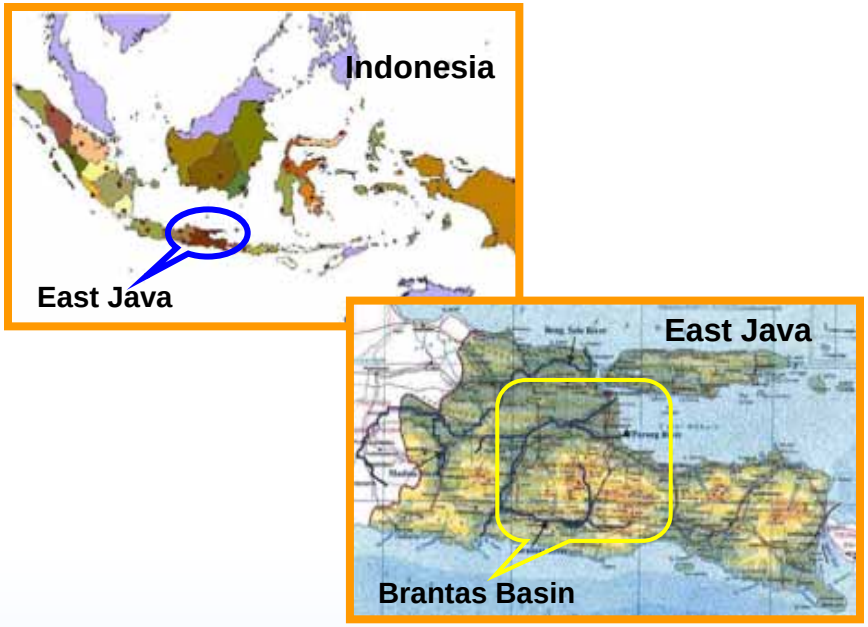
Implementation of the Quality management System ISO 9001: 2000 in Integrated water resources Management the Brantas River Basin - Indonesia

