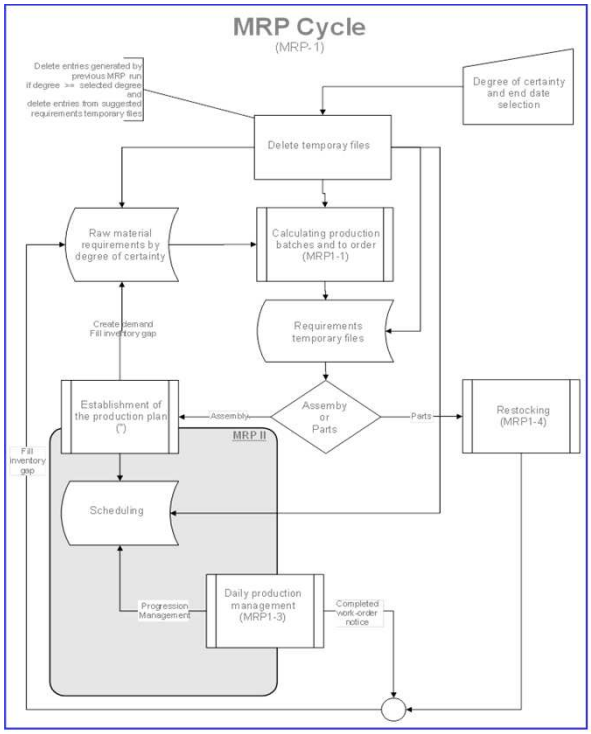
DCision ERP *Operations*

Review of the MRP/ERP methodology



Contains :

- **Degree of certainty management**
- **Demand cycle generation**
- **MRP cycle**
- **Calculation of quantities to produce or to order**
- **Preparation and review of the production plan using the MRP and MRPII model**

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Production Management Methodology Review

You will find in the following pages some basic concepts that were used to develop the various functions of our production management software.

The *DCision ERP* software includes a universal MRP engine, based on external demand elements, that allow you to manage the resource and material requirements for the production and for restocking.

Each customer must determine how to use it in order to to meet their own needs.

This document provides a methodology for general use.

The first stage of the implementation plan consists of :

- Studying this methodology.
- Understand it.
- Approve it as is or define the changes that will make it acceptable.

Production Management Methodology Review

The software uses the concept of "degree of certainty“ (or confidence) as a support for planning.

Each of the independent demands is linked to a degree of certainty. The degree 0 is the most certain (orders in hand) while the degree 5 is the less certain.

The planner can have a series of plans of different degrees of certainty that he will constantly update.

Two types of MRP can be generated:

- MRP based on the demand to the desired degree. The MRP will consider the stocks at the beginning and all demands entered at a lower degree or equal to the desired degree. It will indicate as a result the total requirements.
- MRP based on the demand of the desired degree. Our system will only consider the marginal demand of the desired degree and will show only marginal needs created by this demand.

The following page illustrates in more detail how this concept work.

Production Management Methodology Review

Degree of certainty management

The notion of degree of certainty serves the planner to analyze the impact on resources in demand scenarios probabilities.

Degree of certainty	Sales plan	Bookings	Sales order				Work-order				Purchase order			
			Issues from bookings		Regular		Issued by MRP		Regular		Issued by MRP		Regular	
			nc*	c	nc	c	nc	c	nc	c	nc	c	nc	**c**
Degree 99					√				√				√	
Degree 5	√						√				√			
Degree 4	√						√				√			
Degree 3	√						√				√			
Degree 2	√						√				√			
Degree 1	√						√				√			
Degree 0		√	√	√		√	√				√			
Degree –1														
Degree –2								√		√		√		√

