

Task Performance Management

Draft



30th Jan 2020





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Message from the chairman

It is vividly evident that the world witnessed the worst public health and economic crisis due to COVID-19 pandemic. This inevitably mobilized the international community to act seriously and swiftly. However, the mortalities and morbidities induced by healthcare-acquired infections (HAI) are equally fatal, but the international community did not act similarly. Consequently, we are continuously and chronically suffering from HAI.

The current intervention for HAI is merely based on passively-set standards and enforcing these standards via regulatory agencies such as the centre for disease control and prevention (CDC), joint commission international (JCI), ministries of health, and other regulatory agencies. To efficiently address HAI, we inevitably need to mobilize the international community because HAI traverses a multitude of epistemological dimensions, requiring multidisciplinary tacit knowledge, and mandates active international collaboration. Besides, we believe that we can efficiently traverse deeply into the root-causes and solution landscapes by automating the entire healthcare environmental services and infection control within healthcare institutions using the latest advancements in computational epistemology, computational infection control models, computational epidemiological models, artificial intelligence, machine learning, distributed ledger technology, collective intelligence, cognitive technologies, internet of things, ubiquitous technologies, intelligent micro-measurement frameworks, artificial life, evidence-based program implementation, patient-centric care, strategy anchored execution, and symbiotic healthcare ecosystem services. Consequently, we developed these open standards that were tailored from diverse international standards to promote the automation of healthcare environmental services and infection control processes and best practices.

The Healthcare Environmental Services Operational Map (HESOM) and other standards were developed to efficiently leverage multidisciplinary experts and practitioners to contribute towards the eradication of HAI-induced mortalities and morbidities. Using ReXcels research and innovation environment, we cultivate collective intelligence by bringing together these multidisciplinary experts to iteratively develop these standards and adaptively support the innovation of computational technology that automates the execution and enforcement of these standards. As such, we cordially invite you to use these documents and participate actively in the further development of these standards to significantly reduce HAI-induced mortalities, morbidities, and their enormous negative economic externalities.

Hamid Adem

Interim Chairman, and Chief R&D Officer

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Purpose



1 Purpose

1. PURPOSE

The purpose of this document is to establish a Task Performance Management process for the organization's environmental Services department such that Task related performance is well tracked and monitored and reported.

This process is based on international well acclaimed standards like:

- NHS- National Health Services Standard
- OSHA- Occupational Safety and Health Administration standard
- CDC- Centers for Disease Control and Prevention standard
- Lean six sigma- Quality Standard
- JCI- Journal of Clinical Investigation standard
- JCAHO- Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- EPA- US Environmental Protection Agency
- HCAHPS - Hospital Consumer Assessment of Healthcare Providers and Systems
- HIPA- Health Information Privacy Act standard.

*P.S: This process is a derivation from **ESM (Environmental Service Map)**, which is a holistic and a comprehensive model for Environmental Services Management.*

Structure of the Document



2. STRUCTURE OF THE DOCUMENT

The Task Performance Management process document comprises the following chapters:

Chapter-3: Scope: This chapter describes the scope of the document and the Task Performance Management.

Chapter-4: General Assumptions: This chapter describes the underlined assumptions made for both the document and Task Performance Managementprocess.

Chapter-5: Task Performance Management Framework: This chapter exhibits the interaction of Task Performance Managementprocess with other related processes.

Chapter-6: Task Performance Management Process: In this chapter Task Performance Managementprocess and sub processes (if any) will be depicted and specified using rigorous BPMN and process specification templates.

Chapter-7: References: This chapter serves as a prime reference to Task Performance Managementprocess and presents the details supporting it in tabular formats. The chapter describes relevant Business Rules, Risks, Quality Attributes, Data Quality Dimensions, Operation Policies, KPIs, CTQs, Abstract Time-scales and SLAs terms specific to Task Performance Management process.

Scope



3 Scope

3. SCOPE

This process is applicable to task management process.

General Assumptions



4 General Assumptions

4. GENERAL ASSUMPTIONS

Following are the general assumptions made for this process:

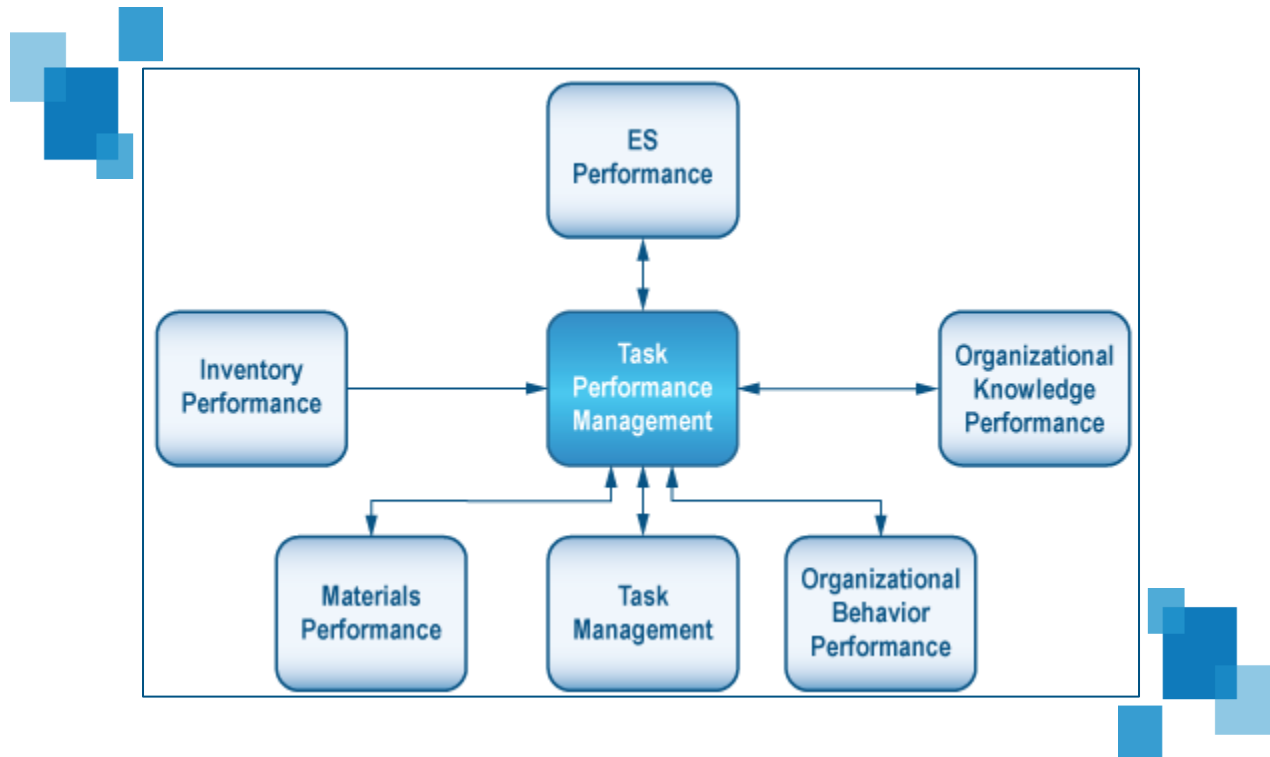
- There exists an automated capability to monitor the performance of Task management
- The roles defined in all processes within this document can be attached to the existing position
- Any activity related assumptions are explicitly identified in related Process Specification table in Chapter 6.