Jasa Tirta I Public Corporation

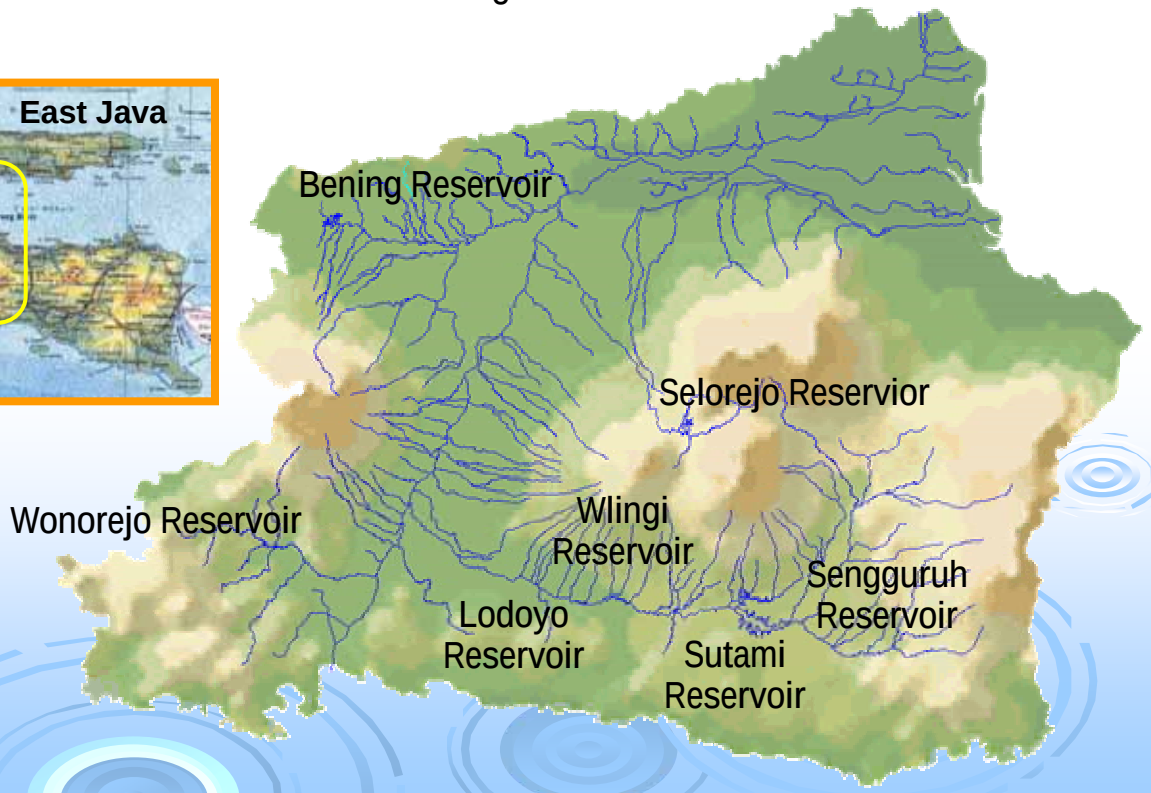
Sertifikat No. ID03/0127

Presented by : Alfan Rianto

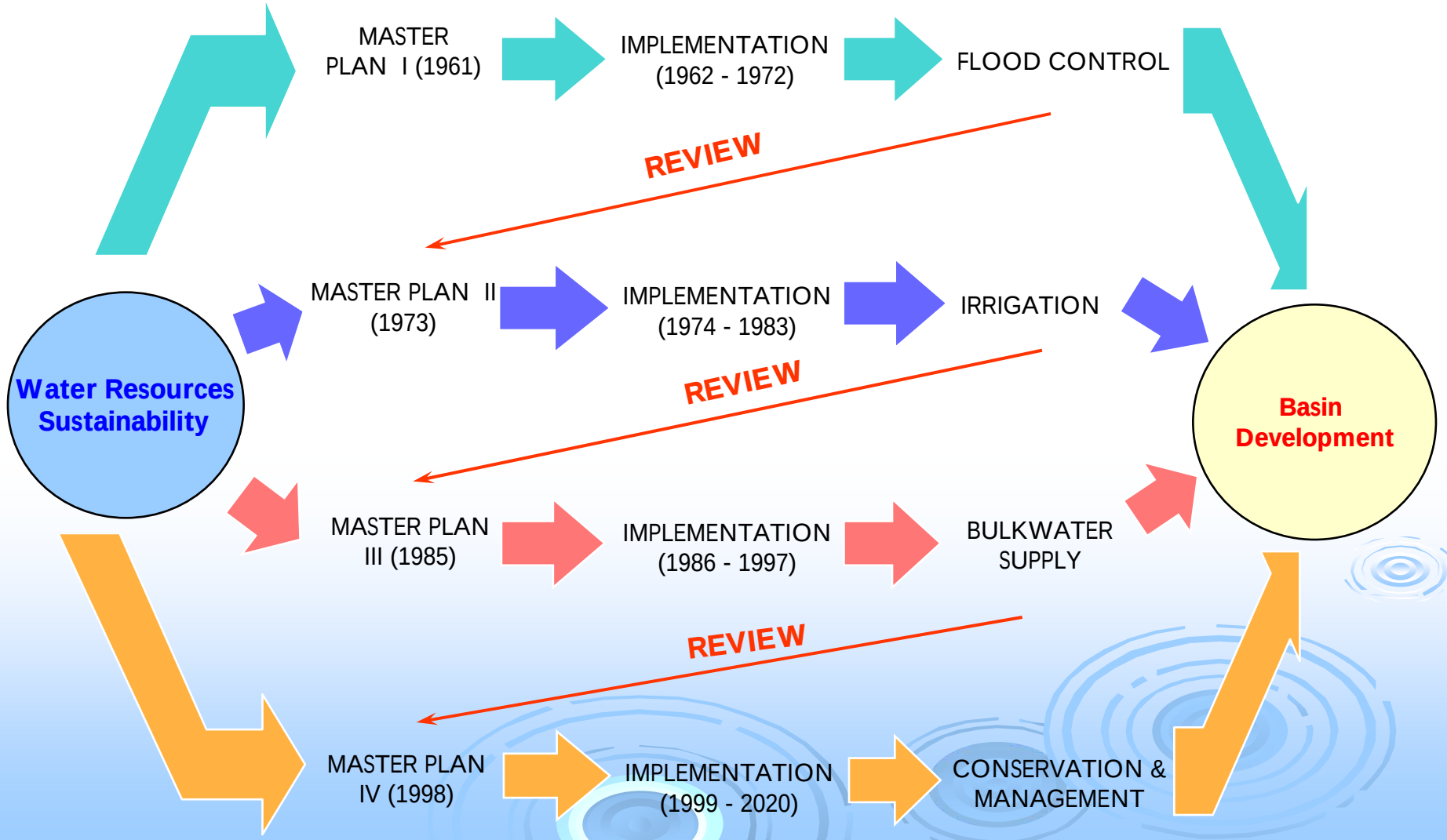
Brantas River Basin, Indonesia



Brantas River System
Catchment area 11.800 km
Main river length 320 km



Development Scheme

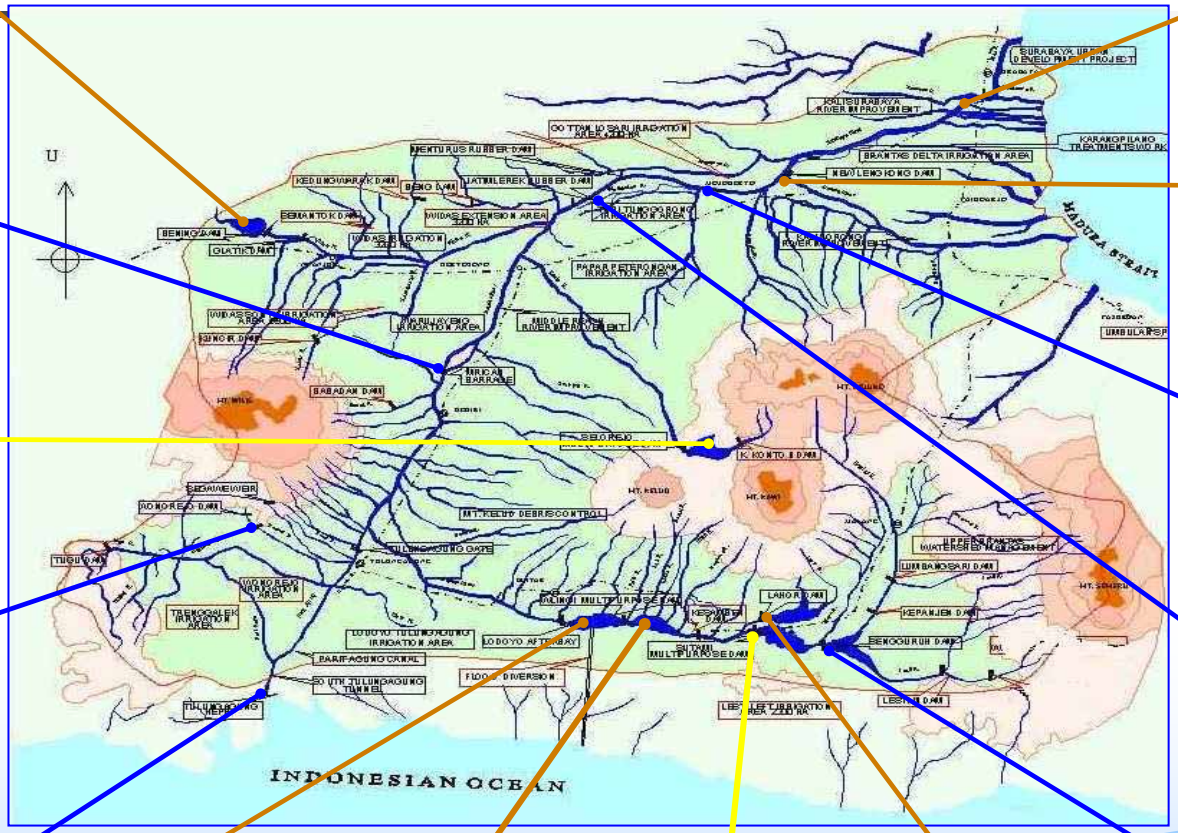


Development of Brantas River Basin

Master Plan I (1961 - 1973)

Master Plan II (1974 - 1985)

Master Plan III (1986 - 2000)




Bening Dam (84)


Waru-Turi B. (92)


Selorejo Dam (72)


Wonorejo Dam (00)


T.Agung Tunnel (91)


Lodoyo Dam (83)


Wlingi Dam (78)


Sutami Dam (72)


Lahor Dam (77)


Sengguruh Dam (88)


Gunungsari B. (81)


New Lengkong B (74)


Menturus R.D (93)


Jatimlerek R.D (93)

Development Benefits

- Water Resources Infrastructure (1961 – 2000)
  - 5 annually operated reservoirs
  - 3 daily operated reservoirs
  - 5 weirs
  - Tunnels, gates, dikes, spurs and rubber dams
- Total Investment (1961 – 2000)
  - Present value at Rp 7,300 billion (2000) = US $ 912 million

Development Benefits

- Flood control : 50 year return period flood
- Irrigation : 350.000 ha (83.000 ha direct)
- Inland fisheries : 15.000 ha
- Energy : 1.200 million kWh (annually)
- Bulkwater
  - Domestic : 225 million m3 (annually)
  - Industry : 140 million m3 (annually)

Role of Brantas Basin to East Java

- Population
  - East Java 35,2 million – Brantas 15,2 million (43%)
- Husked Rice
  - East Java 9,0 million ton annually – Brantas 2,3 million ton (26%)
- Hydro-Generated Energy (Installed Capacity)
  - East Java 277 MW – Brantas 268 MW (97%)
- Gross Domestic Product (GDP)
  - East Java Rp 152,900 billion – Brantas Rp 89,000 billion (58%)

Company's Vision
JASA TIRTA I PUBLIC CORPORATION

Sertifikat No. ID03/0127

- Water resources management by a professional, innovative and sustainable state-owned company with complete stakeholder participation.

