CLOVER™ INFOTECH

# Quality Management System (QMS) Awareness

# Version History

| Ver No | Review Date | Author | Reviewed By | Approved by | Description of The Revision |
|---|---|---|---|---|---|
| 1.2 | 15 Sep 20 | Nisha Bandodkar | Nisha Bandodkar | Lakshmi Mittra | Revised text for clarity |
| 1.3 | 25 Mar 21 | Nisha Bandodkar | Nisha Bandodkar | Lakshmi Mittra | Added defect slide |
| | | | | | |

# Agenda

- What is Quality
- Quality: Standards, Frameworks, Models
- CLOVER – VISION, MISSION STATEMENT, Values
- Clover QMS and Quality Policy
- The Quality Challenges
- Quality Assurance and Quality Control
- What's expected from each of us ?

# Objectives

Primary Objective of this session -

- Basics of Quality and Processes at Clover Infotech

The Stages In Our Quality Journey

# What is Quality


User friendly


Meeting Requirements

Performance


| | |
|---|---|
| Quality must be | SYSTEM-ORIENTED |
| Quality must be | CUSTOMER-FOCUSED |

# Quality definition by Experts

"Fitness for use”

*Joseph M Juran*

“Conformance to requirements, not as goodness”

*Philip Crosby*

“Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for”

*Peter Drucker*

“Quality is Predictability”

*W.Edwards Deming*

“Degree to which a set of inherent characteristic fulfills requirements. The standard defines requirement as need or expectation”

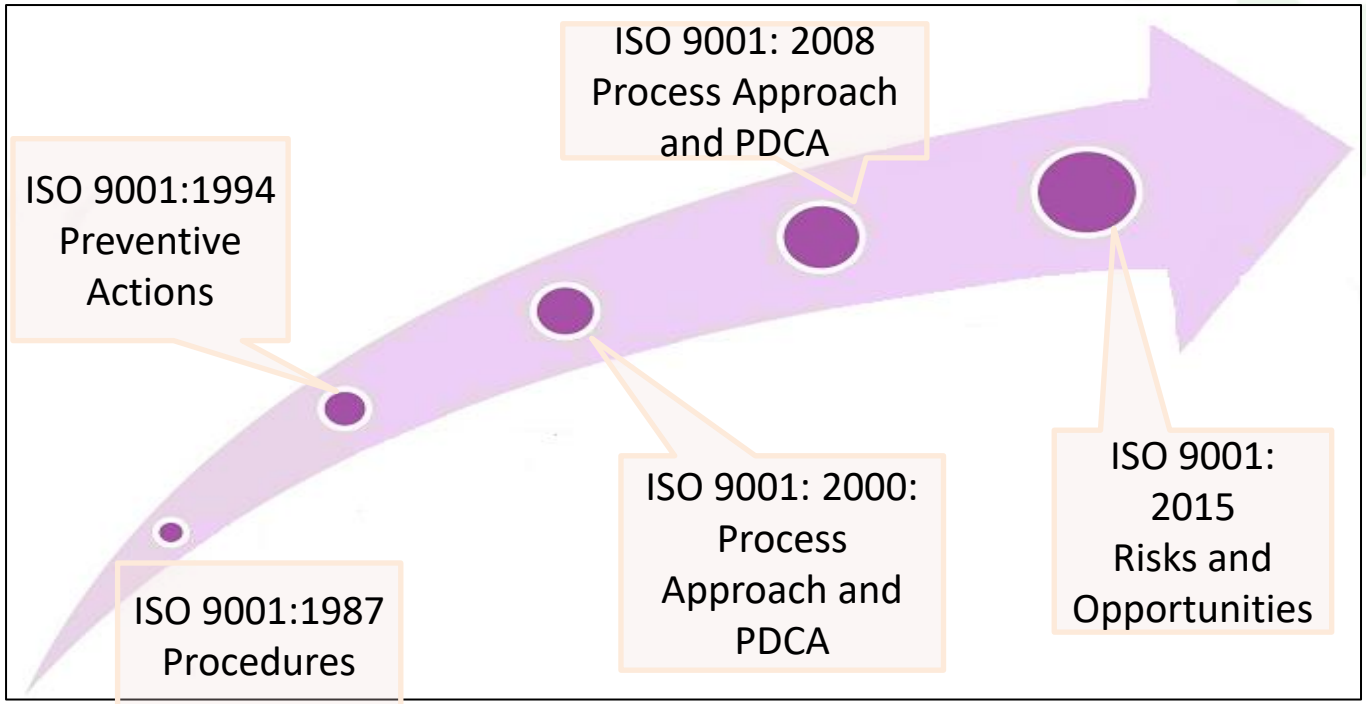
# Quality: Standards, Frameworks, Models




