Continuous Business Improvement Plan

INITIATING A FACILITIES SERVICES ORGANIZATION

CONTINUOUS BUSINESS IMPROVEMENT PLAN THAT ACHIEVES DRAMATIC RESULTS

Charlotte Mecklenburg Schools Road to Excellence
• 137,000 Pre K -12
• 51% FRL
• 176 schools
• 40 Magnet Schools
• No Taxing Authority
• “At Will” State
• FY2010 Budget $1,140,509,220
• County & 7 Municipalities

CMS District Profile
• Largest Property Management Operation in Charlotte
• 2\textsuperscript{nd} Largest Developer in Charlotte
• 9\textsuperscript{th} Largest Bus Fleet in the U.S.
• Largest Food Service Chain in NC
• 4200 Auxiliary Services Employees
• $1.7 billion of Capitol Improvements over 11 years
• 35 New schools, 15 Replacement schools, 
  77 Additions/Renovations
• $220 million Peak Annual Expenditure
Why a Business Improvement Plan?

• Failed Bond Referendum 2005

• Citizen Committee – Out Sourcing

• School Building Solutions Committee – Chaired Former Governor James Martin

• Superintendents Standard Committee – Education Programs & Facility Standards

• District Focus – 2014 Strategic Plan Performance Management

Continuous Business Improvement Plan
• Describe Current Condition Environment – “Know Where You Are”
• Identify Department Key Business Functions
• Identify Industry Best Practices, KPIs and Benchmarks
• Consultants Evaluate Staffing Organization and Process
• Assess Relative Performance
• Describe – Target Desired Environment – “Visualize Where You are Going”
• Implement Organization Change
• Implement Improvement Strategies
• Measure
Educating students to compete locally, nationally and internationally.

AUXILIARY SERVICES
CONTINUOUS IMPROVEMENT PLAN
CAPITAL PROGRAM SERVICES DEPARTMENT

CONTINUOUS IMPROVEMENT PLAN APPROVAL

Continuous Business Improvement Plan Template
STRATEGIC PLAN 2014:
TEACHING OUR WAY TO THE TOP

This Continuous Improvement Plan supports the following district Area of Focus:

Choose all that apply:

1. Effective Teaching & Leadership
2. Performance Management
3. Increasing the Graduation Rate
4. Teaching & Learning through Technology
5. Environmental Stewardship
6. Parent and Community Connections

Capital Program Services Overview:

Department Mission Statement

To successfully manage the design and construction of the voter-approved bond-funded CIP and, in keeping with the County-allowed cashflow schedule, deliver all capital projects on time, within overall project budget, all the while providing a diverse community with high quality educational facilities and meeting the expectations of all stakeholders. The mission statement of CPS has essentially remained the same since work began on the 1996 State and 1997 Local bond-funded projects although individual stakeholder expectations of each other and their performance measurements have changed to reflect process improvement initiatives and other modifications needed to meet changing conditions in the school system, construction, and design environment.
**Background and Current Environment**

Capital Program Services (CPS) is the operational arm of Auxiliary Services responsible for managing all activities associated with facility design and construction, including procuring the contracted resources to carry out the outsourced work. CPS is charged with the responsibility of ensuring CMS capital projects are designed and constructed to meet CMS quality standards, adhere to codes, are delivered on time, and the cost is kept within the budgets established for the projects. CPS staff is experienced in educational planning, design management, construction, procurement, risk management, scheduling, cost management, financial management, and quality management. The organization shares the goal of providing the best K-12 educational facility environments for the students of Mecklenburg County. Business functional unit performance is continually monitored: 16 KPI’s are used to measure CPS team performance against internal as well as external industry benchmarks.

