**Code 800/Suborbital and Special Orbital Projects Directorate**

# Management System Implementation Plan for FY 2006

**Approved:**

*Original Signed by*
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**Director of Suborbital and Special Orbital Projects**

## 1.      GENERAL

The GSFC Quality Manual and supporting Management System (MS) directives and procedures identify the MS processes and their applications.   The implementation of these MS processes is defined by the Agency, Center, and Directorate level directives.

This implementation plan shall be re-evaluated and published annually.

## 2.      APPLICABILITY

The MS applies to all organizational elements of the SSOPD for performance work that is within the scope of the Center's MS.

Contractors shall be subject to the MS to the extent specified in their contracts.

## 3.      GSFC IMPLEMENTATION PLAN LINKAGE

SSOPD has identified objectives and goals derived from the NASA Strategic Plan.  The following goals best link with the SSOPD mission:

**a.      Science Enabling**
To serve as a national resource for discovery in Earth and space science and technology development.  To provide increased opportunities for scientists to make new measurements by increasing flight opportunities across a wide range of instrument platforms and to expand the capabilities of these platforms and the instruments, sensors, and data systems they house.

**b.      Technology Development**
To maintain the capabilities as a Center of Excellence for research in Earth science, space science and technology, as well as project and business management.  To establish value-added partnerships and collaborations in order to optimize capabilities to achieve the Center's mission to transfer new knowledge and technology and expansion of new capabilities to industry and the public.  Also to establish collaborations with local, regional, and state level customers in elementary/secondary education; higher education, including minority universities; and informal education venues.

**c.      Human Capital**
To accomplish the Center's mission through a vital and effective workforce.  To make a commitment of management and resources to ensure that employees receive the training, developmental experiences and tools they need to attain the highest levels of professional excellence and personal growth in order to perform the Center's mission.  To assemble and sustain the best possible workforce of leaders and managers, scientists, engineers, technologists, project managers, administrators, and support personnel.

## 4.      SSOPD OBJECTIVES, METRICS FOR FY 2006

| Traceability to NASA Strategic Plan | SSOPD Objectives | Metrics associated with each objective |
|---|---|---|
| Science Enabling | 1.  Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  Success Rate<br>1.2  Safety Statistics<br>1.3  Timeliness (scheduling)<br>1.4  Customer Feedback<br>1.5  Customer Satisfaction |
| Technology Development | 2.  Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity | 2.1  Success Rate<br>2.2  Safety Statistics<br>2.3  Timeliness (scheduling)<br>2.4  Customer Feedback<br>2.5  Customer Satisfaction |
| Human Capital | 3.  Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1 Mentor Statistics (official program)<br>3.2 Mentee Statistics (official program)<br>3.3 Supervisors Receiving Required Training<br>3.4  Personnel given developmental assignments |

Code 800 offices shall establish office-level goals and metrics that support the Directorate's objectives and ensure that they are understood at all levels within their organization.  (Attachment A).

The metrics/goals associated with each directorate objective shall be reviewed twice a year (6-month intervals) in order to monitor the overall effectiveness of each process.

SSOPD Objectives 1, 2,  – Statistics on our technical performance and educational outreach will be generated annually for continual improvement and additional opportunities. Customer feedback from our external customers shall be collected and analyzed for areas of continual improvement. The Directorate obtains customer feedback in various ways (web based Directorate database, letters, emails, project debriefings, surveys, verbal, etc.).

SSOPD Objective 3 – Training and mentoring shall be reviewed annually to ensure that the directorate is on track in providing continual educational growth of all personnel.

## 5.      REPORTING OF DIRECTORATE STATUS

SSOPD management will summarize and present the Directorate status to the Executive Council as part of the GSFC MS Management Review.  Record:  GSFC MS Management Review Report.