* nc : Not confirmed c : Confirmed

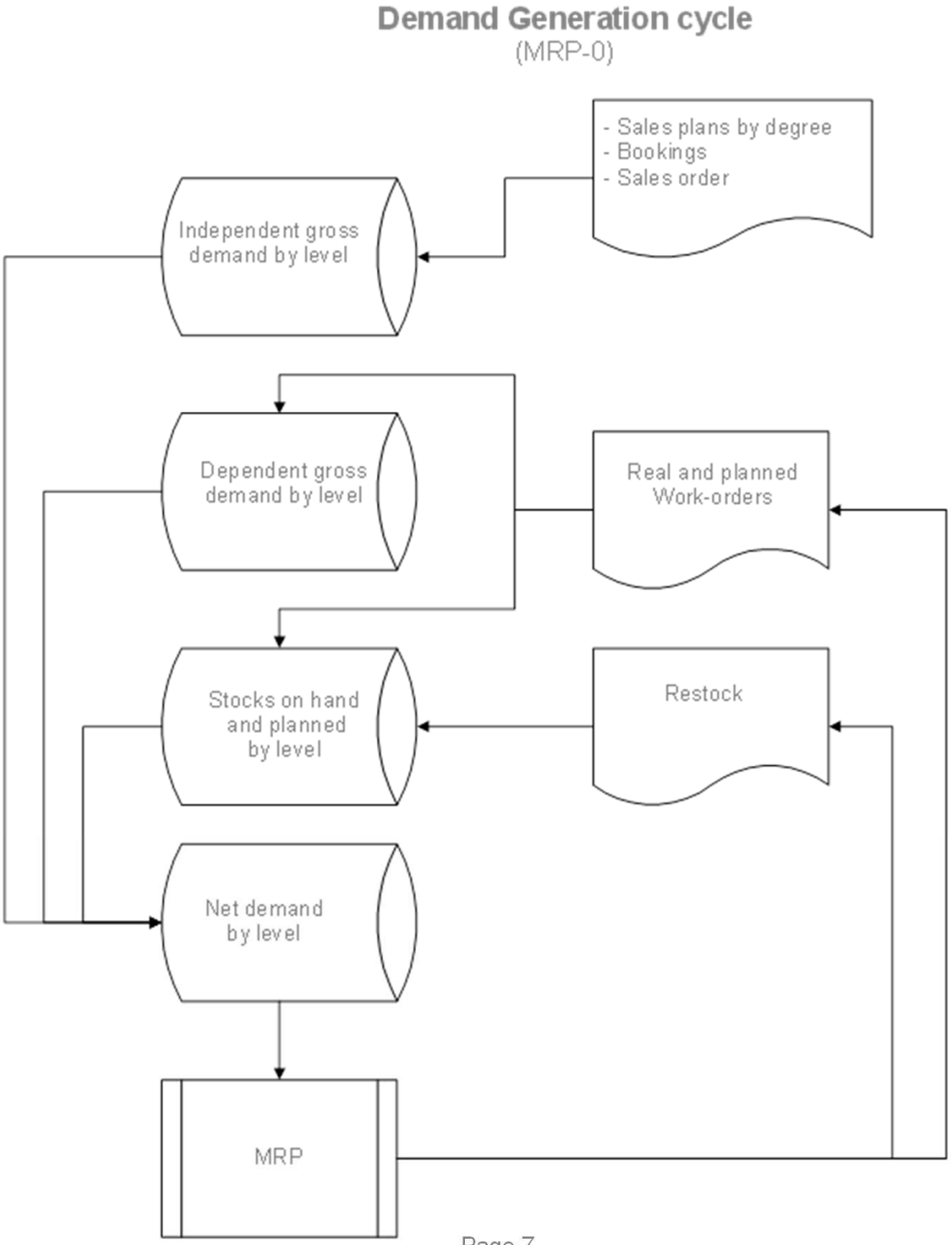
Notes :

- A sales plan can be changed of degree. When it passes to degree 0, it becomes a confirmed booking.
- A work-order or purchase order generated by the MRP from a degree 1 demand or higher cannot be changed.
- A work-order or purchase order generated by the MRP from a degree 0 demand can be confirmed. This confirmation will result in degree -2.
- The sales order, the work-order and the purchase order manually created but unconfirmed are of degree 99. They change to the degree -2 when confirmed. In the next revision, they can alternatively be created at degree -1 (and still go to -2 degree when confirmed).