Task Performance Management Framework



5.1 Task Performance Management Interactions

The following depiction shows the points of interaction of organization's environmental Services Task Performance Management process with other related processes. The arrows moving into Task Performance Management process signifies the inputs from the other processes to Task Performance Management Process, and the arrows moving out of the Task Performance Management process signify the inputs from Task Performance Management process to other related processes.



5.2 Task Performance Management Process Sequence

The Task Performance Management process comprises of following high level sequence of activities:

1. **Monitor & control Task performance**
2. **Initiate Task Performance degradation Report**
3. **Track & Manage Task Performance degradation Report**

Organization's environmental Services department's Task Performance Management process follows sequential steps mentioned below (Section 5.2.1-5.2.5). Section 6.1 Process Model sheds more light on the flow of this process.

5.2.1 Monitor & Analyze Task performance

This process is responsible for collecting performance data for Task and evaluating against the relevant commitment:

- Task Accuracy,
- Task targets
- Task Quality
- Customer Satisfaction.

This process highlights any Task related violations or breaches.

5.2.2 Initiate Task Performance degradation report

This process is responsible for creating Task degradation report. This process establishes an Task Performance degradation report which comprises of:

- Report id,
- Task performance issue
- Effected service / products,
- Business impact,
- Time and date of report,
- Current status,
- Closure time and date.

5.2.3 Track and Manage Task Performance degradation Report

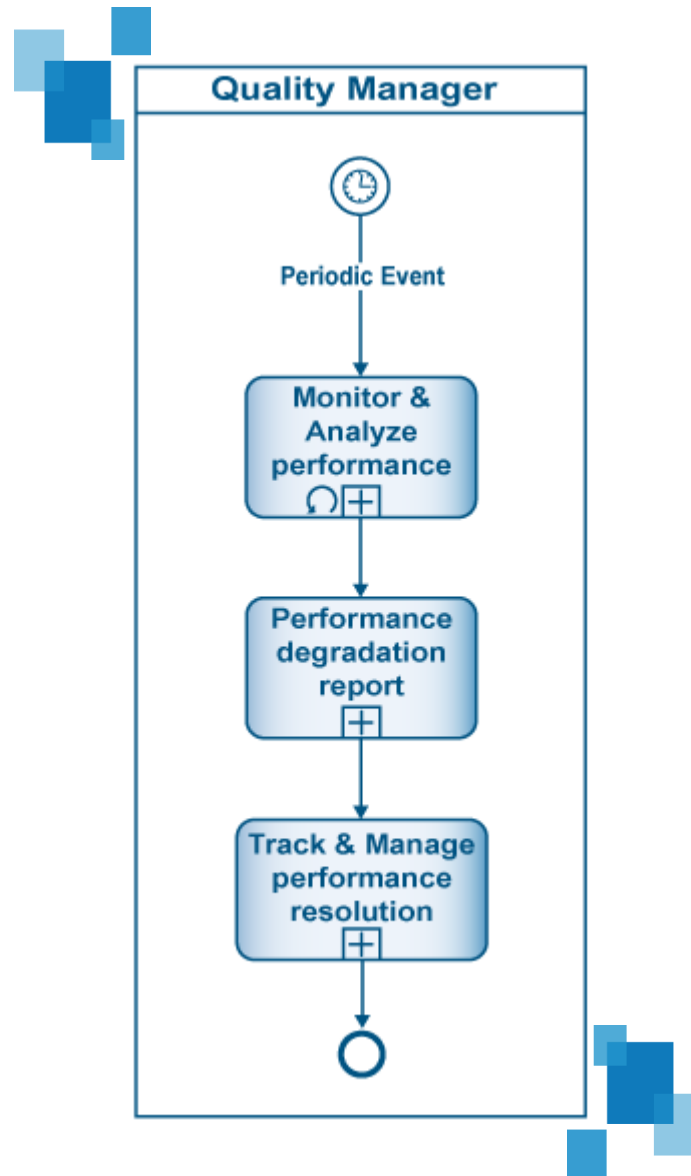
This process ensures that:

- The restoration activities pertaining to Task Performance degradation are managed properly. This process is responsible to manage interactions with the Task Manager on the resolution progress and update the performance degradation report on the current status.
- The Task Performance degradation report is closed once the problem has been resolved.
- Notification and management reports are provided to the top management on the overall problem.

Task Performance Management Process



6.1 Task Performance Management – Process



6.2 Task Performance Management - Specification

| Specification | Description |
|--------------------------------------|--|
| Summary/Purpose | The purpose of this process is to establish Task Performance Management process. |
| Scope | This is a level 1 Process Specification. |
| Primary Reference | <ul style="list-style-type: none"> Lean six sigma- Quality Standard |
| Related ESM Practices | ES Performance, Materials performance, Inventory Management, Organizational Behavior Performance, Organizational knowledge Performance, Task management |
| Related Business Driver | Task Performance improvisation |
| Related Operational Policies | OP-001, OP-002 (Ref. 7.5) |
| Assumptions | There exists a capability at organization's environmental Services department to monitor the performance of Task process. |
| Voice of Customer | Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10) |
| Customer Satisfaction Measure | Customer satisfaction index |
| COI Correlation | None |
| Raw Materials | None |
| Equipment & Accessories | Automated System for Task Performance Management. |

6

Task Performance Management Process

| MSD Management | Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12) | | | | | | |
|-------------------------------|---|------|--------|---------|--------|-----|--------|
| EBC Procedures | None | | | | | | |
| Timing Dimensions | <table border="1"> <thead> <tr> <th>Type</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>Average</td> <td>30 min</td> </tr> <tr> <td>Std</td> <td>12 min</td> </tr> </tbody> </table> | Type | Normal | Average | 30 min | Std | 12 min |
| Type | Normal | | | | | | |
| Average | 30 min | | | | | | |
| Std | 12 min | | | | | | |
| Trigger | <ul style="list-style-type: none"> Period event | | | | | | |
| Basic Course of Event | <p>Task Performance Management</p> <ol style="list-style-type: none"> Quality Manager monitors the Task service performance regularly Quality Manager initiates Task Performance degradation report. Quality Manager tracks and manages Task Performance resolution. End | | | | | | |
| Alternative Path | None | | | | | | |
| Exception Path | <p>System Down</p> <ol style="list-style-type: none"> Keep paper track until system is up and running Update the System and clear all logs. End. | | | | | | |
| Extension points | ES Performance, Materials performance, Task Management, Organizational Behavior Performance, Organizational knowledge Performance. | | | | | | |
| Preconditions | Task's details and service are established and regularly monitored. | | | | | | |
| Post -conditions | Task's performance gets evaluated. | | | | | | |
| Related Business Rules | BR-001, BR-002, BR-003 (Ref 7.1) | | | | | | |
| Related Risks | RR-001, RR-002, RR-003(Ref. 7.2) | | | | | | |

