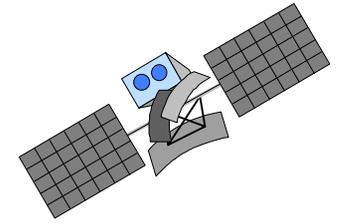


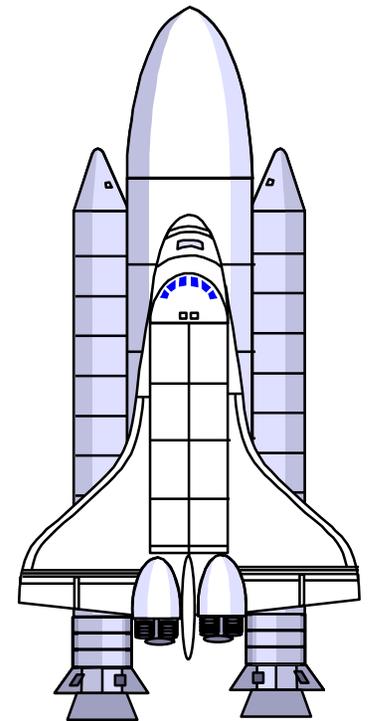
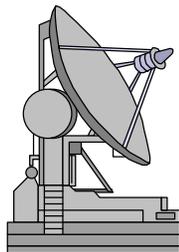
*INTRODUCTION TO*

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# ISO 9000

NASA / MSFC



# What is ISO 9000 ?

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- ISO : International Organization for Standardization
- Family of International Quality Standards
  - Independent of any specific industry or economic sector
  - Provides guidance for Management
  - Identifies “What” but not “How”
  - 20 basic elements are described

# What is ISO 9000 ? (con't)

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## ISO 9000 Family (Quality Systems)

- **ISO 9001** - Design through Service
- **ISO 9002** - Manufacturing through Service (less Design)
- **ISO 9003** - Final Inspection and Test

# The 20 Elements of ISO 9001

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1. Management Responsibility
2. Quality System
3. Contract Review
4. Design Control
5. Document & Data Control
6. Purchasing
7. Control of Customer Supplied Product
8. Product Identification and Traceability
9. Process Control
10. Inspection and Testing
11. Control of Inspection, Measuring and Test Equipment
12. Inspection and Test Status
13. Control of Nonconforming Product
14. Corrective and Preventive Action
15. Handling, Storage, Packaging, Preservation and Delivery
16. Control of Quality Records
17. Internal Quality Audits
18. Training
19. Servicing
20. Statistical Techniques

Note: MSFC's goal is to use as many existing procedures as possible

# NASA's Transition to ISO 9000 Management Policy

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- NMI 1270.3 Management Policy (Signed by Mr. Goldin on 12/06/95)
  - NASA & NASA Suppliers comply with ISO 9000
  - Applicable to NASA Headquarters & Centers
  - NASA Center Directors have the authority, accountability, and responsibility for implementation and oversight at their Centers
  - Safety and Mission Assurance is responsible for facilitating, providing implementation guidance, training, and oversight

# Compliance vs. Registration

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- **Compliance** - When we say we meet all the requirements of ISO 9000 via self assessments and self audits
- **3rd Party Registration** - When an outside registrar [certified by the Registration Accreditation Body (RAB) and with no interest in the company being audited] performs an audit(s) and certifies that all the requirements of ISO 9000 have been met.
  - Internationally recognized in meeting standards
  - Enables us to deal with contractors already certified