Production Management Methodology Review

The following diagrams illustrate how the *Dci* Manufacturing Operations Software approaches each function related to the management operations

Production Management
Methodology Review



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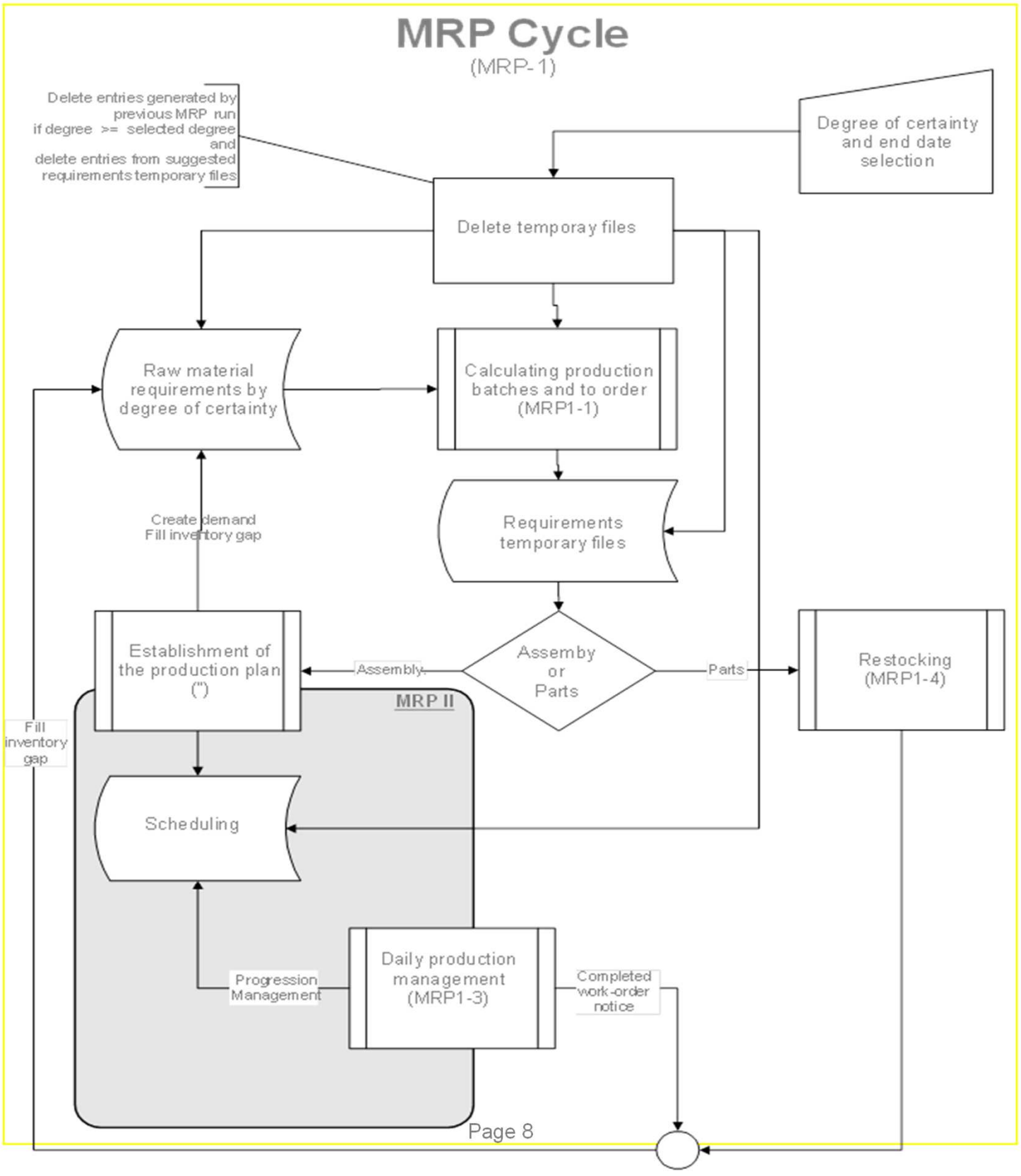