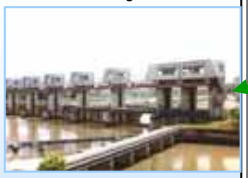
WATER RESOURCES INFRASTRUCTURE


Bening Dam


Jati Rubber Dam


Colo Barrage


Wonogiri Dam


Mrican Barrage


Floodway Sedayulawas


Gunungsari Barrage

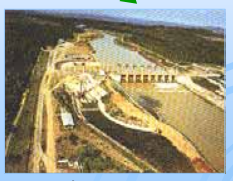

New Lengkong Barrage


Menturus Rubber Dam


Jatimlerek Rubber Dam


Wonorejo Dam


T.Agung Coastal Hydro Electric Power


Lodoyo Barrage

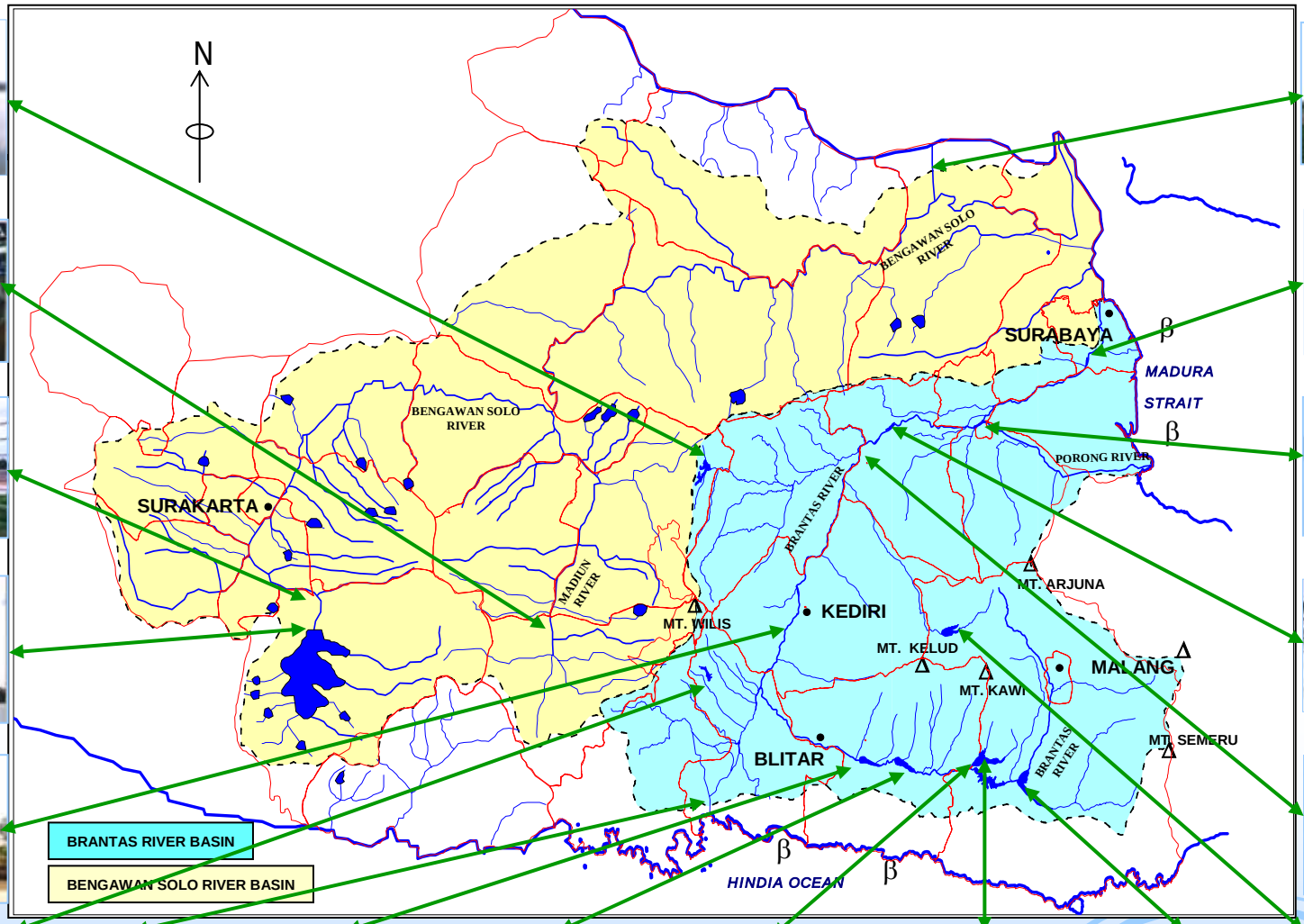

Wlingi Barrage


Sutami Dam


Lahor Dam


Sengguruh Dam


Selorejo Dam



LOCATION OF ONLINE WATER QUALITY MONITORING STATIONS AND AUTOMATIC INDUSTRIAL FLOW METER

Mission Statement

Jasa Tirta I Public Corporation

- Render prime and qualified water resources services for the public utilization in order to achieve fulfillment of the mutual needs.
- Manage water resources effectively and efficiently by means of conducting operation and maintenance of water infrastructure, conservation, utilization, and control measures of its destructive forces, as assigned by the Government through stakeholder participation.
- Carry out corporate management for good governance achievement.

Quality Policy

- The directors and staff intends to continuously improve corporate management quality in a professional manner to fulfill costumer's satisfaction and mutual needs through consistent implementation of the Quality Assurance System ISO 9001:2000.
- In order to achieve this objective the management promises to:
  - Conduct sustainable water resources management and dealings.
  - Implement awareness and attention to all employees in order to provide qualified services.
  - Maintain professionalism and harmony for conducive working environment.
  - Improve cooperation with related institutions and stakeholders.

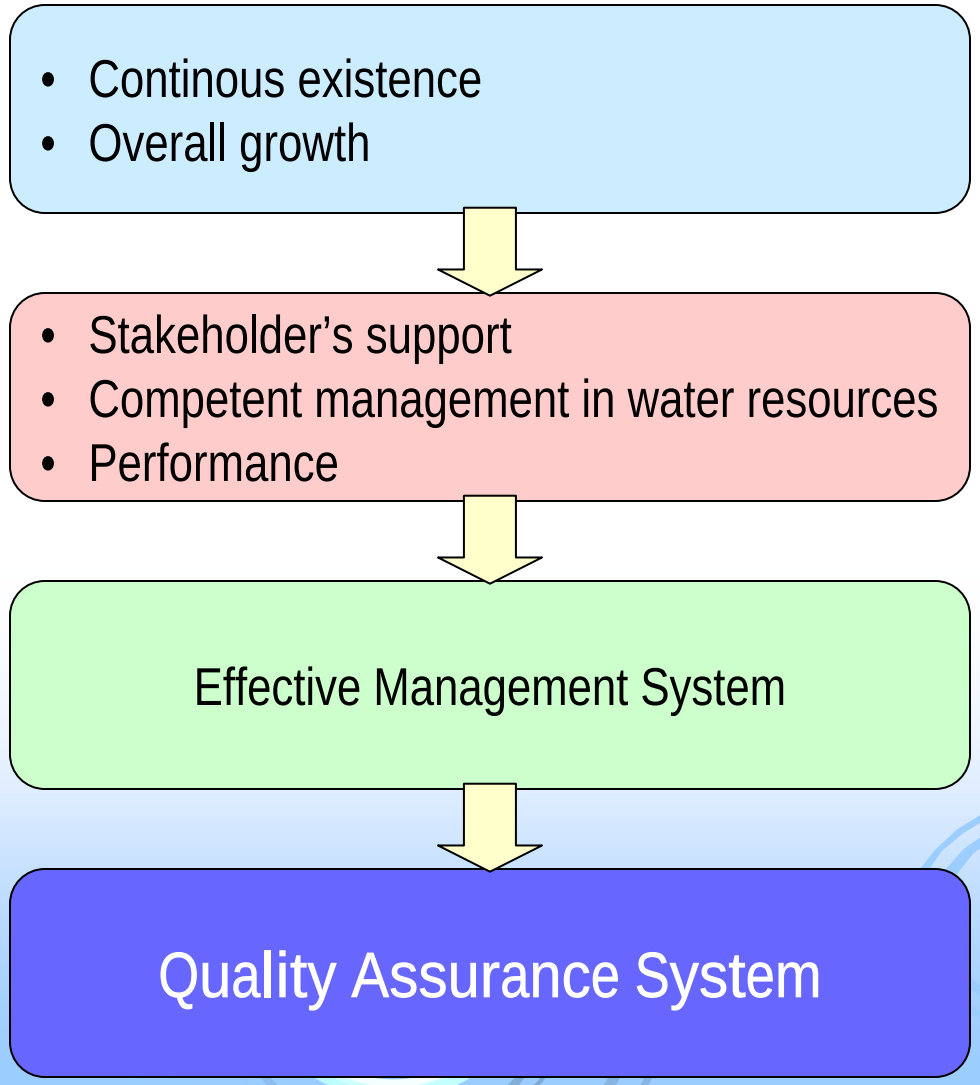
Motto

Identity by Quality

Company's Culture

- Holistic water resources development and management
- Professional management plan for clean, proper and healthy business
- Caring and active
- Improvement of the environment quality
- Prime services to the beneficiaries and stakeholders
- Team work and cooperation as keys to success
- Innovative, harmonious and security
- Responsible and consistent to the company's goals

Background


• Continous existence
• Overall growth
• Stakeholder's support
• Competent management in water resources
• Performance
Effective Management System
Quality Assurance System

Reasoning to Adopt Quality Assurance

- To anticipate stakeholders and beneficiaries' request
- Instrument to meet better water resources management according to the global standards
- Effective system is required to improve the company's performance
- In accordance to the ADB's recommendation, whereas Jasa Tirta is a pilot for water resources management in Asia
- Efficient, effective and consistent corporate management

