies
- Data Gathering – We are identifying the basis on which we are to proceed.

- Strategic Brief
  - Statement of Need
  - Statement of Requirements
  - Statement of Options
  - Initial Studies for an assessment of need – Preliminary Business Case
GATEWAY PROCESS - Feasibility

- Consultation with stakeholders
- Procure specialist surveys, specialist consultancy and investigations
- Feasibility study of options identified at Gateway 1
- Outline ‘draft’ Programme
- Feasibility Report
  - Feasibility and Sketch Plans
  - Topographical Survey, Soil Investigation Report, Buildability Review
  - Project Brief
  - Framework Placing Report

“Here is our response to the question we have been asked”
GATEWAY PROCESS – Fix Budget/Time/Fee (Baseline KPI’s)

- Develop the Project Brief and Outline Proposals to fix the project parameters
- Validate the outputs from Gateway 2 and proceed to confirm selected option
- Set the budget, the programme, the fee and resultant KPI set
- Appoint Framework contractor on ‘pre-contract duties’

- Gateway 2.5
  - Fixed budget, fee, programme
  - Outline proposals
  - Cost Estimate
  - Project Brief

“We are now clear on the way forward and have fixed the brief”
GATEWAY PROCESS – Design/Procure

G1    G2    G2.5    G4    G5

Initiation    Feasibility    Budget/Time    Design/Procure    Construct

• Gateway 3
  • Detailed Proposals (controlling change within the defined budget)
  • Design Freeze at Gateway 3
  • Co-ordination of elements outside the main contract (furniture, move etc)
  • Town Planning Consultations

• Gateway 4
  • Lump Sum JCT Contract Price agreed
  • Contract Programme
  • Orders for non-property items agreed
  • Town Planning approvals in place

“We are now clear to deliver against our KPI targets”
GATEWAY PROCESS – Construct

G1  G2  G2.5  G4  G5

Initiation  Feasibility  Budget/Time  Design/Procure  Construct

• Administer contract on site, including change control procedures
• Sign off payments
• Sign off contract at Practical Completion
• Aftercare
  • Performance measurement report
  • Customer satisfaction feedback
  • Lessons learnt
  • Review training needs, review processes (as necessary)

“We need to learn about what went right / wrong”
# GATEWAY FORMS

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>GATEWAY APPROVAL 2.5</strong></td>
<td><strong>Commit to Invest:</strong> Outline Design, Approve business case set budget, fix fee &amp; base point KPI's</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td>3</td>
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</tr>
<tr>
<td>4</td>
<td>Town / Site / Description</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>6</td>
<td>[Mace Project No.]</td>
<td>[Walker Code:]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I recommend that this project proceeds to detailed design subject to the following qualifications (state none if none)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Construction cost</td>
<td>Original estimate G2</td>
<td>Current budget G2.5</td>
<td>Account code</td>
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<td>11</td>
<td>Works - main contractor [A]</td>
<td>£0.00</td>
<td>£0.00</td>
<td>91201</td>
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<td>12</td>
<td>Works - other contractor [A]</td>
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<td>£0.00</td>
<td>91201</td>
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<td>Landscaping</td>
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<td>£0.00</td>
<td>91211</td>
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PROJECT MANAGEMENT SYSTEM (PMS)

A computer system for administering construction projects

- Microsoft Access Database available for multiple users
- Owned and developed by Mace
- In use 9 years
- Can be used for single projects or programmes of work
- Aggregate project value over £5+ billion
PMS

Primary functions

Cost
- Budget
- Orders Not Placed
- Invoices
- Cash flows
- Cost Planning
- Reserves
- Valuations

Change
- Early warnings
- Change Requests
- Instructions

Information
- RFIs
- Drawings
- Issues

Site
- Snagging
- Orders
- Incidents
- Last Planner
- Assets
Change management

Early Warning

On feedback

Change Request

On approval

Fund changes
Adjust budgets, ONPs, Reserves etc.