The drivers to reaching this goal are based on excellence in key processes, concentrated focus on financial results, a working environment of people first, and a client-centric mentality that specifically speaks to the Superintendent’s Strategic Plan 2010 goal of establishing a truly service oriented workforce and 2014 goals performance management, environmental stewardship, and increasing the graduation rate.
<table>
<thead>
<tr>
<th>Management and Administration – Responsibilities and Staff</th>
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</thead>
<tbody>
<tr>
<td><strong>Key Business Functions:</strong></td>
</tr>
<tr>
<td>- Design Procurement and Management</td>
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<tr>
<td>- Construction Services Procurement and Management</td>
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<tr>
<td>- FF/E Purchase and Installation</td>
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<tr>
<td>- Project Closeout and Warranty Management</td>
</tr>
<tr>
<td><strong>Technology – Systems, Software</strong></td>
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<td><strong>Facilities – Real Property Managed</strong></td>
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<td><strong>Regulatory Mandates – The Approval Maze</strong></td>
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<td><strong>Finance – Funding Source, Expenditures by Source by Budget Category</strong></td>
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<tr>
<td><strong>Best Management Practices</strong></td>
</tr>
<tr>
<td><strong>Target Environment Description – Performance Level Desired</strong></td>
</tr>
<tr>
<td><strong>Benchmarks</strong></td>
</tr>
<tr>
<td><strong>CIP Oversight – Executive Sponsor, CIP Owner, CIP Project Manager</strong></td>
</tr>
<tr>
<td><strong>Key Performance Indicators and Tactics – Performance Results and Improvement Plans</strong></td>
</tr>
</tbody>
</table>
# THIS CONTINUOUS IMPROVEMENT PLAN

## 2010-2011 KEY PERFORMANCE INDICATORS and TACTICS:

<table>
<thead>
<tr>
<th>#:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Focus: 1.1</td>
<td>Performance Management</td>
</tr>
<tr>
<td>KPI #: 1.1.1</td>
<td><strong>Delivery of Schools:</strong> Number of major bond/OOPs projects delivered under BOE approved budget/total number of projects</td>
</tr>
</tbody>
</table>

### 3-Year Historical Data & Industry Benchmark

<table>
<thead>
<tr>
<th></th>
<th>3-Year Ago Result</th>
<th>2-Year Ago Result</th>
<th>Latest Year Result</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tactic #</th>
<th>Tactic Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1.1</td>
<td>Continue doing what we have been doing.</td>
</tr>
</tbody>
</table>
Best Practices

• Deliver a project with defined scope within the established budget
• Utilize a standardized MIS across all function areas
• Meet industry standard for prompt payment
• Close out projects with 180 days
• Effective Warranty management process
• Utilize prototype designs
• Minimize disruption during construction process

Capital Services Continuous Improvement Plan
**Best Management Practices**

CPS’ primary responsibility is to build and renovate school system facilities utilizing capital funds received from bonds, COP’s and other capital funding sources. CPS is physically accountable for the efficient and effective use of all funds allocated for building purposes. Through the application of best practices, they are to ensure schools are built to the school system’s design and educational program standards, that buildings are completed and occupied upon the delivery schedules established in the facilities master plan, and that the cost is managed to ensure work is completed within the funds allocated.

Capital Program Services follows these best practices:

- Deliver a project with defined scope within the established budget for that scope – start with an accurate budget based on existing conditions survey and education program needs then design what is needed and keep in budget.
- Utilize a standardized MIS across all functional areas – one source for data that can be searched and sorted; Meridian Prolog.
- Maintain appropriate communication levels to meet the needs of the stakeholders – communications and information exchange protocol that keeps all appropriate stakeholders informed through the project.
- Effective management process utilizing TQM/PDCA – utilization of quality management process to drive improved performance, defined processes and procedures.
- Establish and utilize effective risk management process – risk mitigation/avoidance managed through use of risk register gatekeeper system.
- Exceed industry standard for payment cycle – pay less than 30 days from receipt of invoice.
- Occupancy plans “occupancy logistics” that are clearly communicated to all stakeholders and ensure real time/proactive coordination between construction and FF&E/move management takes place.
- Close out projects within 180 days of substantial completion.
- Defined process-driven warranty management to quickly correct problems during 1 yr. warranty phase and to catch non-conforming work so it is not transferred to the maintenance operation budget in future years – 1 year follow-up inspections; M&O work order system tied to Prolog MIS.
- Utilize prototype designs – this reduces costs and increase procurement and construction efficiency,
- Incorporate schedule, budget, occupancy contingency plans into all projects (time, budget, facility) – plan for the work before you start to be sure contingency is identified and risk managed.

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**Capital Services Continuous Improvement Plan**
Establish clearly defined project scope that is aligned with a realistic budget at initiation of each project - start with an accurate budget based on existing conditions survey and education program needs then design what is needed and keep in budget.