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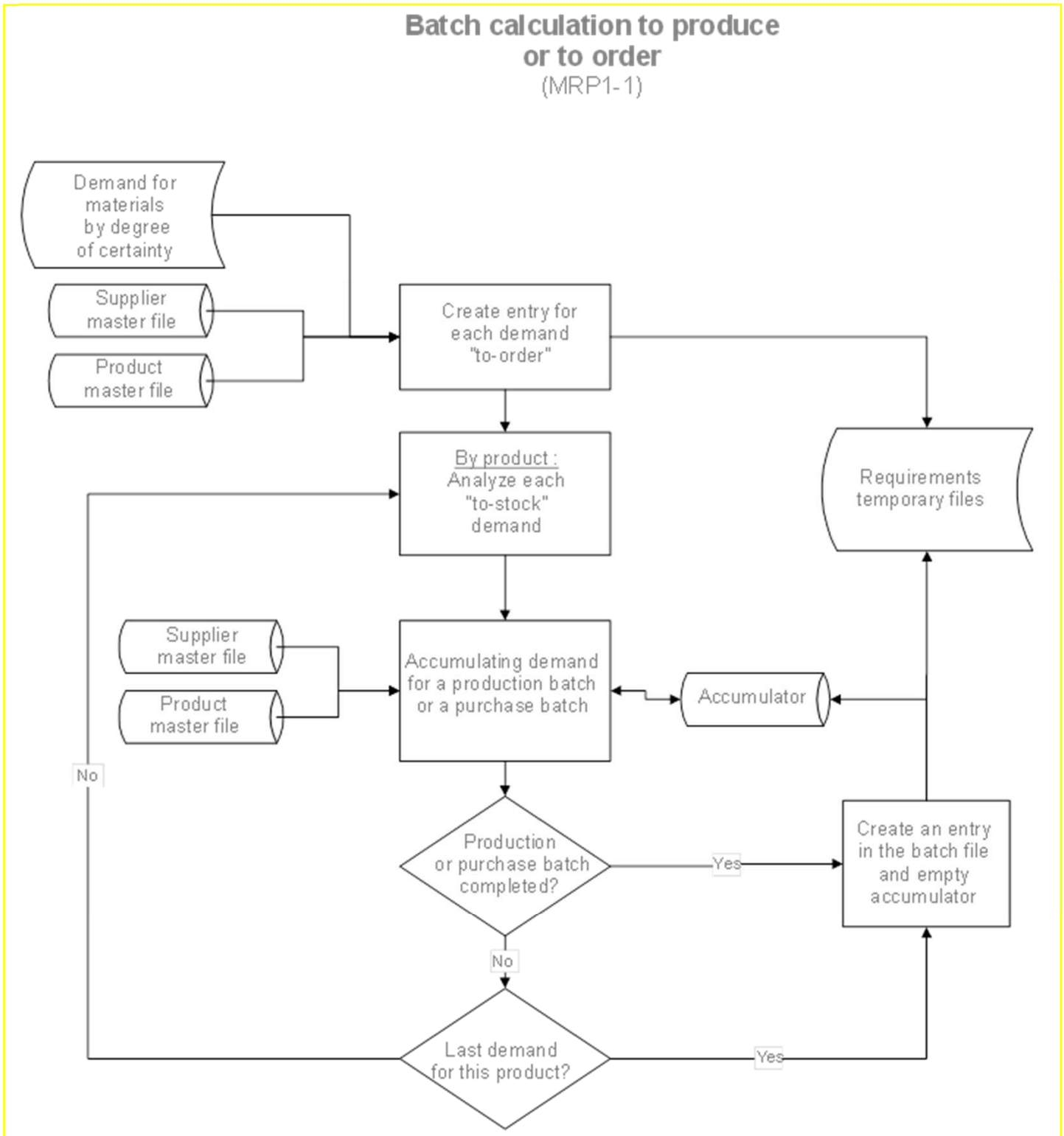