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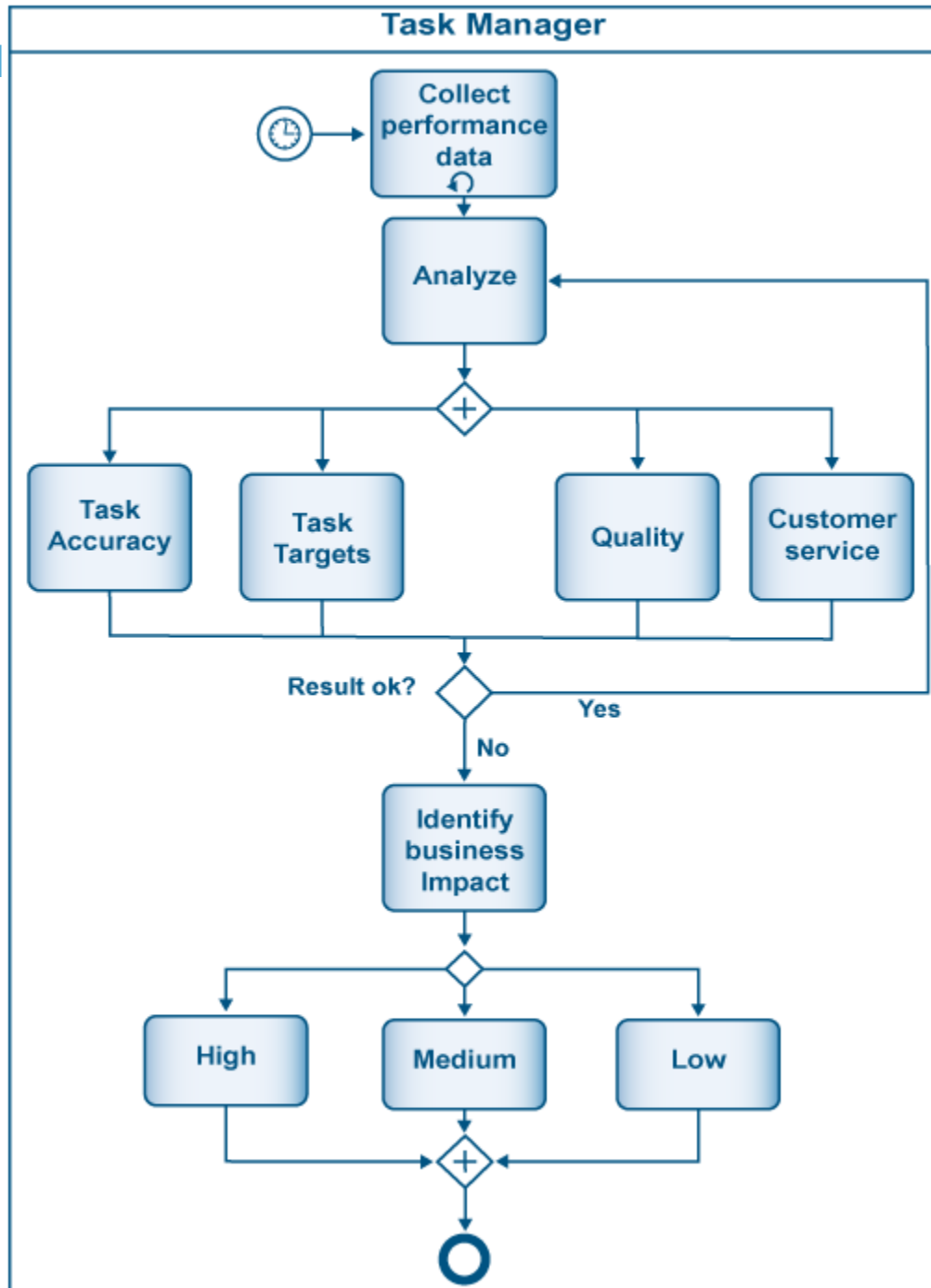
Task Performance Management Process

| | |
|--|--|
| Related Quality Attributes | Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Data Integrity, Non-repudiation, Accountability, Security Integration, Performance, Scalability, Extensibility, Auditability, (Ref 7.3) |
| Related Data Quality Dimensions | Accuracy, Believability, Objectivity, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, (Ref 7.4) |
| Related Primary SLA Terms | (Ref 7.9) |
| Related KPIs | TDR, TDSR (Ref 7.6) |
| Related CTQs | TDRV, TDSRV, MOM, PWOM, CTQ, IOM, TOM, WRM, DRM (Ref 7.7) |
| Actors/Agents | Quality Manager |
| Delegation | <p><u>Delegation Rule -1: Agent Not Available</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation <p><u>Delegation Rule -2: Agent Overloaded</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation |
| Escalation | <p><u>Rule 1: Performance, operational legal Issues</u></p> <ol style="list-style-type: none"> 1. Escalate to environmental services department head. 2. Log Escalation |
| Process Map | Section 5.1 |
| Process Model | Section 6.1 |
| Other References | Appendix A: Business Process Modeling Notation Reference Appendix B: Chain of Infection |

6.3 Task Performance Management – Roles and Responsibilities

| Roles | Responsibilities |
|-----------------|---|
| Quality Manager | <ul style="list-style-type: none">• Monitors and controls the Task service performance• Initiates Task Performance degradation report• Tracks and manages Task Performance resolution |

6.4 Sub Process – Monitor & Analyze Task Performance



6.5 Sub Process – Monitor & Analyze Task Performance Specification

| Specification | Description |
|--------------------------------------|--|
| Summary/Purpose | The purpose of this process is to monitor and analyze Task performance |
| Scope | This is a level 2 Process Specification. |
| Primary Reference | <ul style="list-style-type: none"> Lean six sigma- Quality Standard |
| Related ESM Practices | ES Performance, Materials performance, Inventory Management, Organizational Behavior Performance, Organizational knowledge Performance, Task management |
| Related Business Driver | Evaluation of Task's managements quality of service |
| Related Operational Policies | OP-002 (Ref. 7.5) |
| Assumptions | All Task' management process's commitments (SLA, targets, accuracy etc) are recorded. |
| Voice of Customer | Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10) |
| Customer Satisfaction Measure | Customer satisfaction index |
| COI Correlation | None |
| Raw Materials | None |
| Equipment & Accessories | Automated System for Task Performance Management. |