Major projects within the Code 800 Directorate, as determined by the Directorate Office, shall conduct Monthly Status Reviews (MSRs) for Code 800 senior management and

management from other organizations involved in the project including, but not limited to, Code 500, partners, and participating scientists.  These reviews shall cover status issues, schedules, risk assessment, and other points of interest.  These reviews also shall cover project level, system level and subsystem level discussions as appropriate.  . The Director of SSOPD or his designee shall chair these reviews.   Record:  SSOPD Monthly Status Review Summary.

Semi-Annually, each office shall submit to the directorate's MS representative their metric/goal data showing the previous year's data, current year's goals, and current year-to-date information in order to monitor the overall effectiveness of each process.  Record: MS Objective/Goal Status  (Attachment B – template).

The Director of SSOPD shall be briefed by the directorate's MS representative on the status of the Directorate's MS.  Included in this briefing is an analysis of directorate objectives, metrics, and goals as well as a review of nonconformance reports and synopsis of customer evaluation records.  Record:  MS Objectives/Goal Status.

## 6.      ANALYZING THE DIRECTORATE'S MS

Annually the Directorate's MS shall be analyzed to plot trends and identify any systemic issues.  From this analysis the Directorate shall look for continual improvement areas, lessons learned opportunities, and will provide a corrective action plan for areas that have shown a decline in reaching goals.   Record:  MS Objectives/Goal Status, FY Wrap-up.

# Change History Log

| Revision | Effective Date | Description of Changes |
|---|---|---|
| Baseline | June 9, 2003 | |
| A | August 1, 2003 | Section 4 – Objectives/Metrics for 2003 removed metric 2.6 (number of new business/project/missions captured)<br>Updated Attachment A (directorate and office objectives)<br>Updated Attachment B (added column for office unique objectives) |
| B | August 7, 2003 | (1) Added Directorate Staff Metric/Goals.<br>(2) Added Office Specific Objectives for Code 830.<br>(3) Removed metric "number of students reached".<br>(4) Added clarification to mentoring statistics.  Statistics must be official GSFC mentoring program.<br>(5) Minor changes to Attachment A (organization charts) and Attachment B (reporting chart) |
| C | January 9, 2004 | (1) Updated plan for FY-04.  This included updating the directorate linkage to the FY 2004 GSFC Implementation Plan<br>(2) Changed from monthly to bi-monthly reporting of each office's submission of their metric/goal data to the directorate office.<br>(3) Added back in the metric "number of students/public reached" to the organizational charts.<br>(4) Changed Safety Statistics from "0%" to "0" on Directorate Goals (Attachment A) and office charts as applicable.<br>(5)  Updates made to each office's goals.<br>(6) Attachment B updated to included more specifics |
| D | November  2004 | Updated plan for FY05<br>Changed review period from bi-monthly to semi-annually.<br>Clarified requirements based on Center Rules Review recommendations.<br>Attachment A - Update to directorate and office goals. |
| E | January 31, 2006 | (1) Updated plan for FY06<br>(2) Global replacement of Quality Management System (QMS) to Management System (MS) to align with the Center.<br>(3) Deleted the Educational outreach objective.<br>(4) Code 802 name change<br>(5) With publication of NPD 1000, the Center level Implementation Plan no longer exist.  SSOPD objectives are now traceable to Agency goals & objectives. |
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| | | |
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**Directorate Goals**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Directorate Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1 success rate | 95% (but no less than 85%) |
| | | 1.2 safety statistics | 0 loss of life, unexpendable property, or work related injury |
| | | 1.3 timeliness (scheduling) | 80% of missions on schedule (exclusive of events outside of our control |
| | | 1.4 customer feedback | 80% feedback from customers |
| | | 1.5 customer satisfaction | 100% but no less than 90% |
| | | | |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1 success rate | 85% |
| | | 2.2 safety statistics | 0 loss of life, unexpendable property, or work-related injury |
| | | 2.3 timeliness (scheduling) | 80% of missions on schedule (exclusive of events outside of our control |
| | | 2.4 customer feedback | 80% feedback from customers |
| | | 2.5 customer satisfaction | 100% but no less than 90% |
| | | | |
| **Human Capital** | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1 number of mentors (official program) | 10% of directorate |
| | | 3.2 number of mentees (official program) | 10% of directorate |
| | | 3.3 number of supervisors receiving required training | 90% |
| | | 3.4 number of personnel given developmental assignments (team assignments) | 30% |