Management Expectations

- Improve efficiency
- Improve employee's integrity
- Optimum time and resources usage
- Improve employee's capacity and responsibility
- Better communication and improvement in information quality
- Better customer and supplier relationship
- Responsive towards stakeholders' complaints

Scope and Process of Quality Certification

- Scope of certification: planning, operation and maintenance of water resources and its infrastructure within the Brantas River Basin
- Certification process:
  - 1996-1997 Preparations
  - 1997 Certification by SGS-ICS
  - 1997-2000 Implementation
  - 2000-2002 Upgrading to ISO 9001:2000
  - 2003 Certification for ISO 9001:2000

Certification Process

- First Stage
  - Establishment of the core management team
  - Selection of quality assurance system
  - Formulation of management commitment
  - Socialization of ISO 9001 quality management system

Certification Process

- Second Stage
  - Development of the quality management system
  - Preparation of the related documents:
    - Water allocation in the basin
    - Flood control mechanism
    - Infrastructure operation and maintenance
  - Socialization of the related procedures, manuals and steps

Certification Process

- Third Stage
  - System trial
  - Internal audit trainings
  - System implementation
  - Execution of internal audits
  - Corrective action plans and preventions
  - Quality improvement meetings

Problems Encountered

- System development:
  - Lack of comprehension of the quality assurance/management necessity and benefit
  - References of quality assurance/management in water resources sector is limited/scarce
  - Difficulties in “translating” ISO 9001 elements into water resources management activities

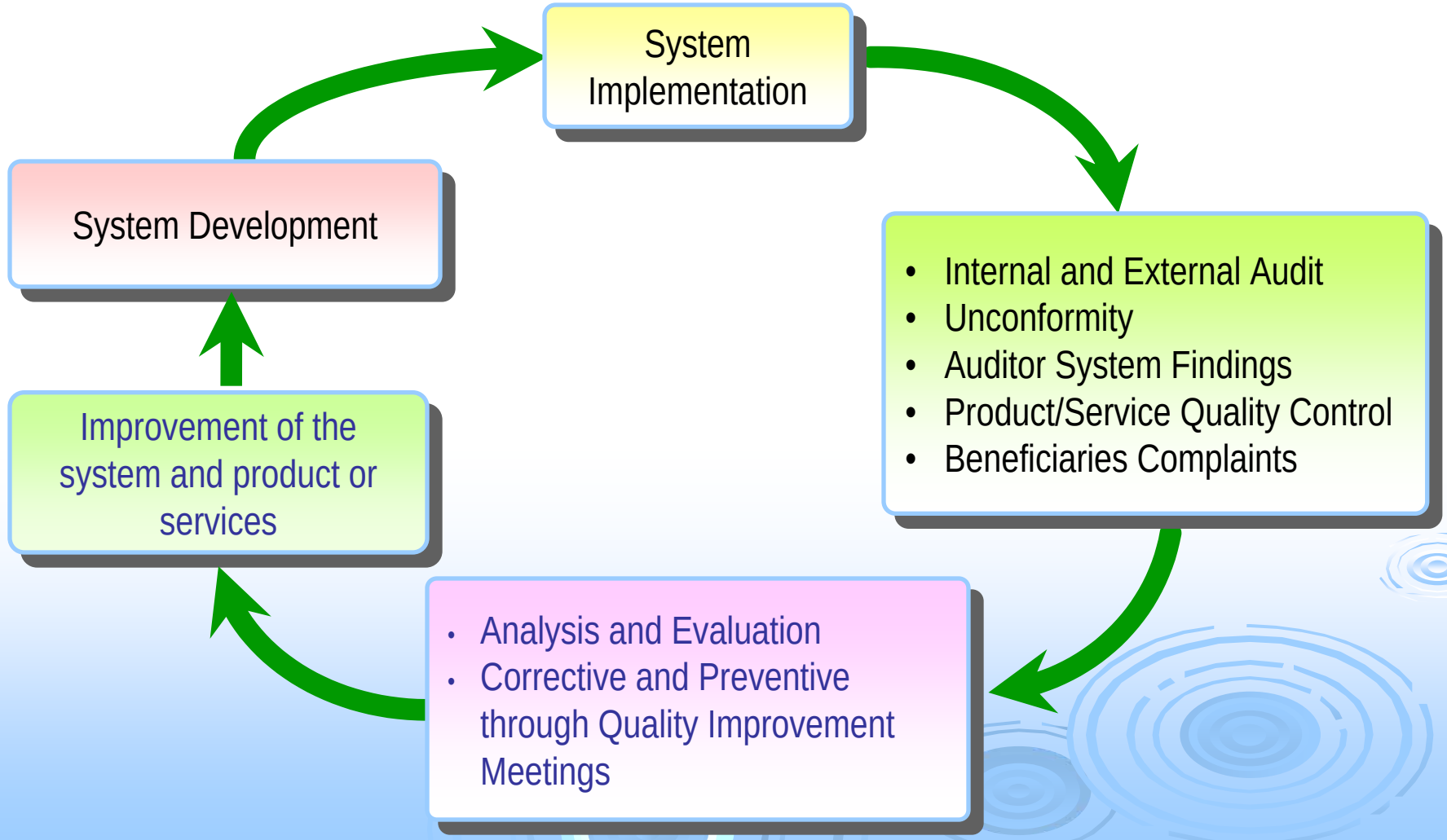
Problems Encountered

- System implementation:
  - Reluctant to improve/change
  - Quality management system is seen as another managerial burden
  - Lack of discipline in documentation
  - The quality management system adds new tasks and activities, like: quality objective, quality plan, identification of uncompleted products etc.