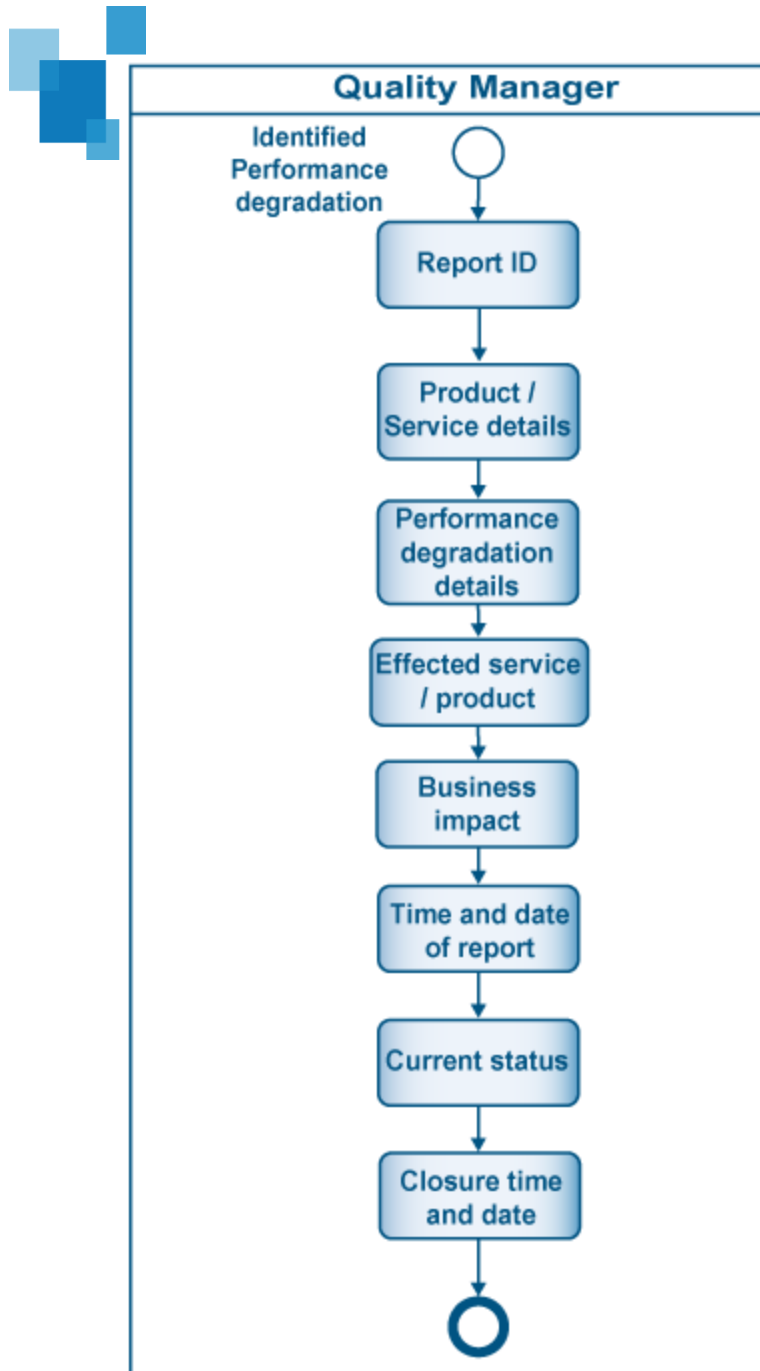
| MSD Management | Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12) | | | | | | |
|------------------------------|---|------|--------|---------|--------|-----|--------|
| EBC Procedures | None | | | | | | |
| Timing Dimension | <table border="1"> <thead> <tr> <th>Type</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>Average</td> <td>30 min</td> </tr> <tr> <td>Std</td> <td>12 min</td> </tr> </tbody> </table> | Type | Normal | Average | 30 min | Std | 12 min |
| Type | Normal | | | | | | |
| Average | 30 min | | | | | | |
| Std | 12 min | | | | | | |
| Trigger | <ul style="list-style-type: none"> Periodic activity.(quarterly or bi annually) | | | | | | |
| Basic Course of Event | <p>Task Performance Management</p> <ol style="list-style-type: none"> Quality Manager collects the performance data Quality Manager analyzes Task related data (accuracy, Task targets, Task quality, customer service) Ends. | | | | | | |
| Alternative Path | <p>Task Performance Management(not okay)</p> <ol style="list-style-type: none"> Quality Manager collects the performance data Quality Manager analyzes Task related data (accuracy, Task targets, Task quality, customer service) Quality Manager identifies business Impact (high, medium, low) Quality Manager creates performance degradation report. End | | | | | | |
| Exception Path | <p>System Down</p> <ol style="list-style-type: none"> Keep paper track until system is up and running Update the System and clear all logs. End. | | | | | | |
| Extension points | Task Performance degradation report process | | | | | | |
| Preconditions | Business impact rules are established. | | | | | | |
| Post -conditions | Task Performance gets analyzed. | | | | | | |

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| Related Business Rules | BR-002 (Ref 7.1) |
| Related Risks | RR-003 (Ref 7.2) |
| Related Quality Attributes | Service Reliability, Availability, Usability, Normal Usability Operations, Confidentiality, Authenticity, Data Integrity, Non-repudiation, Accountability, Security Integration, Performance, Scalability, Extensibility, Auditability (Ref 7.3) |
| Related Data Quality Dimensions | Accuracy, Believability, Objectivity, Relevance, Completeness, Timeliness, Appropriate Amount, Understandability, Interpretability, (Ref 7.4) |
| Related Primary SLA Terms | (Ref 7.9) |
| Related KPIs | TDR(Ref 7.6) |
| Related CTQs | TDRV(Ref 7.7) |
| Actors/Agents | Quality Manager |
| Delegation | <p><u>Delegation Rule -1: Agent Not Available</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation <p><u>Delegation Rule -2: Agent Overloaded</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation |
| Escalation | <p><u>Rule 1: Performance, operational legal Issues</u></p> <ol style="list-style-type: none"> 1. Escalate to environmental services department head. 2. Log Escalation |
| Process Map | Section 5.1 |
| Process Model | Section 6.4 |
| Other References | Appendix A: Business Process Modeling Notation Reference |

6.6 Sub Process – Monitor & Analyze Task Performance Roles and Responsibilities

| Roles | Responsibilities |
|------------------------|---|
| Quality Manager | <ul style="list-style-type: none">• Quality Manager collects the performance data• Quality Manager analyzes Task related data (accuracy, Task targets, Task quality, customer service)• Quality Manager conducts Business impact analysis |

6.7 Sub Process – Task Performance degradation Report



6.8 Sub Process – Task Performance degradation Report Specification

| Specification | Description |
|--------------------------------------|--|
| Summary/Purpose | The purpose of this process is to create Task Performance degradation report. |
| Scope | This is a level 2 Process Specification. |
| Primary Reference | <ul style="list-style-type: none"> Lean six sigma- Quality Standard |
| Related ESM Practices | ES Performance, Materials performance, Inventory Management, Organizational Behavior Performance, Organizational knowledge Performance, Task management |
| Related Business Driver | Establishing the record of Task's performance failure. |
| Related Operational Policies | OP-001(Ref. 7.5) |
| Assumptions | Performance failures have been accurately identified. |
| Voice of Customer | Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10) |
| Customer Satisfaction Measure | Customer satisfaction index |
| COI Correlation | None |
| Raw Materials | None |
| Equipment & Accessories | Automated System for Task Performance Management. |

6

Task Performance Management Process

| MSD Management | Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12) | | | | | | |
|------------------------------|---|------|--------|---------|--------|-----|--------|
| EBC Procedures | None | | | | | | |
| Timing Dimension | <table border="1"> <thead> <tr> <th>Type</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>Average</td> <td>30 min</td> </tr> <tr> <td>Std</td> <td>12 min</td> </tr> </tbody> </table> | Type | Normal | Average | 30 min | Std | 12 min |
| Type | Normal | | | | | | |
| Average | 30 min | | | | | | |
| Std | 12 min | | | | | | |
| Trigger | Identified performance degradation | | | | | | |
| Basic Course of Event | <p>Task Performance Management</p> <ol style="list-style-type: none"> 1. Quality Manager establishes a report ID 2. Quality Manager identifies the performance degradation detail 3. Quality Manager identifies effected service /product. 4. Quality Manager identifies business impact. 5. Quality Manager identifies time and date of the report 6. Quality Manager updates the current status from time to time based on the progress 7. Quality Manager enters the closure time and date upon completion of the service degradation report 8. Ends. | | | | | | |
| Alternative Path | None | | | | | | |
| Exception Path | <p>System Down</p> <ol style="list-style-type: none"> 1. Keep paper track until system is up and running 2. Update the System and clear all logs. 3. End. | | | | | | |
| Extension points | Track and Manage Task performance | | | | | | |
| Preconditions | Identification of performance failure. | | | | | | |
| Post -conditions | Degradation report gets formulated. | | | | | | |

| | |
|--|--|
| Related Business Rules | BR-003 (Ref 7.1) |
| Related Risks | RR-001 (Ref. 7.2) |
| Related Quality Attributes | Reliability, Availability, Confidentiality, Authenticity, Data Integrity, Non-repudiation, Accountability, Performance, Auditability (Ref 7.3) |
| Related Data Quality Dimensions | Accuracy, Objectivity, Free-of-Error, Relevance, Completeness, Timeliness, Understandability, Interpretability, Concise Representation (Ref 7.4) |
| Related Primary SLA Terms | (Ref 7.9) |
| Related KPIs | TDR(Ref 7.6) |
| Related CTQs | TDRV (Ref 7.7) |
| Actors/Agents | Quality Manager. |
| Delegation | <p><u>Delegation Rule -1: Agent Not Available</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation <p><u>Delegation Rule -2: Agent Overloaded</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation |
| Escalation | <p><u>Rule 1: Performance, operational legal Issues</u></p> <ol style="list-style-type: none"> 1. Escalate to environmental services department head. 2. Log Escalation |
| Process Map | Section 5.1 |
| Process Model | Section 6.7 |
| Other References | Appendix A: Business Process Modeling Notation Reference |