Ensure the necessary permits are obtainable prior to the scheduled bid date.

Hire qualified consultants – standardized RFQ process and stakeholder report cards; feedback loop.

Keep prototypes aligned with district education program needs, lessons learned, current codes, changed design guidelines, changed market conditions in contracting community, labor and materials – periodic review of standards compared to educators’ needs.

Deliver projects built to CMS standards of quality (A/E Guide/CMS design standards) at best cost per student and best cost per square foot through utilization of procurement strategies and consistent application of value engineering – defined process used consistently.

Hire qualified contractors – qualification process part of every project.

Collaborate and enter into “partnerships” where possible with jurisdictions, municipalities, and state agencies

Deliver a project with defined scope within the established schedule

Align project delivery method as appropriate with project needs – procurement method (DBB, CM@R) matched with needs of school system, schedule, complexity, and risk.

Minimize educator disruption during construction process – no lost teaching hours due to relocation of students of instructional activities.

Formalized swing space process/planning.

**Target Environment Description**

CPS is committed to achieving best practice performance levels in project closeout and building system commissioning. Current ratings for these KPI’s are 183 days (target is 180 days) and 123 days (target is 60 days) respectively. Both of these areas will be focused on over the next four years until best practice performance is achieved. Tactical improvement initiatives have been determined and will be deployed. Current work activities have been dramatically slowed by the reduced levels of funding received from the County. This in turn has a one-to-one correlation to the performance areas we plan to improve. Measurable results will not be obtained until new projects are started and completed.
<table>
<thead>
<tr>
<th>Source</th>
<th>Description/Measure</th>
<th>Your Organization's Latest Year's Result</th>
<th>Current Year's Target SY 2010-2011</th>
<th>Key Factors/Influencers for Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Number of projects delivered on time</td>
<td></td>
<td>Q1 Q2 Q3 Q4</td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>Total cost of all projects ≤ total budgeted amounts for all projects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP1</td>
<td>Average cost/ea/rev -- ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP2</td>
<td>Average cost/ea/rev -- ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP3</td>
<td>Average cost/ea/rev -- ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP4</td>
<td>Average cost/ea/rev -- ES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BP5</td>
<td>Average cost/ea/rev -- ES</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Internal</td>
<td>NonWISI Participation: Required</td>
<td></td>
<td></td>
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<tr>
<td>AIA/AGC</td>
<td># of days to make payment from date of pay application</td>
<td></td>
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<td>--------------</td>
<td>-------------------------------------------------------</td>
<td></td>
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<tr>
<td>Internal</td>
<td># of days to close out a project from substantial completion date</td>
<td></td>
<td></td>
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<tr>
<td>County</td>
<td>% by weight of construction waste diverted from the landfill (recycled or salvaged for reuse)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Internal</td>
<td>Projects are permittable at time of bid</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Internal</td>
<td>Complete the building system commissioning within 60 days after occupancy</td>
<td></td>
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<tr>
<td>Internal</td>
<td>Internal CPS Stakeholder satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>Internal Customer Satisfaction</td>
<td></td>
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</table>
Benchmarking and Measuring Performance Through KPI’s

**Benchmarking** – *The process of comparing one's business process and performance to industry’s best and or best practices from other industries.*

**KPI** – *Key Performance Indicators – Industry jargon for a type of Measurement of Performance*

Capital Services Continuous Improvement
Initial Findings

• Understanding the BIP/CIP Language and Terminology
• Acceptance of the Charge
• Staff Knowledge of their Department Processes
• Staff knowledge of other Department Processes
• Cross Functional Process and Performance Impact
• Time it Takes
• Benchmark Data
• KPI That Can be Measured

Capital Services Continuous Improvement Plan
Performance Results

• Inspect What You Expect
• Better Communication
• Increased Efficiency – Individuals and Departments
• Continuous Improvement Thinking Daily
• Improved Collaboration
• Healthy Competition Between/Within Departments
• Greater Transparency
• Improved Public Trust-2006 Cops, 2007 Bonds
• Board and Oversight Groups Awareness of Funding Needs for Preventive Maintenance
• Awareness of Reduced Maintenance Funding Impact on Future Capital Needs
• Substantiation of Outsourcing Study’s
• Peer Group Recognition
• Desire to Go Deeper-ISO-9001

Capital Services Continuous Improvement Plan
5.10 Design Development Review & Approval Process

Design Manager reviews, submits, and notifies via email appropriate internal and external Reviewer’s as defined by the Design Reviewer’s Matrix of the review period for the 100% Design Development Review.