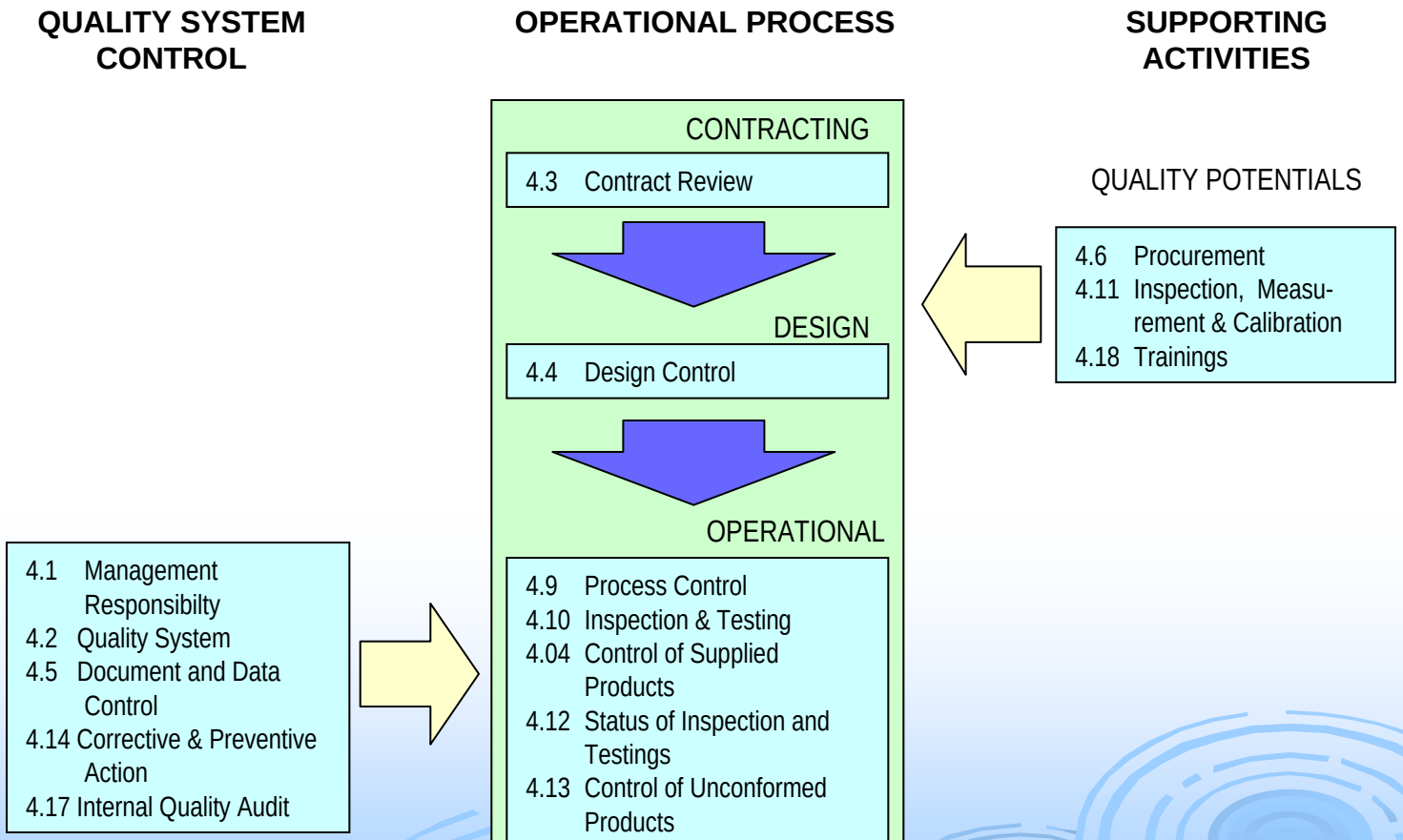
Key of Success

- Prime commitment from the lowest level to the highest rank in the company
- The organization must be in a stable or secure condition
- High motivation and discipline