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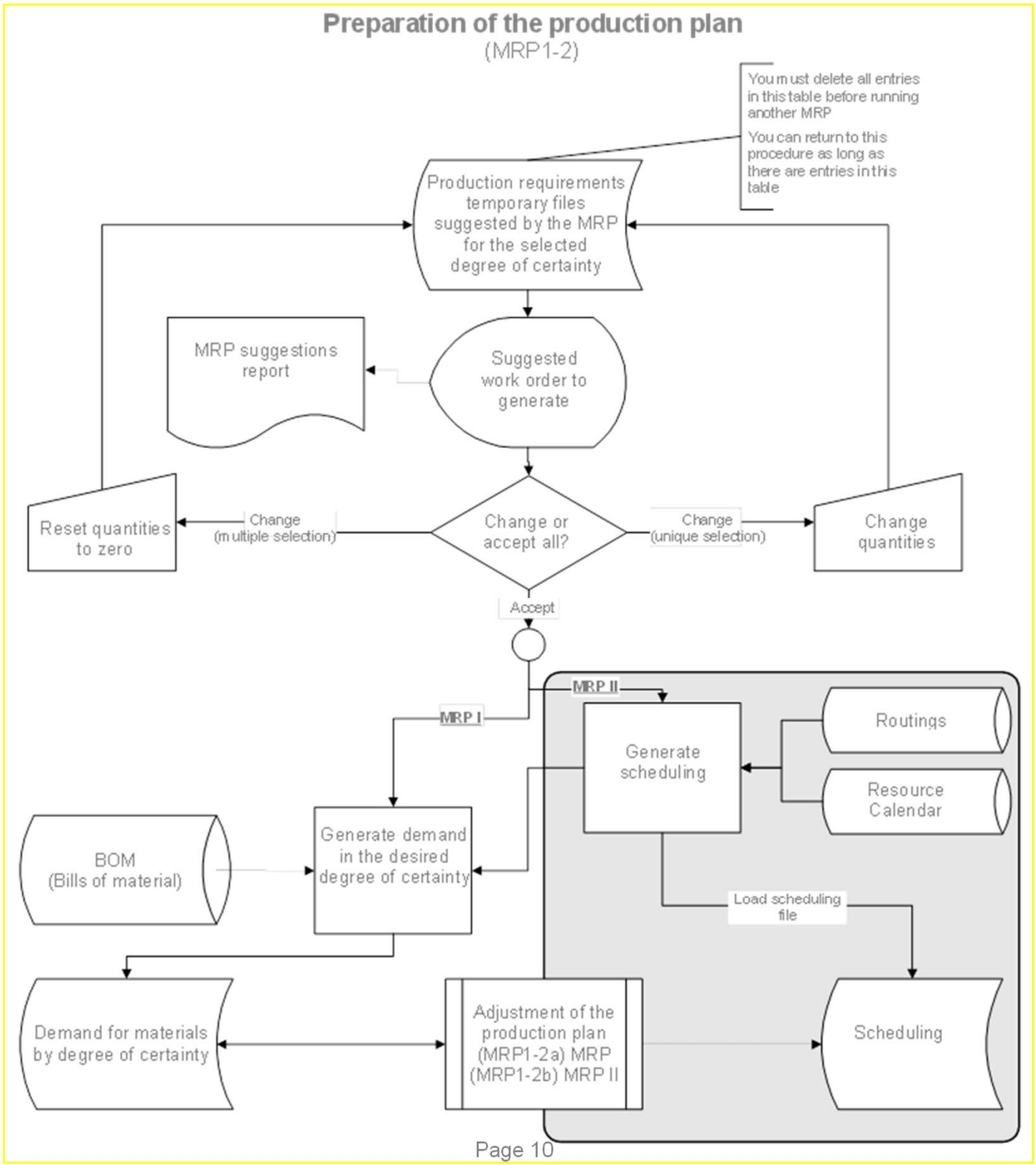