- Set of rules that control how products are developed.
- Set of rules which manage people, process, technology, systems, services and materials.
- Encapsulation of industry best practices
- Helps to satisfy business goals and objectives
- Guide for continuous improvement

# Evolution of Standard - ISO 9001:2015

- International Standards for Quality Assurance
- Lists out processes to be followed
- Document a Quality System
- Comply to the Quality System




PDCA*: Plan Do Check Act

# Models / Standards / Approaches

## Basic Approach for ISO 9001 & ISO 27001

**S**ay what you do

**D**o what you say

**R**ecord what you did

**C**heck on the results

**A**ct on the difference

# CLOVER - VISION & MISSION STATEMENT

To be the most trusted partner to businesses across the globe by making them technology independent

To be the leading provider of reliable and consistent technology services that enables our clients to achieve a competitive edge

*Vision Statement – Focuses on tomorrow and what the organization wants to become

*Mission Statement – Focuses on today and what the organization does

# CLOVER - VALUES


* Values – They are Guiding principles of the Organization

# What is Quality Management System ?

'An organisational framework (generally formal) of policies, **processes**, process accessories, tools and infrastructure to achieve the organisational quality objectives, as derived from its business objectives.'

***Our Quality Management System is*** CLOVER QMS

## Salient Features of CloverQMS

- Acts as central repository for organisational processes
- Establishes a structured and standard manner of formulating processes
- Formalises processes across the organisation
- Establishes common understanding of processes
- Provides standard and consistent way of doing / performing activities across the organisation
- Provides basis for continual improvement
- Inculcates process culture in the organisation

# Our Quality Policy

*We are committed to deliver industry-relevant Client Services that exceed the changing needs of the Clients worldwide.*

*We are committed to provide the highest quality of services to Clients by:-*

- *Exceeding Client's expectations for service performance and quality*
- *Improving our objectives and processes through continuous reviews*
- *Meeting the requirements of International Quality Standards*
- *Engaging employees, ensuring they are aware of and trained in fulfilling Client expectations*
- *Ensuring our work is error free and of excellent quality*
- *Focusing on continuous learning and improvement by upgrading our knowledge, investing in learning & development*
- *Committing to the continual improvement of the Quality Management System.*

***Javed Tapia***

***Managing Director***

# What is a Process?


**Process consists of a sequence of systematic steps or procedures to convert inputs into desired result (Product or service).**