Cycle of Quality Improvement

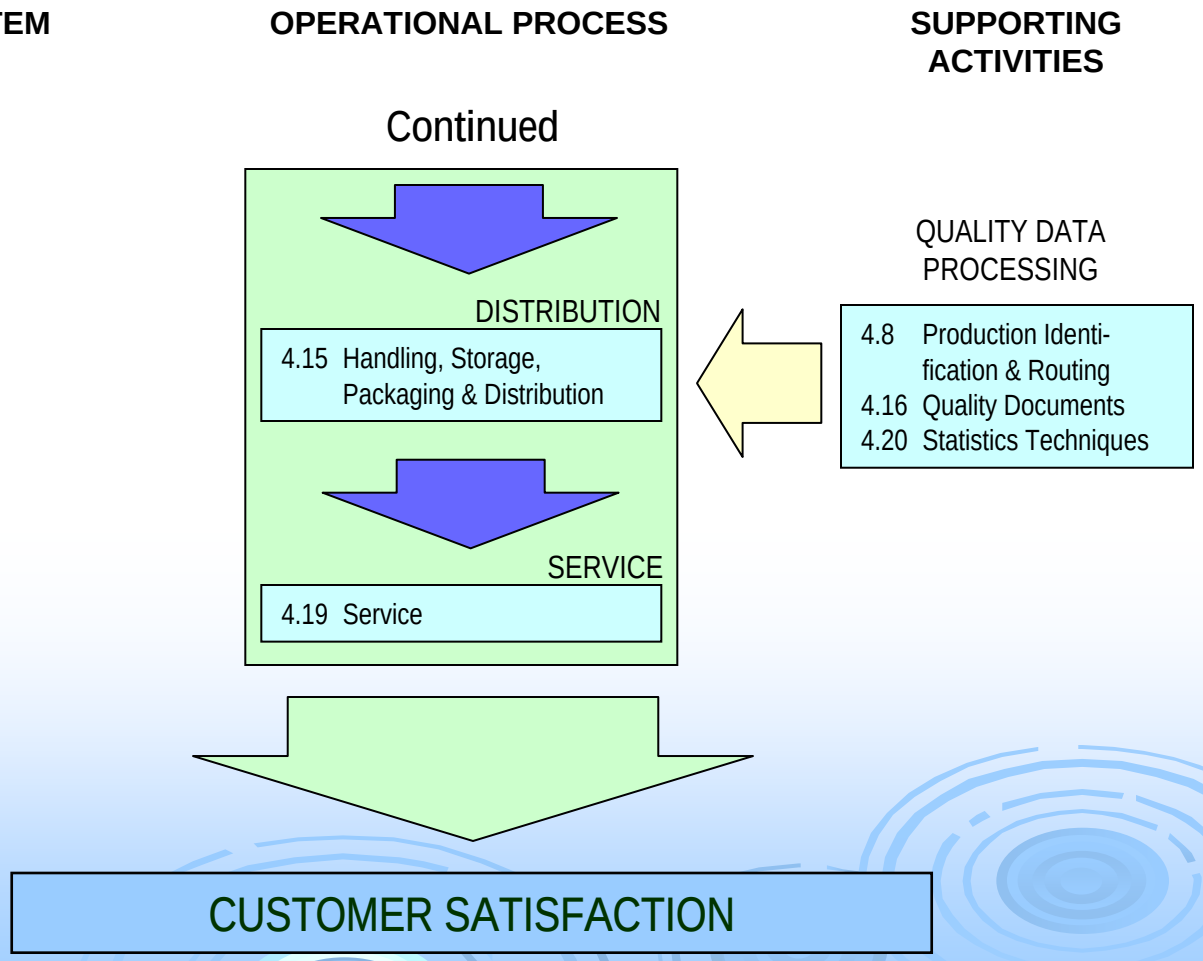


ISO 9000:1994

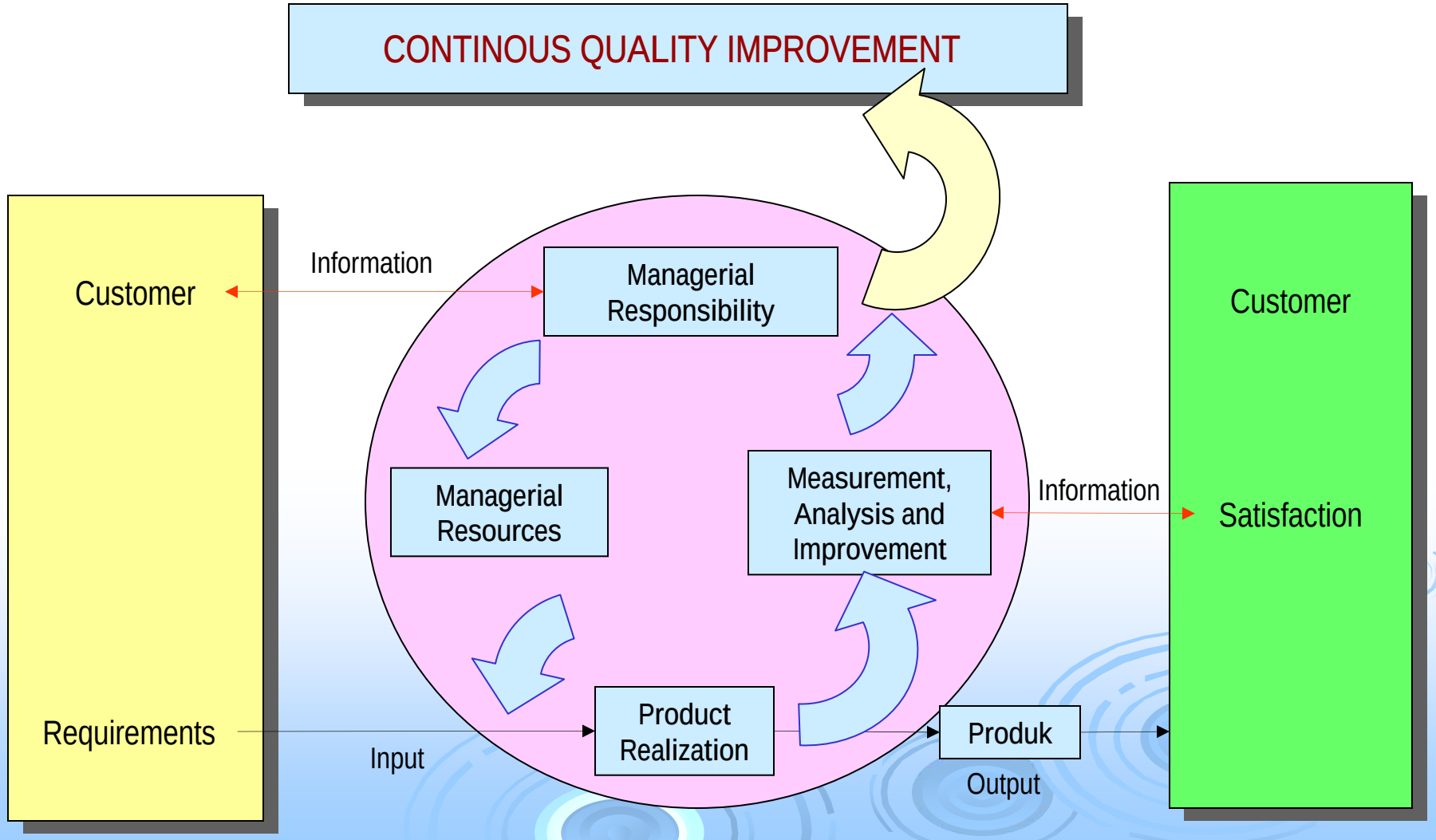


Continued
Continued

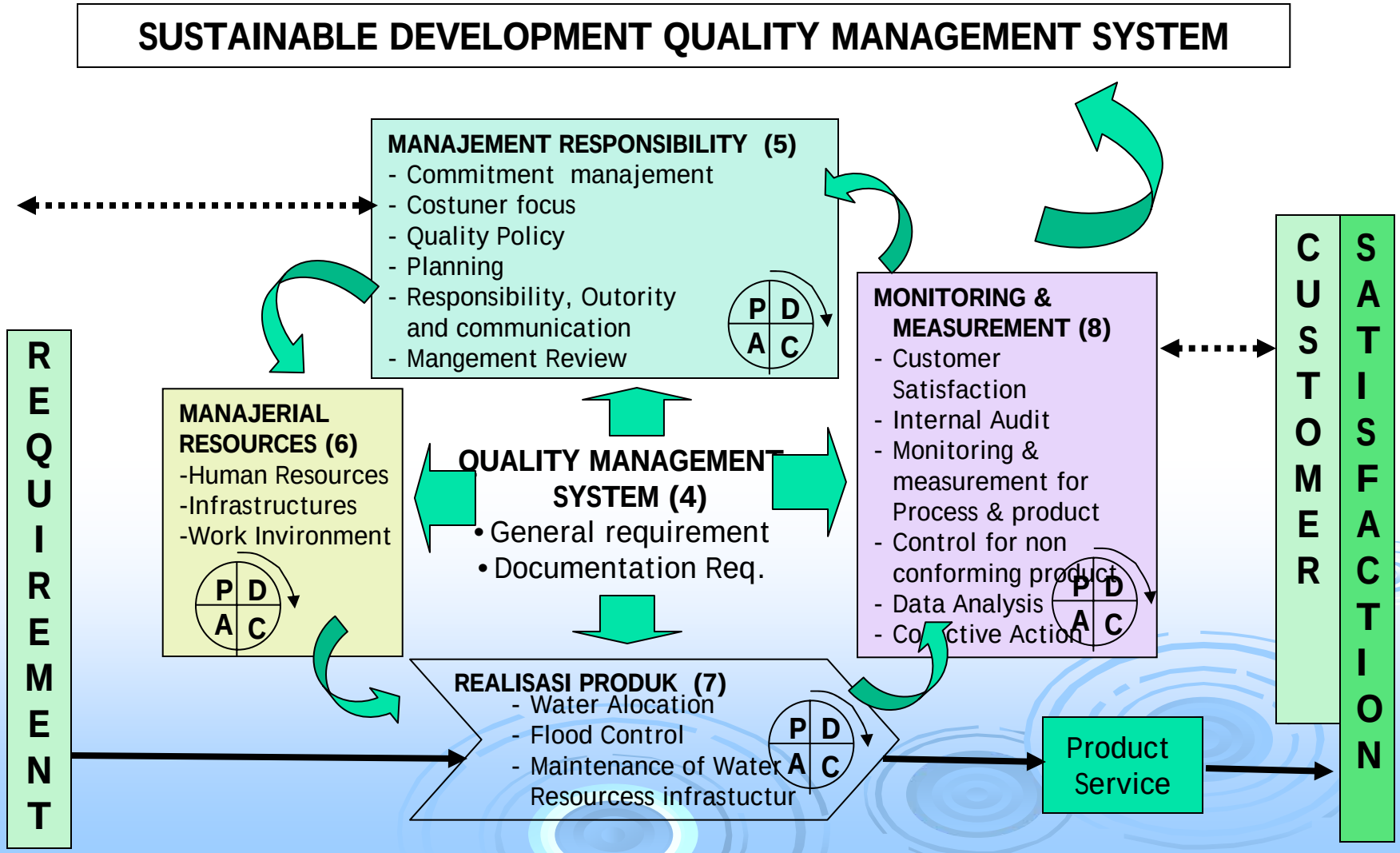
ISO 9000:1994

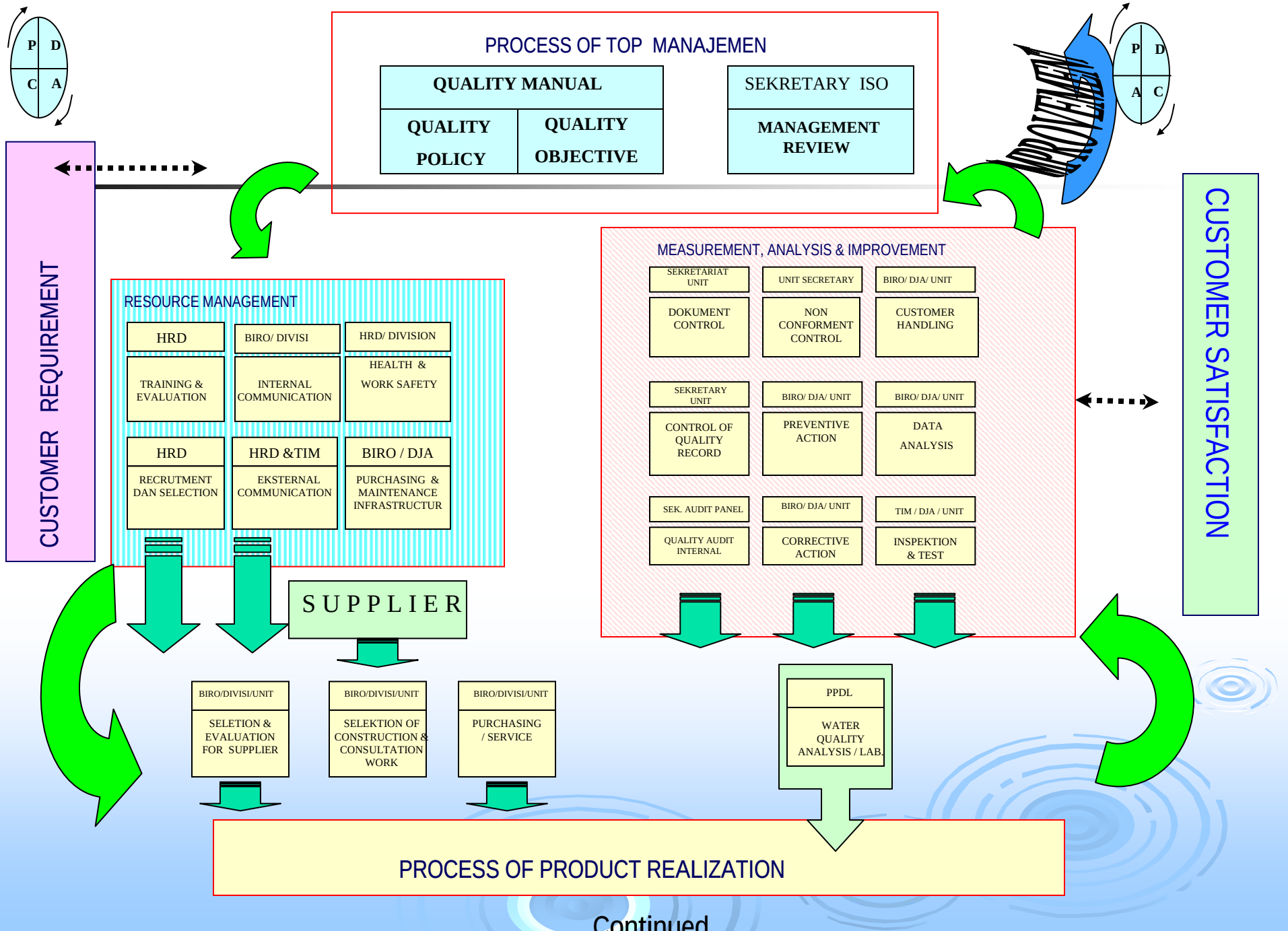


ISO 9000:2000

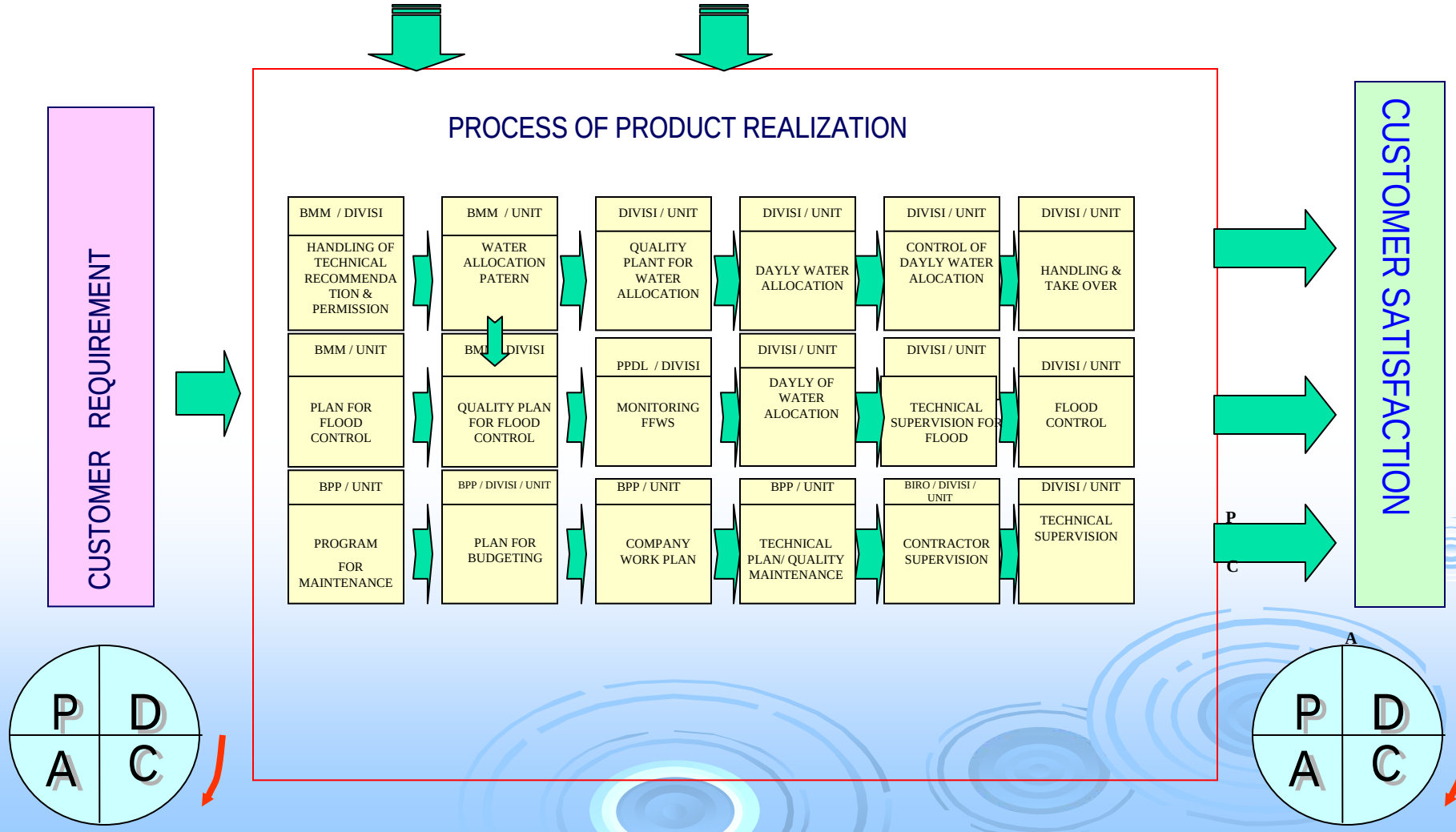


IMPLEMENTATION QS ISO 9000 on BRANTAS RIVER BASIN




PROCESS OF TOP MANAJEMEN
QUALITY MANUAL
QUALITY POLICY
QUALITY OBJECTIVE
SEKRETARY ISO
MANAGEMENT REVIEW
IMPROVEMENT
P D C A
P D A C
CUSTOMER REQUIREMENT
CUSTOMER SATISFACTION
RESOURCE MANAGEMENT
HRD
BIRO/ DIVISI
HRD/ DIVISION
TRAINING & EVALUATION
INTERNAL COMMUNICATION
HEALTH & WORK SAFETY
HRD
HRD &TIM
BIRO / DJA
RECRUTMENT DAN SELECTION
EKSTERNAL COMMUNICATION
PURCHASING & MAINTENANCE INFRASTRUCTUR
MEASUREMENT, ANALYSIS & IMPROVEMENT
SEKRETARIAT UNIT
UNIT SECRETARY
BIRO/ DJA/ UNIT
DOKUMENT CONTROL
NON CONFORMENT CONTROL
CUSTOMER HANDLING
SEKRETARY UNIT
BIRO/ DJA/ UNIT
BIRO/ DJA/ UNIT
CONTROL OF QUALITY RECORD
PREVENTIVE ACTION
DATA ANALYSIS
SEK. AUDIT PANEL
BIRO/ DJA/ UNIT
TIM / DJA / UNIT
QUALITY AUDIT INTERNAL