Instruction

Optional process
Also features …

• Comprehensive reporting
• Project customisation
• Full audit trail
• Definable user access
Our fully integrated **Business Management System**, tracks the project allocation of all our staff, enabling us to review allocations by staff or project to ensure we work at optimum efficiency.
PERFORMANCE MANAGEMENT SYSTEM (PMS)

• 10 ‘Headline’ Key Performance Indicators
  – Customer Satisfaction – Service (‘killer’ KPI)
  – Customer Satisfaction – Product
  – Quality – Defects
  – Safety (‘killer’ KPI)
  – Predictability Cost – Design
  – Predictability Time – Design
  – Predictability Cost – Construction
  – Predictability Time – Construction
  – Cost Reduction
  – Time Reduction

• Year-on-year rising targets, established to ensure continual improvement throughout our contract with HCC.
# The KPI’s – Targets & Results

<table>
<thead>
<tr>
<th>KPI</th>
<th>Measure</th>
<th>Year 0</th>
<th>Year 1 TARGET</th>
<th>Year 1 PROV.</th>
<th>Year 2*</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>Client Satisfaction Product</td>
<td>% scoring 8/10 or better</td>
<td>50%</td>
<td>65%</td>
<td>80%</td>
<td>73%</td>
<td>79%</td>
<td>85%</td>
<td>90%</td>
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<td>Client Satisfaction Service</td>
<td>% scoring 8/10 or better</td>
<td>57%</td>
<td>62%</td>
<td>80%</td>
<td>65%</td>
<td>76%</td>
<td>80%</td>
<td>85%</td>
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<tr>
<td>Defects on handover</td>
<td>% scoring 8/10 or better</td>
<td>36%</td>
<td>50%</td>
<td>80%</td>
<td>58%</td>
<td>74%</td>
<td>86%</td>
<td>100%</td>
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<td>Safety Accidents</td>
<td>Mean Accident Incidence rate per 100k employed</td>
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<td>0</td>
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<td>650</td>
<td>495</td>
<td>300</td>
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<td>Predictability Construction Cost</td>
<td>% on target or better</td>
<td>39%</td>
<td>46%</td>
<td>100%</td>
<td>50%</td>
<td>67%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Predictability Construction Time</td>
<td>% on target or better</td>
<td>36%</td>
<td>52%</td>
<td>80%</td>
<td>61%</td>
<td>76%</td>
<td>80%</td>
<td>85%</td>
</tr>
<tr>
<td>Predictability Design Cost</td>
<td>% on target or better</td>
<td>17%</td>
<td>47%</td>
<td>100%</td>
<td>63%</td>
<td>73%</td>
<td>81%</td>
<td>85%</td>
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<tr>
<td>Predictability Design Time</td>
<td>% on target or better</td>
<td>41%</td>
<td>44%</td>
<td>100%</td>
<td>46%</td>
<td>60%</td>
<td>81%</td>
<td>85%</td>
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<tr>
<td>Construction Cost</td>
<td>Change compared with one year ago</td>
<td>No data</td>
<td>N/A</td>
<td>N/A</td>
<td>TBA</td>
<td>0%</td>
<td>-2%</td>
<td>-5%</td>
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<tr>
<td>Construction Time</td>
<td>Change compared with one year ago</td>
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<td>N/A</td>
<td>TBA</td>
<td>0%</td>
<td>-8%</td>
<td>-15%</td>
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PERFORMANCE MANAGEMENT SYSTEM (PMS)

• Pain / Gain System
  – Both Mace and the Framework Contractors are at financial risk if our targets are not met.
  – Contractors are back-to-back with Mace on KPI's
  – Complex pain / gain system of efficiency savings and bonus payments

  – Mace Pain / Gain:
PERFORMANCE MANAGEMENT SYSTEM (PMS)

- In order to hit our targets we have to employ best practice techniques including:
- Contractor Best Practice Programme:
  - Regular ‘Best Practice Forum’ with all contractors and stakeholders
  - Monthly ‘Liaison Meetings’ for contractor specific improvements
  - Workshops
  - Focus Groups for e.g. Sustainability, Life Cycle Costing, Integrated Programming, Standardisation, Supply Chain, Managing Expectations, Continuity of Workload
  - 7 steps to an integrated team etc…

- Mace Improvement Programme:
  - Behaviour Change Programme
  - Performance Results Descriptions
  - Focus Groups for e.g. Sustainability, Health & Safety, Continual Professional Development (CPD), Peer Review, Design Standards (Specifications)

- Hertfordshire Best Practice Club – share knowledge
PERFORMANCE MANAGEMENT - TOOLS