The Reviewer’s evaluate the documents and make comments within 10 business days of notification.

- **Reviewed within 10 days?**
  - Yes: Proceed to Construction Document
  - No: After the initial 10 business days, Design Manager re-notifies delinquent Reviewer’s via email of the review schedule and the need to review the documents.

- **Reviewed within 10 days?**
  - Yes: Design Manager provides feedback to the contracted Architect, revisits to be accomplished in order to proceed to Construction Documents. The appropriate corrections are made, re-submitted, and validated.
  - No: Design Manager takes the approved Design Development documents with comments and returns to the Contracted Architect and forwards Pay Application to Project Controls for processing.

- **Design Manager authorizes in writing the contracted Architect to proceed to Construction Documents?**
  - Yes: Proceed to Construction Documents
  - No: Internal Payment Process

Construction Document Development Process
The end
• Internal Organizational for Standardization (ISO)
• Quality Management System (QMS)
• Customer Satisfaction
• Globally recognized standard
• Say what you do
• Do what you say

ISO 9001 Quality Management System
• Customer focus
• Leadership
• Involvement of People
• Process Approach
• System Approach
• Continuous Improvement
• Date driven decisions
• Mutually Beneficial to Supplier

ISO 9001 Quality Management Principles
Each Process will include:

- Objective & Scope
- Responsibility
- Documentation
- Equipment
- Procedure
- Process Overview
- Process Charts

Insert chart?
The overview process will show the relationship with other processes.
Each Process will include:

- Objective & Scope
- Responsibility
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- Equipment
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- Process Overview
- Process Charts

ISO 9001 Typical Process
CMS Board Policy ECF – Environmental Stewardship

• Compliance
• Pollution Prevention
• Resource construction
• Resource recovery
• Sustainable purchasing
• Sustainable development
• Behavior change
• Global recognized EMS Requirements
• A positive effect on Environmental Compliance and Performance
• Improved Environmental Awareness Involvement and Competency
• Better Internal and External Communication
• Improved Efficiency, Reduced Costs Greater Consistency
• Better Relationships with Regulators

Final report of the US EPA environmental management system pilot program for local government entities - USEPA 2000
• Increased Reportable Accidents
• Increased Lost time Accidents
• Increased workman’s Comp Claims
• Globally Recognized OSH Management Requirements
• Parallels ISO 9001 and ISO 14001
• Promotes reduced employee Health and Safety risks
• Greater assurance of conformance with Occupational Health and Safety procedures
• Deployment of continual improvement OSH Safety Management System
Pyramid
• 1998 Building Services Reorganization
• 2002 CMS Implements “Tools for Schools”
• 2004 CMS receives Tools for School Excellence Award
• 2006 Development of continuous improvement plans
• 2006 Building Services receives Baldrige NCAfE level II
• 2007 Building Services receives ASBO facilities master award
• 2007 CMS receives Tools for Schools Sustained Excellence Award
• 2008 Facility Department Commence Development of ISO 9001 QMS
• 2008 CMS enters into ESI partnership with NCDENR
• 2009 CMS receives EPA National Mentor of the Year Award
• 2009 CMS named as Public Corporation of the Year for Minority Business
• 2011 Facility Departments attain ISO 9001 Certification
• 2011 Other Auxiliary Services Departments Commence ISO 9001 Process
Management and Administration – Responsibilities and Staff

• Key Business Functions:
• Design Procurement and Management
• Construction Services Procurement and Management
• FF*E Purchase and Installation
• Project closeout or warranty management

Technology – systems software
Facilities – Real Property Managed
Regulatory Mandate – The approval maze
Finance – funding source, expenditures by source by budget category
Best Management Practices
Target environment description – Performance level desire
Benchmarks
CIP Oversight – Executive Sponsor, CIP owner, CIP project manager
KEY Performance Indicators and Tactics – Performance Results and Improvement Plans