**Directorate Staff Goals**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Directorate Staff Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  success rate | N/A |
| | | 1.2  safety statistics | N/A |
| | | 1.3  timeliness (scheduling) | N/A |
| | | 1.4  customer feedback | N/A |
| | | 1.5  customer satisfaction | N/A |
| | | | |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1  success rate | N/A |
| | | 2.2  safety statistics | N/A |
| | | 2.3  timeliness (scheduling) | N/A |
| | | 2.4  customer feedback | N/A |
| | | 2.5  customer satisfaction | N/A |
| | | | |
| **Human Capital** | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1  number of mentors (official program) | 3 |
| | | 3.2  number of mentees (official program) | 2 |
| | | 3.3  number of supervisors receiving required training | 100% |
| | | 3.4  number of personnel given developmental assignments | 3 |

**Code 801 Resources Management Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 801 Goals |
|---|---|---|---|
| **Science Enabling** | 1.  Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  success rate | N/A |
| | | 1.2  safety statistics | N/A |
| | | 1.3  timeliness (scheduling) | N/A |
| | | 1.4  customer feedback | N/A |
| | | 1.5  customer satisfaction | N/A |
| | | | |
| **Technology Development** | 2.  Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1  success rate | N/A |
| | | 2.2  safety statistics | N/A |
| | | 2.3  timeliness (scheduling) | N/A |
| | | 2.4  customer feedback | N/A |
| | | 2.5  customer satisfaction | N/A |
| | | | |
| **Human Capital** | 3.  Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1  number of mentors (official program) | 1 |
| | | 3.2  number of mentees (official program) | 3 |
| | | 3.3  number of supervisors receiving required training | 1 |
| | | 3.4  number of personnel given developmental assignments | 4 |

**Code 802 Advanced Projects Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 802 Goals |
|---|---|---|---|
| **Science Enabling** | 1.  Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  success rate | N/A |
| | | 1.2  safety statistics | N/A |
| | | 1.3  timeliness (scheduling) | N/A |
| | | 1.4  customer feedback | N/A |
| | | 1.5  customer satisfaction | N/A |
| | | | |
| **Technology Development** | 2.  Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1  success rate | N/A |
| | | 2.2  safety statistics | N/A |
| | | 2.3  timeliness (scheduling) | N/A |
| | | 2.4  customer feedback | N/A |
| | | 2.5  customer satisfaction | N/A |
| | | | |
| **Human Capital** | 3.  Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1  number of mentors (official program) | 1 |
| | | 3.2  number of mentees (official program) | 0 |
| | | 3.3  number of supervisors receiving required training | 1 |
| | | 3.4  number of personnel given developmental assignments | 2 |

Objective:
(1)  Training in current FY ---- Office Goal:  all 802 employees have 40 hours of training
(2)  Serious inquiries for support selected (i.e., new business initiatives)  Directorate Goal:  30%

**Code 803 Safety Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 803 Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  success rate | N/A |
| | | 1.2  safety statistics | Reported for entire Directorate separately |
| | | 1.3  timeliness (scheduling) | 100% of ground safety plans completed prior to scheduled operations.  100% of flight safety plans completed prior to the requested due date. |
| | | 1.4  customer feedback | N/A |
| | | 1.5  customer satisfaction | N/A |
| | | | |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1  success rate | N/A |
| | | 2.2  safety statistics | Reported for entire Directorate separately |
| | | 2.3  timeliness (scheduling) | 100% of ground safety plans completed prior to schedule operations.  100% of flight safety plans completed prior to the requested due date. |
| | | 2.4  customer feedback | N/A |
| | | 2.5  customer satisfaction | N/A |
| | | | |
| **Human Capital** | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1  number of mentors (official program) | 2 |
| | | 3.2  number of mentees (official program) | 2 |
| | | 3.3  number of supervisors receiving required training | 1 |
| | | 3.4  number of personnel given developmental assignments | 2 |