CORRECTIVE ACTION
INSPEKTION & TEST
SUPPLIER
BIRO/DIVISI/UNIT
SELETION & EVALUATION FOR SUPPLIER
BIRO/DIVISI/UNIT
SELEKTION OF CONSTRUCTION & CONSULTATION WORK
BIRO/DIVISI/UNIT
PURCHASING / SERVICE
PPDL
WATER QUALITY ANALYSIS / LAB.
PROCESS OF PRODUCT REALIZATION

Continued


CUSTOMER REQUIREMENT
PROCESS OF PRODUCT REALIZATION
BMM / DIVISI
HANDLING OF TECHNICAL RECOMMENDATION & PERMISSION
BMM / UNIT
WATER ALLOCATION PATERN
DIVISI / UNIT
QUALITY PLANT FOR WATER ALLOCATION
DIVISI / UNIT
DAYLY WATER ALLOCATION
DIVISI / UNIT
CONTROL OF DAYLY WATER ALOCATION
DIVISI / UNIT
HANDLING & TAKE OVER
BMM / UNIT
PLAN FOR FLOOD CONTROL
BMM / DIVISI
QUALITY PLAN FOR FLOOD CONTROL
PPDL / DIVISI
MONITORING FFWS
DIVISI / UNIT
DAYLY OF WATER ALOCATION
DIVISI / UNIT
TECHNICAL SUPERVISION FOR FLOOD
DIVISI / UNIT
FLOOD CONTROL
BPP / UNIT
PROGRAM FOR MAINTENANCE
BPP / DIVISI / UNIT
PLAN FOR BUDGETING
BPP / UNIT
COMPANY WORK PLAN
BPP / UNIT
TECHNICAL PLAN/ QUALITY MAINTENANCE
BIRO / DIVISI / UNIT
CONTRACTOR SUPERVISION
DIVISI / UNIT
TECHNICAL SUPERVISION
P
C
CUSTOMER SATISFACTION
P
D
A
C
A
P
D
A
C