- Gateway Forms – record & forecast the non-subjective KPI’s

<table>
<thead>
<tr>
<th>KPI</th>
<th>Planned @ G2.5 (a)</th>
<th>Actual</th>
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</thead>
<tbody>
<tr>
<td>End User Satisfaction - Product</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>End User Satisfaction - Service</td>
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<td>0</td>
</tr>
<tr>
<td>Defects on Handover</td>
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<td>0</td>
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<tr>
<td>Safety Accidents</td>
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<td>1</td>
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<tr>
<td>Predictability Construction Cost</td>
<td>£0.00</td>
<td>0%</td>
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<tr>
<td>Authorized Change - Construction Cost</td>
<td>£0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Predictability Construction Time</td>
<td>£0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Predictability Design Cost</td>
<td>£0.00</td>
<td>0%</td>
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<tr>
<td>Authorized Change - Design Cost</td>
<td>£0.00</td>
<td>0%</td>
</tr>
<tr>
<td>Predictability Design Time</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

- KIT CAT – initially a tool to measure Customer Satisfaction but has been developed into a bespoke tool to do much more…
KIT CAT

• Two newly developed bespoke tools to benchmark and subsequently monitor and manage end user satisfaction…

• KEY IMPROVEMENT TOOL CUSTOMER ALIGNMENT TOOL

• Identify ‘end user client’ at end of feasibility (Gateway 2) – for measurement of end user satisfaction KPI’s

• Set up CAT workshop to establish ‘benchmark’

• ‘End user client’ and all other stakeholders continuously score project team (at agreed strategic points the project) using online questionnaire tool

• Re-occurring “problems” highlighted and targeted by Hertford ‘Best Practice’ team and Leadership team
CUSTOMER ALIGNMENT TOOL - CAT

- Establish CAT (Customer Alignment Tool) with Key User & whole project team
- Effectively asking the end user and the project team to define and score their agreed expectation of the project in terms of its service and product delivery
- Produce the CAT sheet that documents these expectations and exposes any hidden agenda’s from all parties
- The project team learn where to concentrate their efforts… what makes the end user ‘tick’
- Helping the client to understand what is expected of him
CUSTOMER ALIGNMENT TOOL – CAT WORKSHOP

• Attendance:
  – The complete project team, including:
    • the ‘end user client’
    • the project sponsor (fund holder client)
    • the Mace project manager and Mace design/cost team
    • other key stakeholders e.g. external architects, engineers, contractor, key sub-
      contractors, suppliers, specialist consultants

• Agenda:
  – Ask the client for their interpretation of each ‘moment of truth’ on the questionnaire
  – Allow the project team, as a whole, to discuss the client’s vision of success
  – Agree and record the final interpretation
  – Identify importance of each one
  – Ask the client to rate their expectation for the service level for each ‘moment of truth’
CUSTOMER ALIGNMENT TOOL – CAT WORKSHOP

• Aims are:
  – to identify what each client expects from the project team on every specific project across the portfolio (currently over 200 projects)
  – to help the client understand their role and how they can help improve our ability to deliver a quality service
  – to help the client understand what is expected of him
  – to help all members of the project team to understand their mutual responsibilities to one another and establish accountability

• Benefits are:
  – to know where to concentrate the effort – note: Pareto’s ‘80/20’ Principle
  – to identify key issues, expectations & improvements - early in the project
  – to expose hidden agendas – and avoid late surprises
  – to promote the integrated project team – in support of our behaviour change programme
  – to promote greater (and more predictable) client satisfaction!
CUSTOMER ALIGNMENT TOOL – CAT SHEET

• A CAT sheet is available for use in the CAT workshop
  – Contains standard definitions to the questions – for assistance
  – Can be redefined at CAT workshop

• Records the client’s expectation

• Available online (KITT-online) when the end user is scoring the project team

• Provides guidance on scoring
KEY IMPROVEMENT TOOL - KIT

- KIT is essentially a web based customer satisfaction questionnaire
- Individuals score the project team’s performance – promoting the integrated team
KEY IMPROVEMENT TOOL - KIT

- Carry out survey – 360 degrees – All project team score
- Continuously forecast KPI PMS results
- PM & Best Practice Core Team analyse the results in various dimensions
- Communicate to whole team
- Agree and implement corrective action then:
  - Hit the ‘Customer Satisfaction’ killer KPI

Record & report any generic issues to Hertford office ‘Best Practice’ team

All the project team means the ‘end user client’
Project Sponsor
Project Manager
Designers/Consultants
Contractors
major sub-contractors
e.g. M&E, Crossbrooks etc