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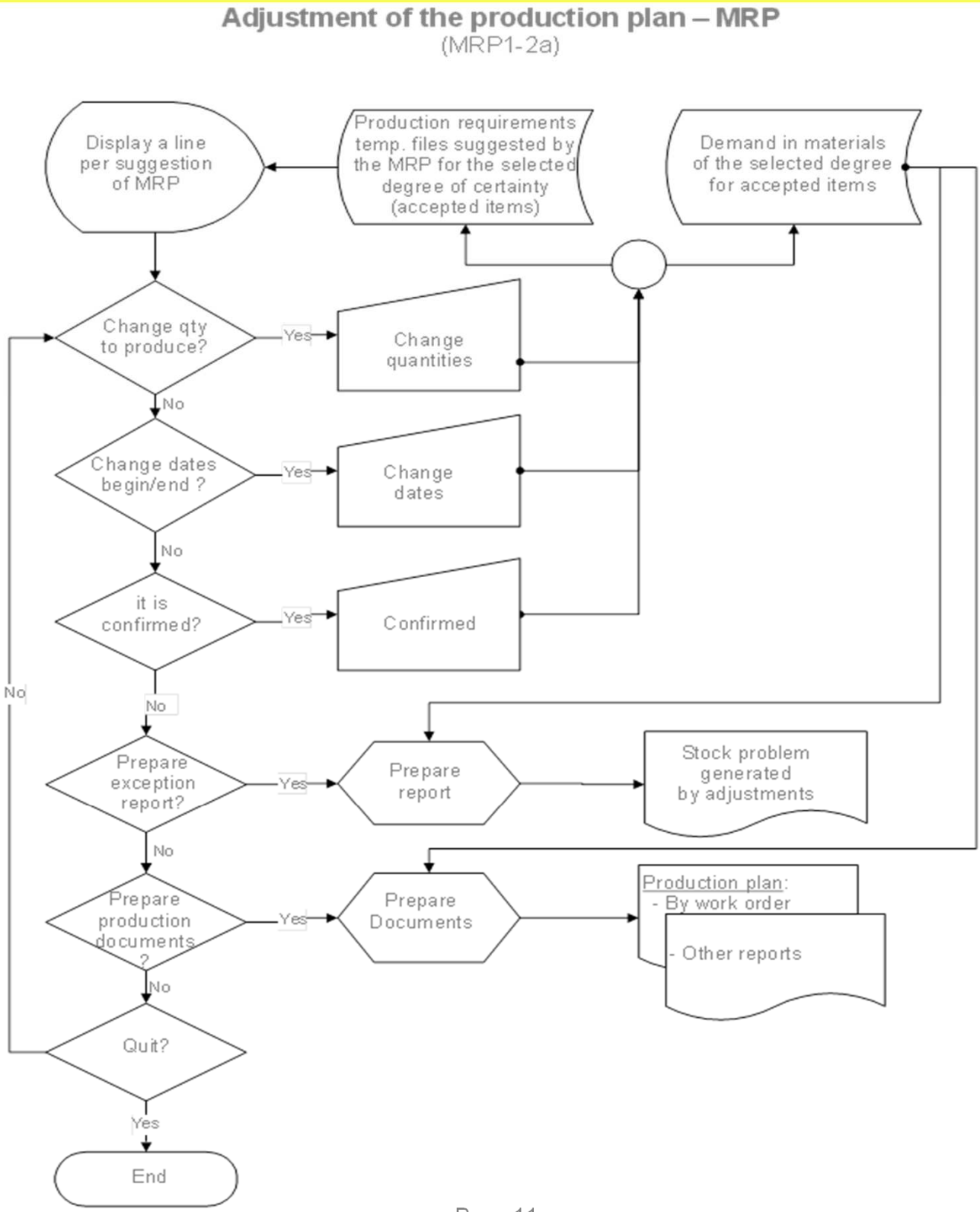

