Visual Control
Visual Control

Visual Controls are :-

Simple, clear and concise visible indicators which show at a glance the status of a machine, a resource, and an entire plant in connection with a plan or definable objective.
**Visual Control**

**Advantages**

- Topical information, easily accessible, simple data collection
- Status of all areas clearly communicated allowing focus on problems
- Concentrates on facility and resource rather than individuals
- Concentrates on continuous improvement
- Ownership is spread across a team rather than just the leader
- Promotes a synchronised approach between cells yet still identifies best practice
- Gets the teams working together, driving improvements from within
Examples of Visual Controls:

<table>
<thead>
<tr>
<th>Component</th>
<th>Programme Gantt Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1</td>
<td></td>
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<tr>
<td>Item 2</td>
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<td>Item 3</td>
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<td>Item 5</td>
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<td>Item 7</td>
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<td>Item 8</td>
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<td>Item 9</td>
<td></td>
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<tr>
<td>Item 10</td>
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</tr>
</tbody>
</table>

Visual Control

Cost Reduction

Cost %

10%

5%

Actual

Target

Time

Cell / Dept

Turning

Milling

Grinding

Inspection

Activity
**Visual Control**

**Skills Matrices**
Examples of Visual Controls:

<table>
<thead>
<tr>
<th></th>
<th>Joe Bloggs</th>
<th>Bill Door</th>
<th>Sam Grimes</th>
<th>Mike Jones</th>
<th>John Petal</th>
<th>Hugh King</th>
<th>Paul Smith</th>
<th>Jim Smart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking</td>
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<td>Stripping</td>
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<td>Spray</td>
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<tr>
<td>Masking</td>
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</tr>
</tbody>
</table>

- No Training
- Planned Training
- Gaining Experience
- Fully Trained

**Allows:**

- Quick identification of available current skills.
- Management to deploy workforce where required.
- The workforce to be provided with additional relevant skills in a timely manner.
- The workforce to be as flexible as possible.
## Visual Control

### Production Control

Examples of Visual Controls:

- Targets taken from customer schedules
- Enables quantification of over spend (e.g. material, labour etc.)

#### Production Control Table

<table>
<thead>
<tr>
<th>Time</th>
<th>Target Quantity</th>
<th>Accumulated Target Quantity</th>
<th>Actual Quantity</th>
<th>Accumulated Actual Quantity</th>
<th>Loss</th>
<th>Accumulated Loss</th>
<th>Remarks</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00 - 10:00</td>
<td>60</td>
<td>120</td>
<td>50</td>
<td>110</td>
<td>10</td>
<td>10</td>
<td>Fault material</td>
<td>Change batch material</td>
</tr>
<tr>
<td>10:00 - 11:00</td>
<td>40</td>
<td>160</td>
<td>44</td>
<td>154</td>
<td>0</td>
<td>6</td>
<td>Regained 4 items</td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00</td>
<td>60</td>
<td>220</td>
<td>56</td>
<td>210</td>
<td>4</td>
<td>10</td>
<td>4 items scrapped</td>
<td>Tool set changed</td>
</tr>
<tr>
<td>12:00 - 13:00</td>
<td>20</td>
<td>240</td>
<td>20</td>
<td>230</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:00 - 14:00</td>
<td>60</td>
<td>300</td>
<td>65</td>
<td>295</td>
<td>0</td>
<td>5</td>
<td>Regained 5 items</td>
<td></td>
</tr>
<tr>
<td>14:00 - 15:00</td>
<td>40</td>
<td>340</td>
<td>41</td>
<td>336</td>
<td>0</td>
<td>4</td>
<td>Regained 1 item</td>
<td></td>
</tr>
<tr>
<td>15:00 - 16:00</td>
<td>60</td>
<td>400</td>
<td>52</td>
<td>388</td>
<td>8</td>
<td>12</td>
<td>Dia (c) out of tolerance</td>
<td>Tool set changed</td>
</tr>
<tr>
<td>Overtime</td>
<td>12</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL ITEMS PRODUCED:** 400

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**Remarks**

- Fault material
- Change batch material
- Regained 4 items
- Tool set changed
- Regained 5 items
- Regained 1 item
- Tool set changed
- Dia (c) out of tolerance

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Part Description: ANT Shaft
Part Number: ANT 32561
Date: 10th September 1998
Daily Target: 400 Items
Visual Control

Quality / Defects
Examples of Visual Controls:

- Material Defects
- Scrap %
  - 10%
  - 5%
- Time
- Actual
- Target
- Backed-up by an action plan to reduce Defects

Statistical Process Control

- UCL
- LCL

Quality Improvements

Suggestions

- Week No
- Cell / Dept
- Activity
- Backed-up by an action plan to reduce Defects
Visual Control

Inventory

Examples of Visual Controls:

- Material reduction
- Min raw material

Material Inventory

- Finished Items
- W.I.P
- Raw Materials

Inventory reduction plan

Activity

- Actual
- Target
Man-hour Reduction

Examples of Visual Controls:

Total No. of man hours worked per product

Activity

Actual

Target

No of man hrs worked

Target man hour level

Assembly cell owner J. Bloggs
Job Standardisation
What is Job Standardisation?

- A formalised method of documenting procedures, tasks, and times - relating to man, machines and materials.
- More than a set of job instructions.
- Enables everyone to understand the instructions involved.
- A process that involves the whole team in the development of standards.
- A method which ensures repeatability of the manufacturing process

➡ The foundation for improvement
Job Standardisation

Why?

Method and time are fundamental to:

- Product costing
- Man-hour / manpower planning
- Capacity planning
- Scheduling
- Performance analysis / review
- Target setting
Job Standardisation

Benefits

- Enables capable and repeatable processes.
- Process control at source.
- Improves accuracy of planning.
- Leads to better adherence to plans.
- Provides a platform from which continuous improvement can be made.
- Reduces costs.
- Improves quality
Method and time are both essential to job standardisation
Job Standardisation

Review

Example of a low volume / high variety job sheet

Predominantly used low volume industry. e.g. aerospace

All methods must be stamped to indicate that they have been correctly carried out.

Deviations from agreed time are usually captured on Shop Floor Data Capture System

<table>
<thead>
<tr>
<th>Operation No</th>
<th>Time Run/ Set</th>
<th>Method</th>
<th>Stamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>/</td>
<td>Receive Material</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>5</td>
<td>Inspect Material</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>/</td>
<td>Marshall Book in</td>
<td></td>
</tr>
<tr>
<td>4.0</td>
<td>/</td>
<td>Receive Material</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>/</td>
<td>Milling :-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Block Up</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mill 2 Rebates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mill 2” Slot</td>
<td></td>
</tr>
</tbody>
</table>
Job Standardisation

Review

Example of a high volume / low variety job sheet

- Measures differences in cycle times within the cells.
- Used for analysing any variances.
- Brings a standard approach to walking, handling & machine times, methods, cycle time & work in progress.