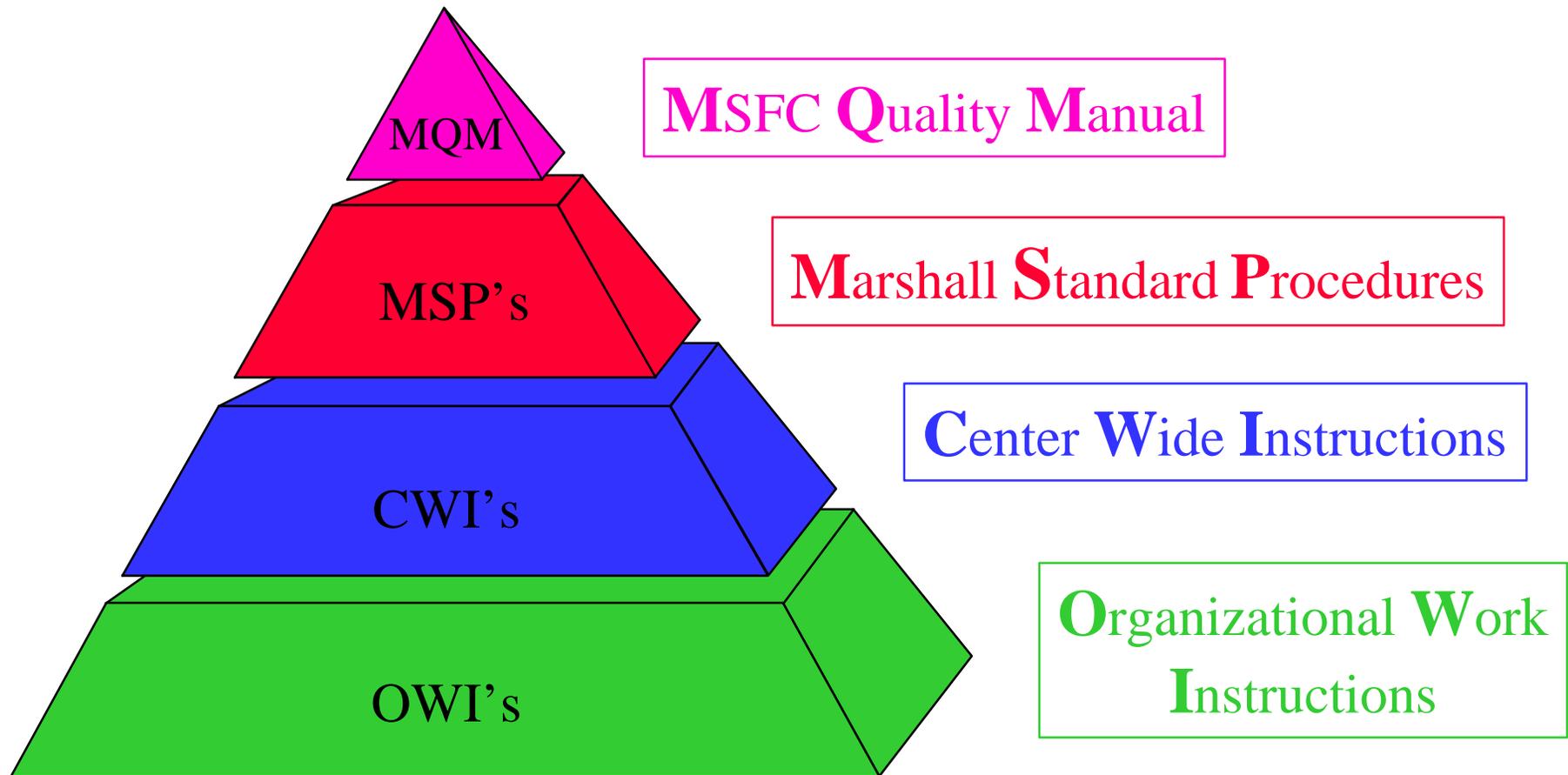
# Reasons for Transition

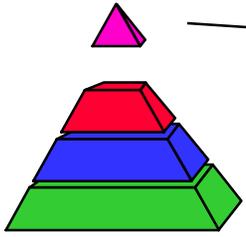
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- One Quality System for everyone
- Consistent implementation
- Simplicity and Efficiency
- More compatible with the International market
- Market direction
- Purge redundancies

# MSFC Quality System Documentation Pyramid (ISO 9001 format)

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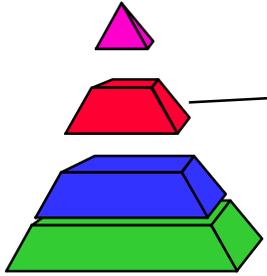


# MSFC Quality Manual (MQM)

(Tells **WHAT** is being controlled)

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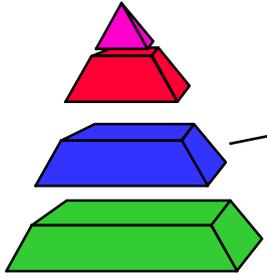
- Describes overall system
- States policy
- Commits to quality
- Lists authorities, responsibilities & interrelationships
- Includes or refers to procedures



— Marshall Standard Procedures (MSP's)  
(Tells **HOW** in general terms)

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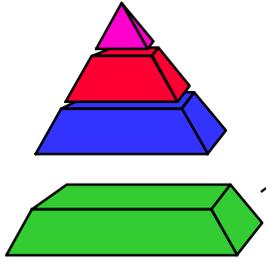
- Handles *inter* departmental (cross-functional) flows and controls
- Tells How system is implemented
- Operating controls for processes and systems



Centerwide Work Instructions (CWI's)  
(Tells **HOW** by categories of the SLP's)

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- Handles *inter* departmental (cross-functional) flows and controls for specific sub-categories of the SLP's with more details
- Tells more details on How system is implemented than MSP's
- Operating controls for QA processes and systems



## Organization Work Instructions (OWI's) (Tells **HOW** in specific terms)

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- Handles *intra* departmental (internal) activities
- Provides detailed information for individuals
- Explain how to:
  - Perform specific duties
  - Prepare forms, etc.

# MSFC ISO 9000 Implementation Team

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- Established a MSFC Working Group to implement ISO 9000 with key individual from a cross section of MSFC
- Bob Schwinghamer is the Chairperson of Working Group
- Implementation Team Responsibilities
  - Determines Policy for ISO 9000 at MSFC and for our Contractors
  - Coordinates/initiates procedure/directive changes to implement ISO 9000
  - Detailed issues: Training, Contract SOW's, Procedure Hierarchy and changes, Quality Assurance Manual, Implementation Plan and Schedule

# Benefits

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- Reduced Documentation
- One Quality System for everyone
  - Simplicity and Efficiency
  - Consistency among MSFC Labs/facilities, Contractors, other NASA Centers, and our International Partners
- Shuttle restructuring benefits (USA Contract requires 3rd Party Registration) - ensures consistency among contractors/vendors/suppliers

# Goals

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- Use as many existing procedures as possible
- Consolidate duplicative procedures
- Goal for Documentation Compliance Jun 1997
- Third Party Registration by February 1998