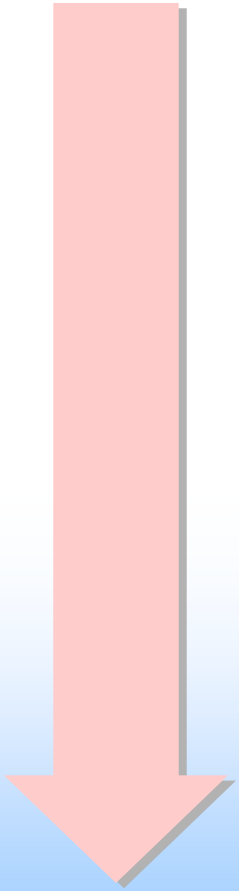
Certification Benefits

- Operational aspect of the company is not affected by change of the employed workforce (better working methods)
- Improvement in the company's performance
- Stakeholders' complaints are better handled and anticipated
- Main tasks are undertaken more efficient and effectively
- Appreciation from external parties to the company's existence increases

Certification Benefits

- Pilot concept for water resources management at the basin-wide perspective in Indonesia
- Better relationship between stakeholders and beneficiaries

Post-certification Path



- Motivation decreases
- Certain unfamiliar procedures are neglected
- Operational process became more complicated
- Obstruction of procedures
- Unconformed products and services starts to exists
- Audit findings increases
- Objections to the existing system quality
- Quality system became neglected
- Certificate is post-poned

Anticipation of Post-certification Problems

- On time and better preventive and correction plan
- Consistent correction in line to the audit findings
- Direct identification and analysis to weaknesses within the quality management system
- Annual evaluation to ensure completion of the quality objective and quality plan
- Providing a task force to ensure quality management accelaration and endorsement within the company
- Convening the task force to ensure quality competence to quality management improvement

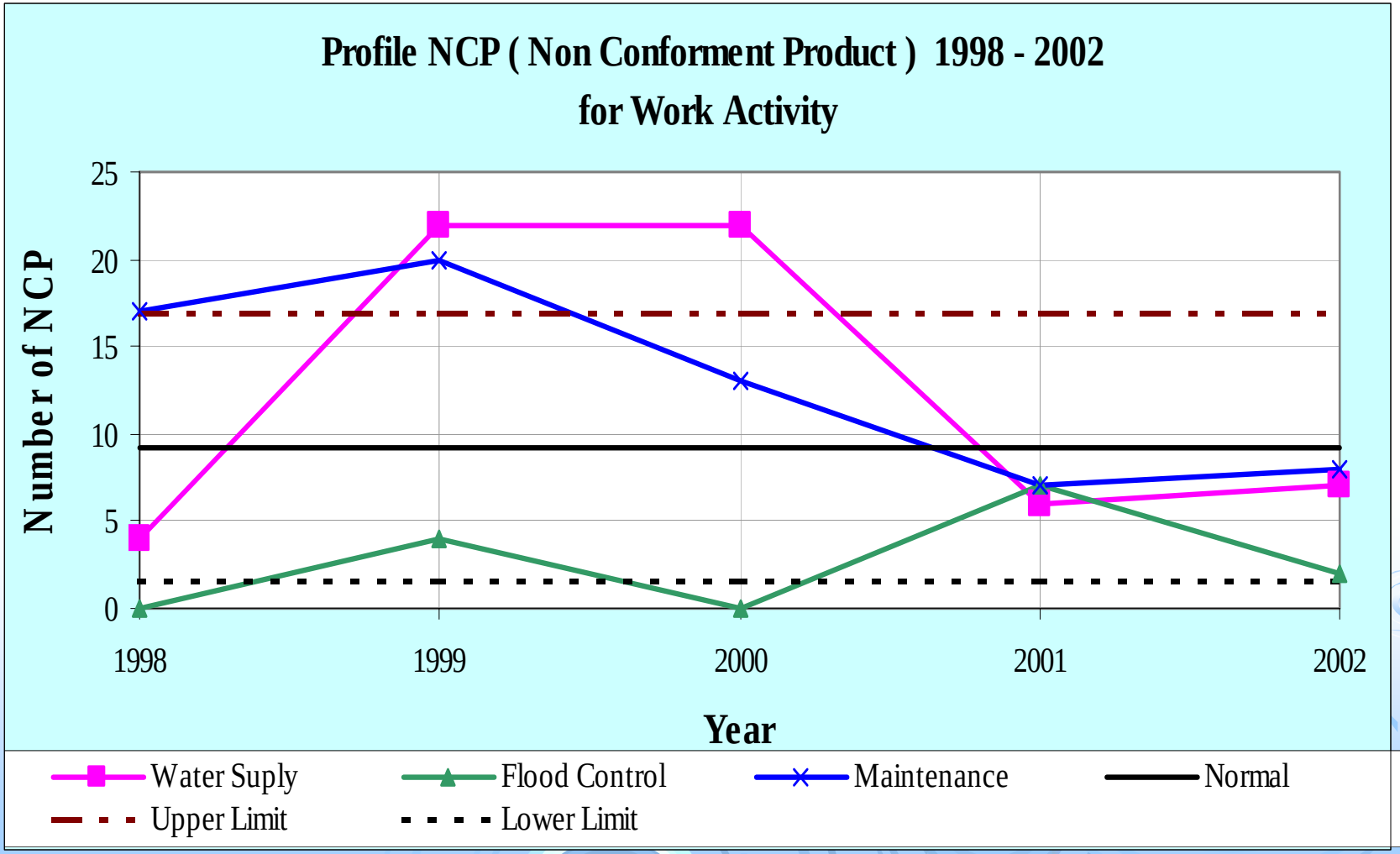
ISO 9000:1994 to ISO 9000:2000

- ISO 9000:1994 – Element based with standarized documentation protocols
- ISO 9000:2000 – Basically management process

ISO 9000:1994 to ISO 9000:2000

- Eight Quality Management Principles:
  - Customer Focus Organization
  - Leadership
  - Involvement of People
  - Process Approach
  - System Approach to Management
  - Continual Improvement
  - Factual Approach to Decision Making
  - Mutually Beneficial Supplier Relationship

Evaluation


Profile NCP (Non Conforment Product) 1998 - 2002
for Work Activity
Number of NCP
25
20
15
10
5
0
1998
1999
2000
2001
2002
Year
Water Suply
Flood Control
Maintenance
Normal
Upper Limit
Lower Limit

ISO 9000 : 2000

1. Scope
2. Normative reference
3. Term and definitions
4. Quality Management system
5. Management Responsibility
6. Resource Management
7. Product Realization
8. Measurement, Analysis & Improvement

ISO 9000 : 1994

1. Scope
2. Normative reference
3. Term and definitions

4.1. Management Responsibility
4.2. Quality System
4.3. Contract Review
4.4. Design Control
4.5. Document and Data Control
4.6. Purchasing
4.7. Control of Customer Supply Product
4.8. Product Identification & Treacebility
4.9. Process Control
4.10. Inspection and Testing
4.11. Inspection, Measuring and Test Equipment
4.12. Inspection and Testing Status
4.13. Control of Nonconforming Product
4.14. Correction and and Preventive Action
4.15. Handling, Storage, Packing, Preservation and Delivery
4.16. Quality Record
4.17. Internal Quality Audits
4.18. Training
4.19. Servicing
4.20. Statistical Technique

Thank you!