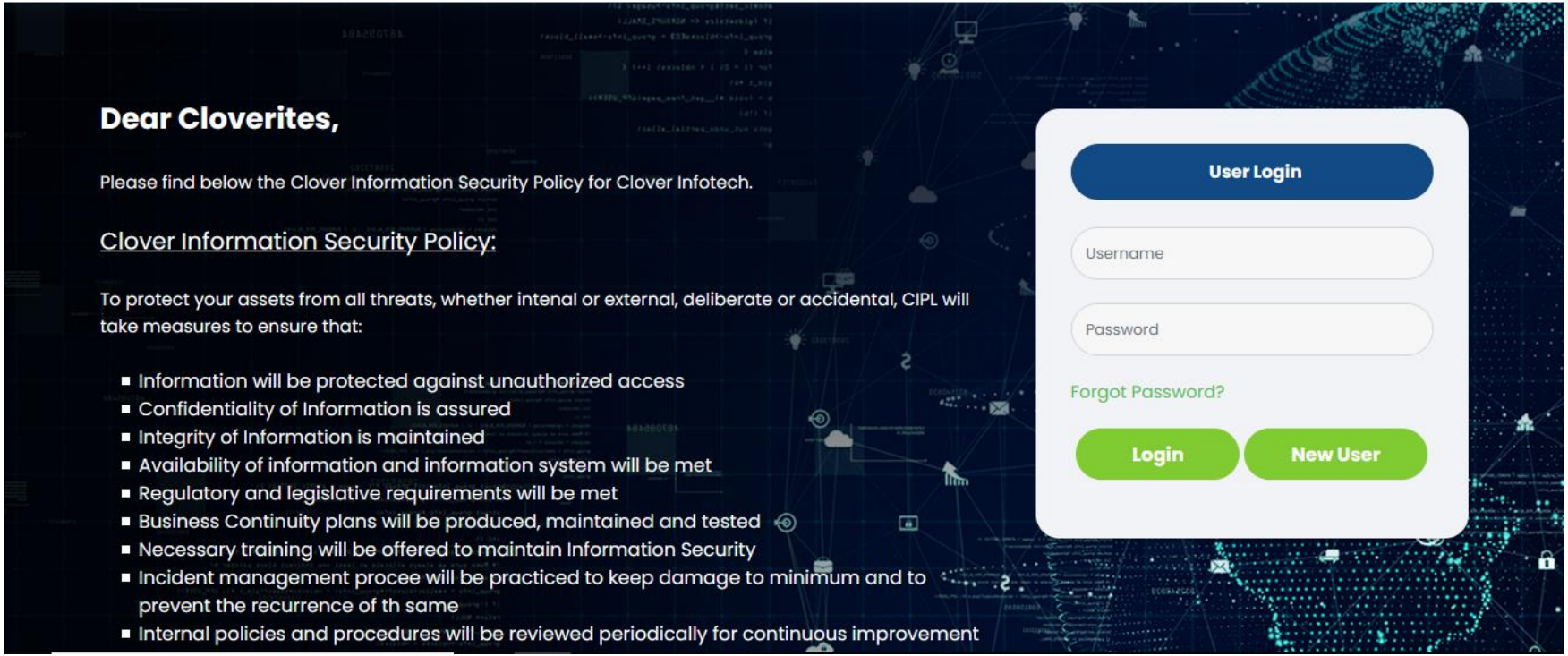
## Examples :

| Input | Process | Output |
|---|---|---|
| Business Requirements | Requirement Gathering | SRS, Signoff records, review records |
| Signed SRS | Design | Signed design documents (HLD, LLD) |
| Signed design | Coding | Source code |

| Input | Process | Output |
|---|---|---|
| Graduates, Test questions, Hardware, Software | Recruitment | Selected candidates, Offer |
| Selected Candidates | Training | Skilled Resources |

**Output of one process will be an input for another process, hence Quality of output in all the process is very essential to deliver the final output with desired quality**

# Clover QMS (https://quality.cloverinfotech.co.in:8083/)



# Clover QMS - Project Lifecycles

**ENGINEERING Process** -

- **Managed IT** – Engineering Process areas based on ITIL framework for Support Projects.

E.g. – Tickets SLA Management, Incident Management, Problem Management, Service Capacity, Service Continuity & Availability.

- **Application Development** – Engineering Process areas based on SDLC life Cycle

E.g. – Requirements, Design, Coding, Testing, UAT.

- **Infrastructure Delivery** –Migration, Conversion ,Implementation and Upgrade Projects.