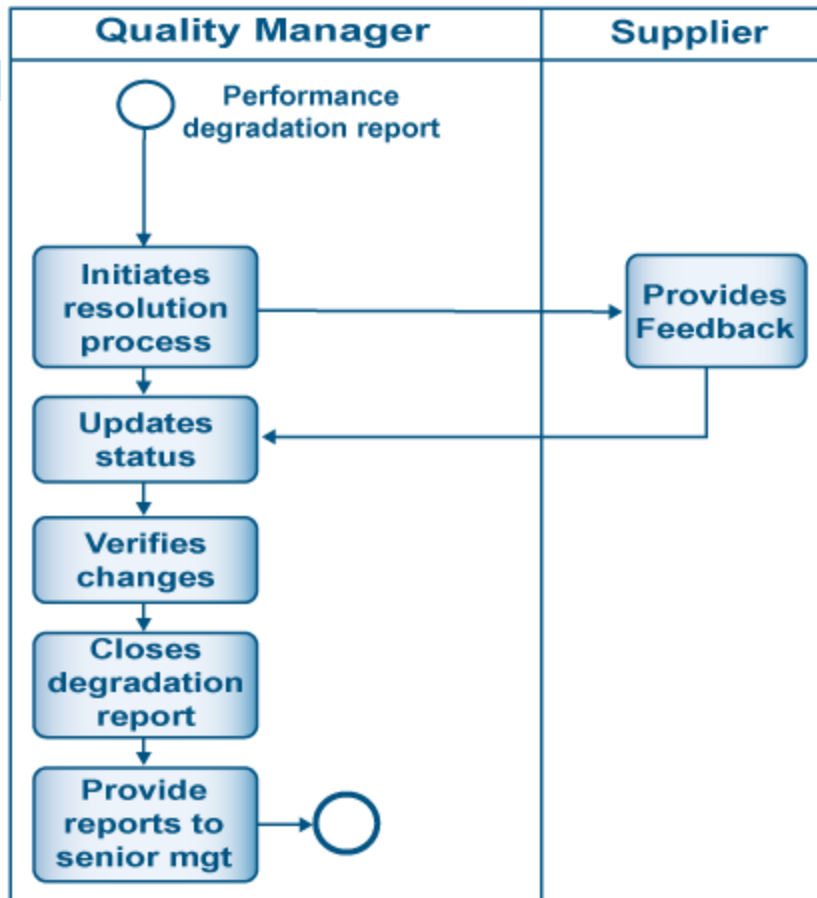
6.9 Sub Process – Task Performance degradation Report Roles and Responsibilities

| Roles | Responsibilities |
|------------------------|---|
| Quality Manager | Quality Manager establishes a report ID, establishes product / service details, identifies the performance degradation detail, identifies effected service /product, identifies time and date of the report, updates the current status from time to time based on the progress, enters the closure time and date upon completion of the service degradation report |

6

Task Performance Management Process

6.10 Sub Process – Track & Manage Task Performance



6.11 Sub Process – Track & Manage Task Performance Specification

| Specification | Description |
|--------------------------------------|--|
| Summary/Purpose | The purpose of this process is to track and manage Task performance. |
| Scope | This is a level 2 Process Specification. |
| Primary Reference | <ul style="list-style-type: none"> Lean six sigma- Quality Standard |
| Related ESM Practices | ES Performance, Materials performance, Inventory Management, Organizational Behavior Performance, Organizational knowledge Performance, Task management |
| Related Business Driver | Faster correction of identified performance degradation. |
| Related Operational Policies | OP-001 (Ref. 7.5) |
| Assumptions | Task Manager is supportive in rectifying the performance degradation caused. |
| Voice of Customer | Hygiene, High and Consistent Quality of standards, Free of Infections, Timely Services, High Coordinating, Remove Waste, Excellent Ergonomic, Safety, Appearance, Excellent Worker Attitude. (Ref 7.10) |
| Customer Satisfaction Measure | Customer satisfaction index |
| COI Correlation | None |
| Raw Materials | None |
| Equipment & Accessories | Automated System for Task Performance Management. |

6

Task Performance Management Process

| MSD Management | Lifting/carrying, Disability, Force, Loaded motion, Physical ergonomics, Posture change, Excessive force, Scarceness, Noise, Concentration, Floor hazards, Clothing, Psychosocial factors. (Ref 7.12) | | | | | | |
|-------------------------------|---|------|--------|---------|--------|-----|--------|
| EBC Procedures | None | | | | | | |
| Timing Dimension | <table border="1"> <thead> <tr> <th>Type</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>Average</td> <td>30 min</td> </tr> <tr> <td>Std</td> <td>12 min</td> </tr> </tbody> </table> | Type | Normal | Average | 30 min | Std | 12 min |
| Type | Normal | | | | | | |
| Average | 30 min | | | | | | |
| Std | 12 min | | | | | | |
| Trigger | <ul style="list-style-type: none"> Performance degradation report | | | | | | |
| Basic Course of Event | <p>Task Performance Management</p> <ol style="list-style-type: none"> Quality Manager initiate resolution process Task Manager provides feedback Quality Manager updates the status in performance degradation report Quality Manager verifies changes Quality Manager closes degradation report Quality Manager provides reports to senior management. Ends. | | | | | | |
| Alternative Path | None | | | | | | |
| Exception Path | <p>System Down</p> <ol style="list-style-type: none"> Keep paper track until system is up and running Update the System and clear all logs. End. | | | | | | |
| Extension points | ES Performance, Materials performance, Inventory Management, Organizational Behavior Performance, Organizational knowledge Performance, Task management | | | | | | |
| Preconditions | Communication channel is established with Task Manager. | | | | | | |
| Post -conditions | Performance degradation gets corrected. | | | | | | |
| Related Business Rules | BR-001 (Ref 7.1) | | | | | | |

| | |
|--|--|
| Related Risks | RR-002 (Ref. 7.2) |
| Related Quality Attributes | Reliability, Availability, Confidentiality, Authenticity, Data Integrity, Non-repudiation, Accountability, Performance, Auditability (Ref 7.3) |
| Related Data Quality Dimensions | Accuracy, Free-of-Error, Completeness, Timeliness, Understandability, Interpretability, Concise Representation (Ref 7.4) |
| Related Primary SLA Terms | (Ref 7.9) |
| Related KPIs | TDSR (Ref 7.6) |
| Related CTQs | TDSRV (Ref 7.7) |
| Actors/Agents | Quality Manager, Task Manager |
| Delegation | <p><u>Delegation Rule -1: Agent Not Available</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation <p><u>Delegation Rule -2: Agent Overloaded</u></p> <ol style="list-style-type: none"> 1. Delegate the Issue to additional Agent with same Role 2. Update the Issue 3. Log the Delegation |
| Escalation | <p><u>Rule 1: Performance, operational legal Issues</u></p> <ol style="list-style-type: none"> 1. Escalate to environmental services department head. 2. Log Escalation |
| Process Map | Section 5.1 |
| Process Model | Section 6.9 |
| Other References | Appendix A: Business Process Modeling Notation Reference Appendix B: Chain of Infection |

6.12 Sub Process – Track & Manage Task Performance Roles and Responsibilities

| Roles | Responsibilities |
|-----------------|---|
| Quality Manager | <ul style="list-style-type: none">• Quality Manager initiate resolution process, updates the status in performance degradation report, verifies changes done by Task manager, and closes degradation report.• Quality Manager provides reports to senior management. |
| Task Manager | <ul style="list-style-type: none">• Task Manager provides feedback |

Reference



This chapter serves as a prime reference to Chapter 6 and presents the details supporting Chapter 6 in tabular formats. This chapter consists of various variable values which would frequently evolve or change as organization's environmental Services department's Task Performance Management process matures or changes.