**803 Office Specific objectives:**
 (1)  Percentage of WFF personnel receiving required safety training during calendar year:  Goal:  100%

**Code 810 Sounding Rockets Program Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 810 Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1 success rate | 100% (Program Requirement 85%) |
| | | 1.2 safety statistics | 0 loss of life, unexpendable property, or work related injury |
| | | 1.3 timeliness (scheduling) | 100% of missions on schedule (exclusive of events outside of our control) |
| | | 1.4 customer feedback | 80% of prior year launches |
| | | 1.5 customer satisfaction | 100% satisfaction but no less than 90% |
| | | | |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1 success rate | 100% (Program Requirement 85%) |
| | | 2.2 safety statistics | 0 loss of life, unexpendable property, or work-related injury |
| | | 2.3 timeliness (scheduling) | 100% of missions on schedule (exclusive of events outside of SRP control) |
| | | 2.4 customer feedback | 80% of prior year launches |
| | | 2.5 customer satisfaction | 100% satisfaction but no less than 90% |
| | | | |
| | | | |
| **Human Capital** | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1 number of mentors (official program) | 1 |
| | | 3.2 number of mentees (official program) | 0 |
| | | 3.3 number of supervisors receiving required training | 1 |
| | | 3.4 number of personnel given developmental assignments | 1 |

**Code 820 Balloon Program Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 820 Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1 success rate | 95% (Program Requirement 85%) |
| | | 1.2 safety statistics | 0 mishaps |
| | | 1.3 timeliness (scheduling) (see note 1) | 95% within schedule |
| | | 1.4 customer feedback | 95% feedback obtained |
| | | 1.5 customer satisfaction | 85% satisfaction |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1 success rate | 85% |
| | | 2.2 safety statistics | 0 mishaps |
| | | 2.3 timeliness (scheduling) | 95% within schedule |
| | | 2.4 customer feedback | 95% feedback obtained |
| | | 2.5 customer satisfaction | 85% satisfaction |
| Human Capital | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1 number of mentors (official program) | 1 |
| | | 3.2 number of mentees (official program) | 1 |
| | | 3.3 number of supervisors receiving required training | 1 |
| | | 3.4 number of personnel given developmental assignments (see note 2) | 4 |

Note 1: Balloon missions account for possible delays due to weather. Subsequent opportunities are offered due to delays with objective of getting science mission within ~ 2 year period and not necessarily any given campaign.

Note 2: Example, ULDB development, IEP development, planetary balloon studies, selection panels, standing committees, etc.

**820 Office Specific Objectives:**
(1) Number of commercial/university based partnerships for technology development, test, and operational support
(2) Number of Mentors providing training within 820
(3) Number of Mentees receiving training by 820 Mentors

**Code 830 Aircraft Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 830 Goals |
|---|---|---|---|
| **Science Enabling** | 1. Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1 success rate | 95% missions flown vs scheduled |
| | | 1.2 safety statistics | 0 lost time or $1000 or > property loss |
| | | 1.3 timeliness (scheduling) | 90% on time departures (within 1 day) |
| | | 1.4 customer feedback | 90% feedback obtained |
| | | 1.5 customer satisfaction | 90% satisfaction but no less than 80% |
| | | | |
| **Technology Development** | 2. Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1 success rate | N/A |
| | | 2.2 safety statistics | N/A |
| | | 2.3 timeliness (scheduling) | N/A |
| | | 2.4 customer feedback | N/A |
| | | 2.5 customer satisfaction | N/A |
| | | | |
| Human Capital | 3. Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1 number of mentors (official program) | 1 |
| | | 3.2 number of mentees (official program) | 1 |
| | | 3.3 number of supervisors receiving required training | 1 |
| | | 3.4 number of personnel given developmental assignments | 2 |