- **Application Support** – Ticket SLA Management, Change Management in terms of Code based and Configuration based changes.

**COMMON Process** -

- **Project Management** – This Process is common across all Projects

E.g. – Planning, Estimation, Training, Resource Management, Work Schedule Management, Defects Management, Backup, Archival, Risk Management, Configuration Management, Delivery Management, Audits Management, Communication Management.

# Clover QMS - Support Function Processes

- Marketing
- Talent Acquisition
- Corporate Quality
- Project Management Office
- Academy
- Administration
- IT
- HR
- Resourcing
- Sales
- CoE – Centre of Excellence
- Practices

# Clover QMS - Managed IT Process Templates

## Managaed IT Services Team

| Sr. No. | ID | Name | Version Number | Artifact |
|---|---|---|---|---|
| 1. | QMS-L4-FR-MTS-01 | Service Management Plan | 2.0 | |
| 2. | QMS-L4-FR-MTS-02 | Issue Tracking Sheet | 2.0 | |
| 3. | QMS-L4-FR-MTS-03 | Problem & Known error database log | 2.0 | |
| 4. | QMS-L4-FR-MTS-04 | Site Document | 2.0 | |
| 5. | QMS-L4-FR-MTS-05 | System Study Document | 2.0 | |
| 6. | QMS-L4-FR-MTS-06 | Schema assessment /Security Policy document | 2.0 | |
| 7. | QMS-L4-FR-MTS-07 | Backup Policy Document | 2.0 | |
| 8. | QMS-L4-FR-MTS-08 | Monthly Service Report | 2.0 | |
| 9. | QMS-L4-FR-MTS-09 | Incident Report (Intrusion and Breaches) | 2.0 | |
| 10. | QMS-L4-FR-MTS-10 | Test Reports | 2.0 | |
| 11. | QMS-L4-FR-MTS-11 | Sign-off for all deliverables | 2.0 | |
| 12. | QMS-L4-FR-MTS-12 | Monthly Service Report | 2.0 | |

# Clover QMS - Application Development Process Templates

## Application Development Team

| Sr. No. | ID | Name | Version Number |
|---|---|---|---|
| 1. | QMS-L4-FR-ADT-01 | Requirement Understanding Document | 2.0 |
| 2. | QMS-L4-FR-ADT-02 | Requirements Traceability Matrix Form | 2.0 |
| 3. | QMS-L4-FR-ADT-03 | Test Case Form | 2.0 |
| 4. | QMS-L4-FR-ADT-04 | Defect Report Form | 2.0 |
| 5. | QMS-L4-FR-ADT-06 | User Training Feedback Form | 2.0 |
| 6. | QMS-L4-FR-ADT-07 | Unit Test Cases | 2.0 |
| 7. | QMS-L4-FR-ADT-08 | Functional Scope Document | 2.0 |
| 8. | QMS-L4-FR-ADT-09 | High Level Design Document Template | 2.0 |
| 9. | QMS-L4-FR-ADT-10 | Low Level Design Document Template | 2.0 |
| 10. | QMS-L4-FR-ADT-11 | User Manual Template | 2.0 |
| 11. | QMS-L4-FR-ADT-12 | Data Migration Strategy | 2.0 |
| 12. | QMS-L4-FR-ADT-13 | Data Collection Sheet | 2.0 |
| 13. | QMS-L4-FR-MR-04 | Minutes of Meeting Form | 2.0 |
| 14. | QMS-L4-CD-ADT-07 | Standards for System Documentation | 2.0 |