7.1 Business Rules

| BR ID | Description | Context | Rule | Source |
|--------|---|----------|------|--------|
| BR-001 | For target breaches with monetary implications, the department/ supplier/ person responsible is entitled to pay all the damages with regards to its target violation. | Business | TBD | TBD |
| BR-002 | All vital operational performance data should be collected | Business | TBD | TBD |
| BR-003 | All the performance deviations should be reported | Business | TBD | TBD |

7.2 Risk

| Risk ID | Description | Source | Severity Level | Status | Resolution |
|---------|--|--------|----------------|--------|---|
| RR-001 | All the Task performances are not recorded | NA | High | TBD | Effort should be undertaken to ensure all the performance are recorded and hence analyzed. |
| RR-002 | Performance degradation identified are not | NA | High | TBD | Senior management should ensure that all the identified degradation reports are settled within a stipulated time frame. |

| | | | | | |
|--------|----------------------------|----|--------|-----|---|
| | properly followed up | | | | |
| RR-003 | Not all data is monitored. | NA | Medium | TBD | All the performance related vital data needs to be monitored regularly. |

7.3 Quality Attribute

| QA ID | Description | Threshold |
|--------|-----------------------------|-----------|
| QA-001 | Interoperability | TBD |
| QA-002 | Reliability | TBD |
| QA-003 | Service Reliability | TBD |
| QA-004 | Availability | TBD |
| QA-005 | Usability | TBD |
| QA-006 | Normal Usability Operations | TBD |
| QA-007 | Confidentiality | TBD |
| QA-008 | Authenticity | TBD |
| QA-009 | Data Integrity | TBD |
| QA-010 | Availability | TBD |
| QA-011 | Non-repudiation | TBD |
| QA-012 | Accountability | TBD |
| QA-013 | Security Integration | TBD |
| QA-014 | Performance | TBD |
| QA-015 | Scalability | TBD |

| | | |
|--------|-------------------------------|-----|
| QA-016 | Extensibility | TBD |
| QA-017 | Adaptability | TBD |
| QA-018 | Testability | TBD |
| QA-019 | Auditability | TBD |
| QA-020 | Operability and Deployability | TBD |

7.4 Data Quality Dimension

| DQ ID | Description | Threshold |
|--------|------------------------|-----------|
| DQ-001 | Accuracy | TBD |
| DQ-002 | Believability | TBD |
| DQ-003 | Reputation | TBD |
| DQ-004 | Objectivity | TBD |
| DQ-005 | Free-of-Error | TBD |
| DQ-006 | Value Added | TBD |
| DQ-007 | Relevance | TBD |
| DQ-008 | Completeness | TBD |
| DQ-009 | Timeliness | TBD |
| DQ-010 | Appropriate Amount | TBD |
| DQ-011 | Understandability | TBD |
| DQ-012 | Interpretability | TBD |
| DQ-013 | Concise Representation | TBD |

7.5 Operation Policy

| Policy ID | Description | Context | Importance (1-5) |
|-----------|---|---------|------------------|
| OP-001 | All the degradation reports are resolved within 5 working days from the day of identification | TBD | TBD |
| OP-002 | Business impact should be identified only for performance deviation. | TBD | TBD |

7.6 KPI

| Name | Acronym | Description | Context | Importance | Soft Threshold | Hard Threshold |
|-------------------------------|---------|---|---------|------------|----------------|----------------|
| Task degradation rate | TDR | Number of Task degradation reported per month | NA | TBD | TBD | TBD |
| Task degradation solving rate | TDSR | Number of reported performance degradation solved by Task per month | NA | TBD | TBD | TBD |

7.7 CTQ

| Name | Acronym | Description | Context | Importance | Soft Threshold | Hard Threshold |
|---|---------|---|---------|------------|----------------|----------------|
| Task degradation rate variation | TDRV | Standard deviation of TDR | NA | TBD | TBD | TBD |
| Task Degradation solving rate variation | TDSR | Standard Deviation of TDSR | NA | TBD | TBD | TBD |
| Motion Optimization Measure | MOM | Management of motion optimization measure | NA | TBD | TBD | TBD |
| Paper work Optimization Measure | PWOM | Management of Paper work Optimization Measure | NA | TBD | TBD | TBD |
| Correction reduction measure | CRM | Management of Correction reduction measure | NA | TBD | TBD | TBD |
| Task Optimization Measure | IOM | Management of Task Optimization Measure | NA | TBD | TBD | TBD |

7 Reference

| | | | | | | |
|--|------------|---|----|-----|-----|-----|
| Transportation Optimization Measure | TOM | Management of Transportation Optimization Measure | NA | TBD | TBD | TBD |
| Waiting Reduction Measure | WRM | Management of Waiting reduction Measure | NA | TBD | TBD | TBD |

7.8 Abstract Time – Scale

| Name | Acronym | Description | Quantification |
|------|---------|-------------|----------------|
| TBD | TBD | TBD | TBD |

7.9 SLA Terms

| SLA ID | Description | Context | KPI | CTQ |
|--------|-------------|---------|-----|-----|
| TBD | TBD | TBD | TBD | TBD |

7.10 Voice of Customer

| VOC | Customer | Description | Perceived Value |
|----------------|--|---|--|
| Hygiene | Doctors, Patients, Nurses, Housekeeping Supervisors, Housekeepers, Clerks, | The environment should be attributing with great hygiene level. | <ul style="list-style-type: none"> • High quality healthcare services • Safe environment |

| | | | |
|---|--|---|---|
| | Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker. | | <ul style="list-style-type: none"> • Low infection rate • Low risk |
| High and Consistent Quality of standards | Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | High and Consistent Quality of standards. | <ul style="list-style-type: none"> • Reputation of organization or hospital • Professionalism • Trust • Positive psychological bias |
| Free of Infections | Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | Infections free and healthy environment. | <ul style="list-style-type: none"> • Safe environment • Reputation of hospital or organization • Trust • Quick healing • Positive psychological bias • Low risk |
| Timely Services | Doctors, Patients, Nurses, Housekeeping Supervisors, Visitors, Environmental Services Management, Laundry worker, Transportation worker, | The response time for any request should be very short. | <ul style="list-style-type: none"> • Professionalism • Trust • Positive psychological bias • Reputation of hospital or organization |