**830 Office Specific Metrics**
(1) Operate B-200 efficiently in a closely controlled manner.
(2) Meet or exceed customer expectations on the P-3 Missions
(3) Meet or exceed customer expectations on the DC-8 missions
(4) Increase Education Outreach (i.e., Increase direct curricula activity with UMES, increase intern activity through projects)

**Code 840 Range and Mission Management Office**

| Implementation Plan | Code 800 Objectives | Metrics Associated w/Objectives | Code 840 Goals |
|---|---|---|---|
| **Science Enabling** | 1.  Enable scientific research through the development and deployment of low-cost highly capable suborbital and orbital research payload carriers and science platform mission services | 1.1  success rate | 100% based on defined per-mission success criteria |
| | | 1.2  safety statistics | 0 loss of life, no unplanned destruction of property/equipment, or work related injury |
| | | 1.3  timeliness (scheduling) | 100% missions completed on time exclusive of events outside of our control |
| | | 1.4  customer feedback | 80% of customers responding via debriefs, etc. |
| | | 1.5  customer satisfaction | 90% based on responses received |
| | | | |
| **Technology Development** | 2.  Enable aerospace technology and facilitate commercial use of space through advance technology development, test, operational support, and facilitation of the commercial launch activity. | 2.1  success rate | 100% based on defined per-mission success criteria |
| | | 2.2  safety statistics | 0 loss of life, no unplanned destruction of property/equipment, or work related injury |
| | | 2.3  timeliness (scheduling) | 100% missions completed on time exclusive of events outside of our control |
| | | 2.4  customer feedback | 80% of customers responding |
| | | 2.5  customer satisfaction | 90% based on responses received |
| | | | |
| **Human Capital** | 3.  Ensure that employees receive the training, developmental experiences, and tools they need to attain the highest levels of professional excellence and personnel growth | 3.1  number of mentors (official program) | 2 |
| | | 3.2  number of mentees (official program) | 2 |
| | | 3.3  number of supervisors receiving required training | 2 |
| | | 3.4  number of personnel given developmental assignments | 8 |

**840 Office Specific Objectives:**
(1) Each employee participate in 1 training class annually: goal
(2) Number of Project Managers taking 40 hours of training in current FY: goal
(3) Number of mentors (other than official program)
(4) Number of mentees (other than official program)

Attachment B

# MS Objective/Goal Status

Organization _____

Date _____ to _____

| Metrics Associated with Objectives | 2005 FY Actuals | 2006 FY Goal | 2006 FY to-Date-Data |
|---|---|---|---|
| **OBJECTIVE 1** | | | |
| 1.1 Success Rate (based on _____ missions) | | | |
| 1.2 Safety Statistics | | | |
| 1.3 Timeliness (scheduling) | | | |
| 1.4 Customer Feedback (based on _____ received) | | | |
| 1.5 Customer Satisfaction (based on _____ received) | | | |
| **OBJECTIVE 2** | | | |
| 2.1 Success Rate (based on _____ missions) | | | |
| 2.2 Safety Statistics | | | |
| 2.3 Timeliness (scheduling) | | | |
| 2.4 Customer Feedback (based on _____ received) | | | |
| 2.5 Customer Satisfaction (based on _____ received) | | | |
| **OBJECTIVE 3** | | | |
| 3.1 Number of Mentors (official program) | | | |
| 3.2 Number of Mentees (official program) | | | |
| 3.3 Number of Supervisors Receiving Required Training | | | |
| 3.4 Number of Personnel Given Developmental Assignments | | | |
| **OFFICE SPECIFIC OBJECTIVE(S)** | | | |
| **1.** | | | |
| **2.** | | | |
| **3.** | | | |

Objective 1 and 2    List the type of mission/event/flight/activity as well as the quantity