# Clover QMS - Standards & Guidelines

## Application Development Team

| Sr. No. | ID | Name | Version Number |
|---|---|---|---|
| 1. | QMS-L4-GD-ADT-01 | Guidelines for Information Gathering, Study and Analysis | 2.0 |
| 2. | QMS-L4-GD-ADT-02 | Guidelines for Definition of Constraints | 2.0 |
| 3. | QMS-L4-GD-ADT-03 | Guidelines for High Level Design | 2.0 |
| 4. | QMS-L4-GD-ADT-04 | Guidelines for Low Level Design | 2.0 |
| 5. | QMS-L4-GD-ADT-05 | Guidelines for Testing | 2.0 |

| Sr. No. | ID | Name | Version Number |
|---|---|---|---|
| 1. | QMS-L4-CD-ADT-01 | Standards for Coding in Dot Net | 2.0 |
| 2. | QMS-L4-CD-ADT-02 | Standards for Coding in Java | 2.0 |
| 3. | QMS-L4-CD-ADT-03 | Standards for Coding in ASP | 2.0 |
| 4. | QMS-L4-CD-ADT-04 | Standards for Coding in C | 2.0 |
| 5. | QMS-L4-CD-ADT-05 | Standards for Coding in C++ | 2.0 |
| 6. | QMS-L4-CD-ADT-06 | Standards for Coding in VB | 2.0 |
| 7. | QMS-L4-CD-ADT-07 | Standards for System Documentation | 2.0 |

# Quality Management Plan

Quality Management Plan comprises of key metrics monitoring of project objectives, by which the requirements and goals for a service or project are fulfilled

Below mentioned are Project Key Measurements :

| Metric / Objective | Target | How | Source Data |
|---|---|---|---|
| Schedule Variance | 90% | Track Planned vs achieved schedule | Project Schedule |
| Effort Variance | 85% | Track Planned vs achieved efforts | Project Timesheets |
| Number of Critical Defects | </=3 | Measure client reported defects | Defect Reports |
| Achieve Internal/External SLA | 85% | Track incidents against defined SLAs | Incident Reports |
| Process Compliance Index | 70% | Monthly Project audits | Audit Reports |
| Customer Satisfaction Score | >=3 | Score achieved on a scale of 1-5 | Survey Reports |

# The Quality Challenges

## The Mental Blocks to watch out for -

| | |
|---|---|
| **“Quality increases Costs …..”** | Quality Vs Costs |
| **“Quality curbs Creativity …..”** | Quality Vs Creativity |
| **“Defects…”** | Insufficient Reviews |
| **“Do Work now. Do Quality later; -maybe …..”** | Alienation from Work |
| **“Quality is done by Quality Department …..”** | Ownership / Responsibility |

# Defects

Anything that adversely impacts the expected functionality
Eg. Incorrect logic, Missing functionality


Anything that reduces the quality of a work product
Eg. Performance issues


Any variance from a desired requirement, attribute or functionality

**A defect is a deviation from specifications, whether missing, wrong, or extra**

# How do I find Defects & ensure Product Quality?

QA


- Standards
- Checklist
- Program specs
- Unit test plan
- Domain Knowledge

Testcase Reviews

Code Reviews

Design Reviews

Plan Reviews

Review Types : Offline, Walkthrough & Inspection


QC

Unit Testing

Integration Testing

System Testing

User Acceptance Testing

# Quality Control Vs Quality Assurance

| QC | QA |
| --- | --- |
| Focus on Product | Focus on Process |
| Reactive | Proactive |
| Find defects | Prevent defects |
| Activities are performed after product is ready | Activities are performed before product is ready |
| Eg. : Integration Testing, UAT, System Testing | Eg. : Defining Process, Reviews, Audits, Training |

**So , which is better?**


- **Prevention is better than cure**

# What's expected from each of us ?

**Expectations -**

- Being responsible for the quality of my work/output
- Differentiating between requirement and solution
- Being customer-oriented
- Participate in quality initiatives
- Adherence to defined processes

# What's in it for you and me?

## Direct and Indirect Benefits for all of us -

- Culture of process and quality
- Clarity of roles and responsibilities
- Uniformity in practice
- Repeatable, measurable, predictable outputs
- Culture of empowerment and innovation
- Customer satisfaction / delight
- Profitability and growth

# Thank You

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