Turtle Diagram

What? What are the resources for the process?

Materials: (raw, chemicals, subassemblies, etc.)

Equipment: (production, test, inspection, etc.)

Buildings: (floor space, office, etc.)

Hardware/Software:

Who? Who *owns* the process or applies resources?

Process Owners: (competence issues)

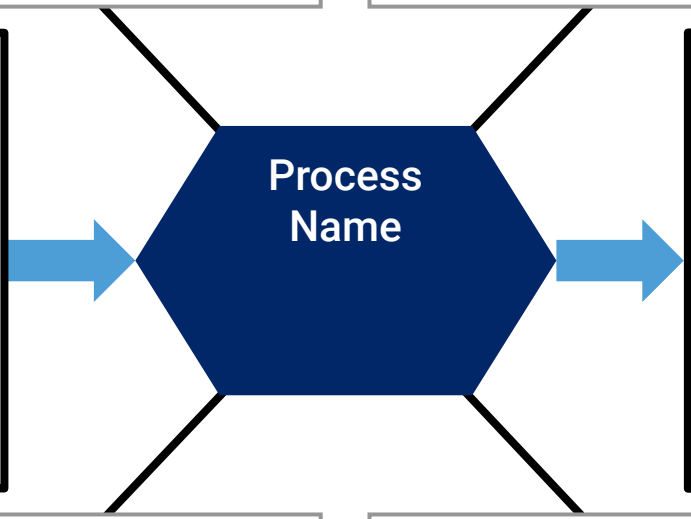
Personnel: (competence issues)

Who Helps? Who supports this process? (See also *How*)

Input **Customer's Needs**

Input Requirements: What characteristics define the product of this process?

- Customer Specifications
- Governmental/Regulatory
- Other



Output **Customer's Needs Met**

Output Requirements**:** What output criteria are used to determine what <u>should have been</u> produced <u>has been</u> produced?

How? How is the process controlled?

Procedures: (control docs, timing charts, work instructions, etc.)

Subprocesses: (if not a procedure or work instruction)

Support Processes

Which processes support this process? (See also *Who*)

Measures Which measures/analyses of process effectiveness are used?

Measures and Metrics:

Use of Data:

© 2022 Plexus International

Plexus INTERNATIONAL

Turtle Diagram Example

What? What are the resources for the process?

- Plant, machinery, process equipment (7.1.3)
- Measuring equipment (7.1.5.2)
- Environment for the operation of processes (7.1.4)
- Property belonging to customers or external providers (8.5.3)
- Preservation (8.5.4)
- Control of externally provided processes, products and services (8.4.1)

Who? Who owns the process or applies resources?

- Organizational roles, responsibilities and authorities (5.3)
- Competence (7.2)
- Organizational knowledge (7.1.6)
- Training effectiveness (7.2)

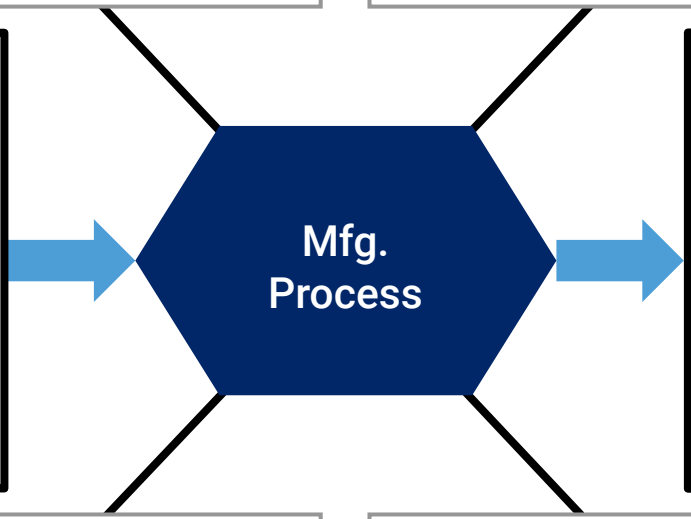
Who Helps?

- IT
- HR
- Logistics
- Sales
- Quality
- Maintenance Personnel

Input **Customer's Needs**

Product needs to be manufactured according to:

- Customer requirements (8.2.2)
- Statutory/regulatory reqs (8.2.3.1)
- QMS requirements (4.4)



Output **Customer's Needs Met**

Product is manufactured which:

- Satisfies the customer (9.1.2)
- Conforms to the specified requirements in the input (8.2.2)

How? How is the process controlled?

- Nonconforming product procedure (10.2)
- Document control (7.5.3.1)
- Document control of records (7.5.3.2)

Support Processes

- Training
- Hiring/Firing
- Purchasing
- Product movement
- Inspection
- Preventive & predictive maintenance

Measures Which measures/analyses of process effectiveness are used?

- Analysis of data (9.1.3)
- Customer satisfaction (9.1.2)
- Other Organizational objectives (6.2.1)
- Continual improvement results to which this process contributes (10.3)
- Audit records related to this process (9.2)

© 2022 Plexus International

Plexus INTERNATIONAL