Abstract

Procedure and Process Flow Charts for Better Business Performance. You will find example process diagram layouts with the most effective flow chart templates to use, what to include in them so that the flow chart drives business results and personal performance (and you will be surprised at how easy they are to create).

With the right layout and the inclusion of ACE 3T (Target-Tolerance-Test) quality assurance standards your process flowcharts and procedures will drive business and workplace performance. First it is necessary to layout your flowcharts so it is totally clear what must happen in a process or procedure, who is responsible to make it happen, and how their performance will be measured.

Keywords: process flow chart template, process flow diagram, business process modelling

Many of our ISO 9001 quality system Clients find that no one in management or the shopfloor reads their business process descriptions, job procedures or work instructions. When that happens we introduce them to a simple solution: we turn their unread documents into easy to follow flow charts.

Do not write what you can show people. They will not understand what you describe, and you surely will bore them with too much monotonous, dull text. For example, instead of me describing how to create fantastic process flow charts, just look at the three accompanying example flow diagrams to see their content and get the gist of the technique. Look at the flow diagram layouts and you will ‘get it’ in about 30 seconds. Had I written and described what you needed to do, you would never ‘get it’ at all—no matter how often you reread the work instruction.

How to Get the Performance You Want

It is vital that you tell users of process, procedure and work instruction flow chart what the acceptable job performance is by putting one, and up to four, measurable performance indicators in every step.

To totally control the process or procedure outcomes add an Accuracy Controlled Enterprise (ACE) Target, Tolerance and Proof Test (3T) for each measure. For example, in the Level 2 Project Engineering Process flow diagram performance measures for EQUIPMENT DESIGN AND REVIEW you can totally lock-down the performance you want by setting specific ACE 3T quality assurance parameters. Table 1 shows potential examples of ACE 3T standards.

<table>
<thead>
<tr>
<th>Original Performance Indicator</th>
<th>ACE 3T Performance Quality Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop Plan Hours Forecast</td>
<td></td>
</tr>
<tr>
<td>(Provide a) Workshop Plan Hours Forecast within ± 2% accuracy</td>
<td>Workshop Plan Hours Forecast within ± 5% accuracy</td>
</tr>
<tr>
<td>(Provide) Assembly Procedures with &gt; 90% Detailed</td>
<td>Fully detailed, ACE 3T no-chance-of-error Assembly Procedures</td>
</tr>
</tbody>
</table>

Table 1 Setting ACE 3T Work Quality Standards
LEVEL 1 CORPORATE PROCESS

Performance Measures

- Cost to Win the Client
- Identify Client Drivers and ROI
- Revenue Outside the Funnel
- Have a Pre-call Plan
- Revenue in the Funnel
- Have a Next Step Plan

BUSINESS DEVELOPMENT
SEEK TO UNDERSTAND CLIENT
Seek opportunities from diverse Clients that use our core business

SUBMIT A PROPOSAL
Gain a thorough appreciation of the Client and what work they want done

CLIENT REVIEW
Develop a proposal to meet the Client requirements

PROJECT OFFICE
Go through in detail with the Client what will be provided by our company

PROJECT EXECUTION
Plan how to design, procure and install the Client project for maximum profit

PROJECT ENGINEERING
Do the project on-time, on-profit, OHS and environmental incident-free,

PROJECT ACCEPTANCE
See Equipment Design, Supply, Manufacture and Installation Process

CLIENT REVIEW
Formal Client acceptance of project deliverables

CLIENT SERVICE CONTRACT
Investigate project performance for its commercial and implementation lessons

Gain a service contract from the Client

MARKETING MANAGER
1. Identify prospective Clients
2. Determine how can we help them?

MARKETING MANAGER
1. Determine Client ROI using Project Financials form FRM-001
2. Is it company core business?
3. What commercial risk if we do the Client project? Use Project Risk Assessment form FRM-002

SALES MANAGER
1. Understand Client:
   - Concept
   - Budget
   - Tender requirement
2. Does it meet our company requirements and terms?
3. Have we got the resources?
4. Can we meet the schedule?
5. What can Project Office commit to?

GENERAL MANAGER
1. Review Contract
   - Negotiations with Client
2. Confirm prices
3. Accept order

GENERAL MANAGER
1. Develop and provide:
   - Project Plan
   - Budget
   - Resources loads
2. Determine impact on existing business, including finance
3. Reassess estimate and set project KPIs
4. Risk assessment:
   - Compliance
   - Commercial
5. Director review and approval

PROJECT MANAGER
- Project Manager organises:
  - Design
  - Procurement
  - Labour resources
  - Site access
  - Project management controls per work instruction WIN-001

PROJECT MANAGER
- By Project Office:
  1. Is Client satisfied?
  2. How could we have done better?
  3. Conduct a Client feedback event with comments in Client Project Report FRM-003
  4. Confirm all payments due have been invoiced

PROJECT MANAGER
- 1. Profit
  2. Rework
  3. Zero safety and environmental incidents
  4. What could have been done better? Use Lessons Learnt form FRM-004
  5. Learn from the Client
  6. Improve our processes to prevent identified problems

SALES MANAGER
- Provide:
  - Process control
  - Breakdown cover
  - Warrantee cover
LEVEL 2 CONTROL ENGINEERING AND SOFTWARE PROCESS

Weekly Report with S-curve

Project Control Engineering Review

Critical Path Identified

FAT Right First-Time > 98% of Plan

No Unexpected Product Losses to Client

All Commissioning Problems Resolved

Client Handover and Training Plan Fully Developed

Software Coding

Factory Acceptance Test (FAT)

Site Acceptance Test (SAT)

Commissioning Plan

Client Training and Support

Gain a thorough appreciation of the Control work is to be done in project

Write control system code to achieve FDS

Perform FAT until successfully completed

Perform SAT until successfully completed

Run-up equipment and prove project scope is completely satisfied

Provide agreed training and support

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1 Understand:
   - Scope
   - Cost
   - Resources
   - Discover implications and requirements

2 Review URS
3 Compile FDS
4 Management of Change

1 Extent of coding:
   - PLC
   - SCADA
   - MES

2 Select coding standards to use

1 Compile documentation

1 Identify potential risks on Control Engineering Risks FRM-006

1 Develop and work to a Commissioning Plan

2 Assess and control OHSE risks
3 Record commissioning results
4 Handover User documents

1 Develop training plan
2 Allocate support resources

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Target is the perfect outcome. Tolerance is the worst outcome acceptable. Test is how you check what is actually happening.

Use the flowchart to communicate to the reader the procedural task quality and the details needed at each step, including what forms to complete and what work instructions to follow when necessary.

The very best to you,

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Plant Wellness Way: world class industrial equipment reliability that lasts