| | | | |
|----------------------------|---|---|---|
| | Maintenance worker, Waste management worker, Housekeepers | | <ul style="list-style-type: none"> • Safe environment |
| High Coordinating | Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | There should be high level of coordination between hospital employees and departments. | <ul style="list-style-type: none"> • Professionalism • Trust • Low risk • Excellent Ergonomic |
| Remove Waste | Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | Wastes should be either removed or minimized. | <ul style="list-style-type: none"> • Safe environment • Low infection rate • Low risk • Reputation of hospital or organization • Low cost • Timely response • High quality |
| Excellent Ergonomic | Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, | The hospital environment and policy should comply with physical, organization and cognitive ergonomics. | <ul style="list-style-type: none"> • Professionalism • Trust • Job accuracy • Excellent communication • Low risk • Reputation of hospital or organization |

| | | | |
|--|--|--|--|
| | Waste management worker, Housekeepers | | |
| Safety | Doctors, Patients, Nurses, Housekeeping Supervisors, Clerks, Visitors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | Hospital environment should comply with occupational health and safety procedures. | <ul style="list-style-type: none"> • Safe environment • Professionalism • Low risk |
| Appearance | Housekeeping Supervisors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | The appearance of the workers, supervisors and manager should induce positive biases. | <ul style="list-style-type: none"> • Professionalism • Reputation of hospital or organization • Trust • Positive psychological bias |
| Excellent Worker Attitude | Housekeeping Supervisors, Environmental Services Management, Laundry worker, Transportation worker, Maintenance worker, Waste management worker, Housekeepers | The environment service employee should be free from negative attitudes. | <ul style="list-style-type: none"> • Professionalism • Reputation of hospital or organization • Trust • Positive psychological bias • Minimum disputes • Less employee turn over |

7.11 Customer Context Matrix

| Name of Customer | Acronym | Context of Customer | Coordination Process Area |
|-----------------------------------|---------|---------------------|--|
| Doctors | DOC | Direct | HIS Coordination |
| Patients | PAT | Direct | HIS Coordination |
| Nurses | NUR | Direct | HIS Coordination, Nurse Coordination |
| Housekeeping Supervisors | HKS | Direct | Quality Coordination, Nurse Coordination, infection control coordination |
| Clerks | CLR | Direct | HIS Coordination |
| Visitors | VIS | Indirect | HIS Coordination |
| Environmental Services Management | ESM | Direct | Nurse Coordination, infection control coordination |
| Other hospital workers | OHW | Indirect | Security coordination |
| Laundry worker | LDW | Direct | Nurse Coordination, HIS Coordination |
| Transportation worker | TRW | Direct | Quality Coordination, HIS Coordination |
| Maintenance worker | MAW | Direct | Quality Coordination, HIS Coordination |
| Waste management worker | WMW | Direct | Quality Coordination, HIS Coordination |

| | | | |
|--------------------------------|-----|----------|--------------------------------------|
| Infection control professional | ICP | Indirect | Infection Control Coordination |
| Housekeepers | HK | Direct | HIS Coordination, Nurse Coordination |

7.12 MSD Attributes

| MSD Attribute | Description |
|---------------------|---|
| Lifting/carrying | Large vertical movements, long carry distances. |
| Disability | Pose a risk to those with a health problem or a physical or learning disability. |
| Force | High initial forces to get the load moving. |
| Loaded motion | High forces to keep the load in motion. |
| Physical ergonomics | Constraints on body posture/positioning, confined spaces/narrow doorways. |
| Posture change | Strong force and awkward movement/posture. E.g. bent wrists. |
| Excessive force | Excessive force to grip raw materials, product or tools |
| Scarceness | Inadequate tools for repetitive use screwdrivers, pliers, hammers. |
| Noise | Noise which cause stress and muscle tension. |
| Concentration | Tasks require high levels of attention/concentration especially where the worker has little control over allocation of effort to the task. |
| Floor hazards | Remove slip and trip hazards through provision of appropriate floor surfaces and good keeping. |
| Clothing | Clothing/PPE may prevent sufficient movement for the task or reduce capability. E.g. to grip consider handling needs when selecting work wear/gloves. |

Psychosocial factors

Adverse psychosocial factors can increase the potential for manual handling injuries. A workers psychosocial response to work and the workplace conditions can affect their health in general and MSDs in particular. The factors include the content, design, organization and management of the work

Glossary / Acronyms



GLOSSARY

| Terminology | Description |
|--------------------------------|---|
| Abstract Time Scale | Time Scale that will be quantified both during operations and continuous process improvement. These time identifiers are correlated with the soft thresholds that are dynamically specified during life span of the process. |
| BPMN | Business Process Modelling Notation Business Process Modelling Notation is the practice of documenting an organisation's key business processes in a graphical format. |
| Business Rules | Business Rules are intended to assert business structure or to control or influence the behaviour of the Business. Business rules describe the operations, definitions and constraints that apply to an organization |
| CTQ | Critical to Quality Critical To Quality (CTQ) is continuous measuring and monitoring tool agreed between the internal processes to achieve greater customer satisfaction. |
| COI | Chain of Infection |
| Data Quality Dimensions | The totality of features and characteristics of data that bears on their ability to satisfy a given purpose |
| EBC | Evidence Based Cleaning |
| ESM | Environmental Services Map |
| KPI | Key Performance Indicator A metric that is used to help manage a process, IT service or activity. Many metrics may be measured, but only the most important of these are defined as KPIs and used to actively manage and report on the process, IT service or activity. KPIs should be selected to ensure that efficiency, effectiveness, and cost effectiveness are all managed. |
| MSD | Macro skeleton disorder |
| Operational Policy | Rules defined to operate the process. |
| Quality Attributes | Quality attributes are non-functional requirements used to evaluate the performance of a process. |

| | |
|-------------|---|
| Risk | A possible event that could cause harm or loss, or affect the ability to achieve Objectives. A risk is measured by the probability of a threat, the vulnerability of the asset to that threat, and the impact it would have if it occurred. |
| SLA | Service Level Agreement An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer |
| VOC | Voice of customer |



Appendix A: Business Process Modeling Notation Reference



APPENDIX.
A









INTRODUCTION

Business Process Modelling (“BPM”) is the practice of documenting an organisation’s key business processes in a manner which:




- Is highly graphical
- Focuses on business terminology rather than technical
- Allows all business steps/tasks to be included, not just those which involve a computer system

Mentioned below are the various core concepts of BPMN with the relevant definition and graphic notation.







PROCESS START

| | |
|---|--|
| All processes have to start somehow, general notation for a process models commence with the START event, is a circle. |  |
| One can use simply the <i>basic unmarked</i> start event as above, or one of the different types of start event, to provide more detail as described below. | |
| If a process starts when some sort of message arrives, mail, email, text. Following notation can be used | Message start  |
| If a process starts by virtue of the passage of time – e.g. 1st Jan review or 4 days after the purchase order is sent, following notation can be used | TIMER Start  |
| If the process starts when a rule/condition is met – e.g. when Incident Impact is more than 100,000. | RULE Start  |
| If a process starts when another process finishes. Following notation can be used | LINK Start  |
| If there is more than one ‘trigger’ for a process to start. Following notation can be used | MULTIPLE Start  |


TASK AND SUB PROCESS




| | | |
|--------------------|--|---|
| Task | Task is a lowest level activity in a process map. A task is used when the work is not broken down to a finer level of detail |  |
| Sub Process | A Sub-process is a compound activity which can be broken down into finer details. |  |
| Loops | Loops task or sub process continues to iterate until the loop condition is true. |  |

INTERMEDIATE EVENTS



| | | | | | | |
|--|---|---|---|---|---|---|
| Following notation can be used to display the intermediate event, similar to start and end events. | | | | | | |
| | BASIC | MESSAGE | TIMER | RULE | LINK | MULTIPLE |
| |  |  |  |  |  |  |

PROCESS END


| | |
|---|---|
| All processes have to end somehow, general notation for a process models end will be a circle with a solid line. |  |
| One can use simply use the <i>basic</i> end event as above, or you can use one of the different types of end event, to provide more detail, as described below: | |

| | |
|---|---|
| If a process ends by something being sent via a message of some sort e.g., mail, email, document, following notation can be used. | MESSAGE End  |
| If the end of this process causes the start of another, following notation can be used. | LINK End  |
| If more than one consequence of the process ending, following notation can be used. | MULTIPLE End  |

SWIMLANES


| | | |
|-------------|--|--|
| Pool | A <i>Pool</i> represents a participant in a Process. It is also acts as a “swimlane” and a graphical container for partitioning a set of activities from other Pools |  |
| Lane | A <i>Lane</i> is a sub-partition within a Pool and will extend the entire length of the Pool, either vertically or horizontally. Lanes are used to organize and categorize activities. |  |

CONNECTORS

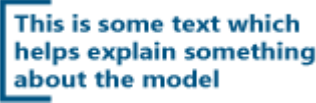


| | | |
|----------------------|---|---|
| Sequence Flow | A <i>Sequence Flow</i> is represented by a solid line with a solid arrowhead (see the figure to the right) and is used to show the order (the sequence) that activities will be performed in a Process. |  |
|----------------------|---|---|

9

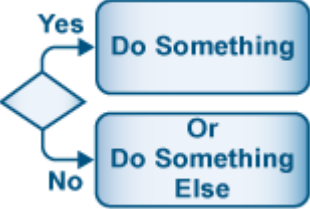
Appendix A: Business Process Modeling Notation Reference

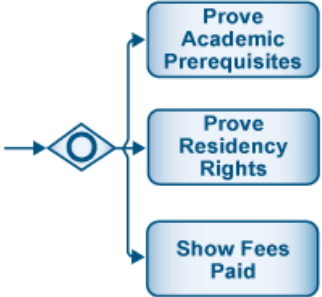
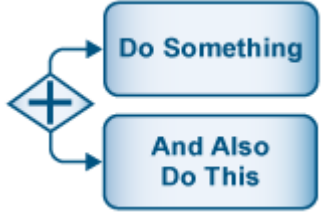
| | | |
|---------------------|---|---|
| Message Flow | <p>A <i>Message Flow</i> is represented by a dashed line with an open arrowhead (see the figure to the right) and is used to show the flow of messages between two separate Process Participants. In BPMN, two separate Pools in the Diagram will represent the two Participants.</p> |  |
|---------------------|---|---|

ARTIFACTS

| | | |
|--------------------|--|---|
| Annotation | <p>The ANNOTATION shape is used to add comments to a process model. It consists of text in a square left bracket</p> |  |
| Data Object | <p>A data object represents a piece of data which is required or produced by the process eg. Customer details, output.</p> |  |
| Group | <p>A grouping is purely for documentation or explanatory purposes. It has no impact on the model. It consists of a rectangle with dashed lines and rounded corners, usually enclosing other objects.</p> |  |

GATEWAYS

| | | |
|------------------|---|---|
| Exclusive | <p>The values of the process are examined to determine which path to take</p> |  |
|------------------|---|---|

| | | |
|------------------|--|---|
| Inclusive | <p>Each branch will be evaluated and will not stop when one branch condition becomes true.</p> |  <p>The diagram shows an inclusive gateway (diamond with a circle) on the left. Three arrows branch out to the right, leading to three rounded rectangular task boxes: 'Prove Academic Prerequisites', 'Prove Residency Rights', and 'Show Fees Paid'.</p> |
| Parallel | <p>Provides a mechanism to synchronise parallel flow and to create parallel flow.</p> |  <p>The diagram shows a parallel gateway (diamond with a plus sign) on the left. Two arrows branch out to the right, leading to two rounded rectangular task boxes: 'Do Something' and 'And Also Do This'.</p> |

Appendix B: Chain of Infection



APPENDIX.
B

10 Appendix B: Chain of Infection

In order to control or prevent infection it is essential to understand that transmission stages of a pathogen resulting in infection requires the six vital links (Refer to the table below).

Each link mentioned below must be present for infection or colonization to proceed, and breaking any of the links can prevent the infection.

The section below details out the six stages:

| Stage | Link | Description |
|-------|---------------------------|--|
| 1 | Infectious Agent | Any disease-causing microorganism (pathogen) |
| 2 | The Reservoir Host | The organism in which the infectious microbes reside |
| 3 | The Portal of Exit | Route of escape of the pathogen from the reservoir. |
| 4 | The Route of Transmission | Method by which the pathogen gets from the reservoir to the new host |
| 5 | The Portal of Entry | Route through which the pathogen enters its new host |
| 6 | The Susceptible Host | The organism that accepts the pathogen |

Link 1: Infectious Agent

The causative agent for infection is any microorganism capable of producing disease. Microorganisms responsible for infectious diseases include bacteria, viruses, rickettsiae, fungi, and protozoa. Sometimes, microorganisms are part of patient's own body flora and can cause infection in the immunocompromised host. These infections are called endogenous infections. Infections which are acquired from external sources are called exogenous infections.

Link 2: Reservoir Host

The second link in the chain of infection is the reservoir, i.e. the environment or object in or on which a microorganism can survive and, in some cases, multiply. Inanimate objects, human beings, and animals can all serve as reservoirs, providing the essential requirements for a microorganism to survive at specific stages in its life cycle.

Infectious reservoirs abound in health care settings, and may include everything from patients, visitors, and staff members to furniture, medical equipment, medications, food, water, and blood.

10 Appendix B: Chain of Infection

Link 3: Portal of Exit

The portal of exit is the path by which an infectious agent leaves its reservoir. Usually, this portal is the site where the microorganism grows. Common portals of exit associated with human reservoirs include the respiratory, genitourinary, and gastrointestinal tracts, the skin and mucous membranes and the placenta (transmission from mother to fetus)

Link 4: Route of Transmission

The microorganism can be acquired by inhalation (through respiratory tract), ingestion (through gastrointestinal tract), inoculation (through accidental sharp injury or bites), contact (during sexual intercourse) and transplacental transmission (microbes may cross placenta from the mother to fetus). It is important to remember that some microorganisms use more than one transmission route to get from the reservoir to a new host.

Of the six links in the chain of infection, the mode of transmission is the easiest link to break and is key to control of cross-infection in hospitals.

Link 5: The Portal of Entry

The portal of entry is the path by which an infectious agent invades a susceptible host. Usually, this path is the same as the portal of exit. For example, the portal of entry for tuberculosis and diphtheria is through the respiratory tract, hepatitis B and Human Immunodeficiency Virus enter through the bloodstream or body fluids and Salmonella enters through the gastrointestinal tract. In addition, each invasive device, e.g. intravenous line, creates an additional portal of entry into a patient's body thus increasing the chance of developing an infection.

Link 6: The Susceptible host

The final link in the chain of infection is the susceptible host. The human body has many defense mechanisms for resisting the entry and multiplication of pathogens. When these mechanisms function normally, infection does not occur. However, in immunocompromised patients, where the body defenses are weakened, infectious agents are more likely to invade the body and cause an infectious disease. In addition, the very young and the very old are at higher risk for infection because in the very young the immune system does not fully develop until about age 6 months, while old age is associated with declining immune system function as well as with chronic diseases that weaken host defenses.