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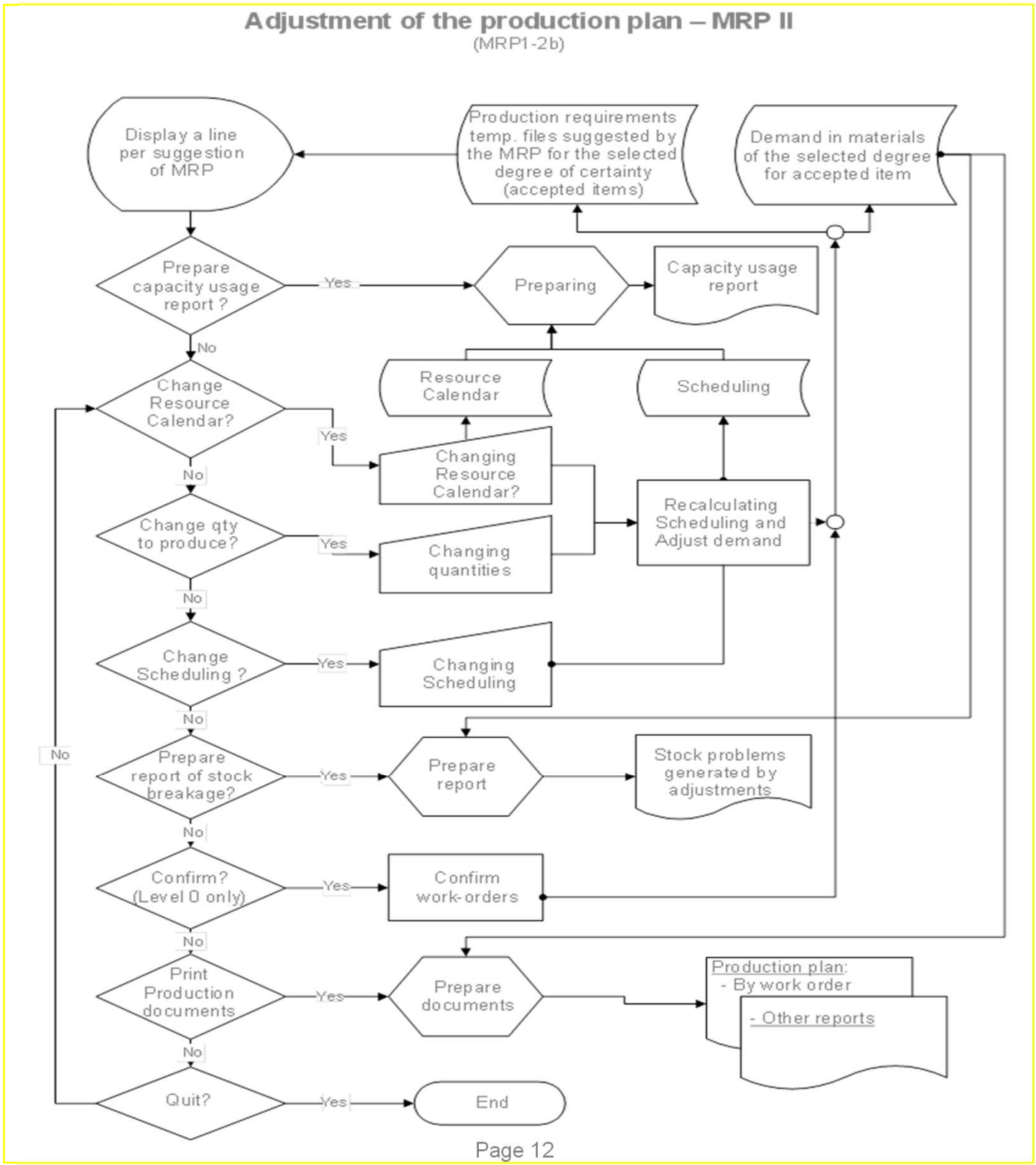

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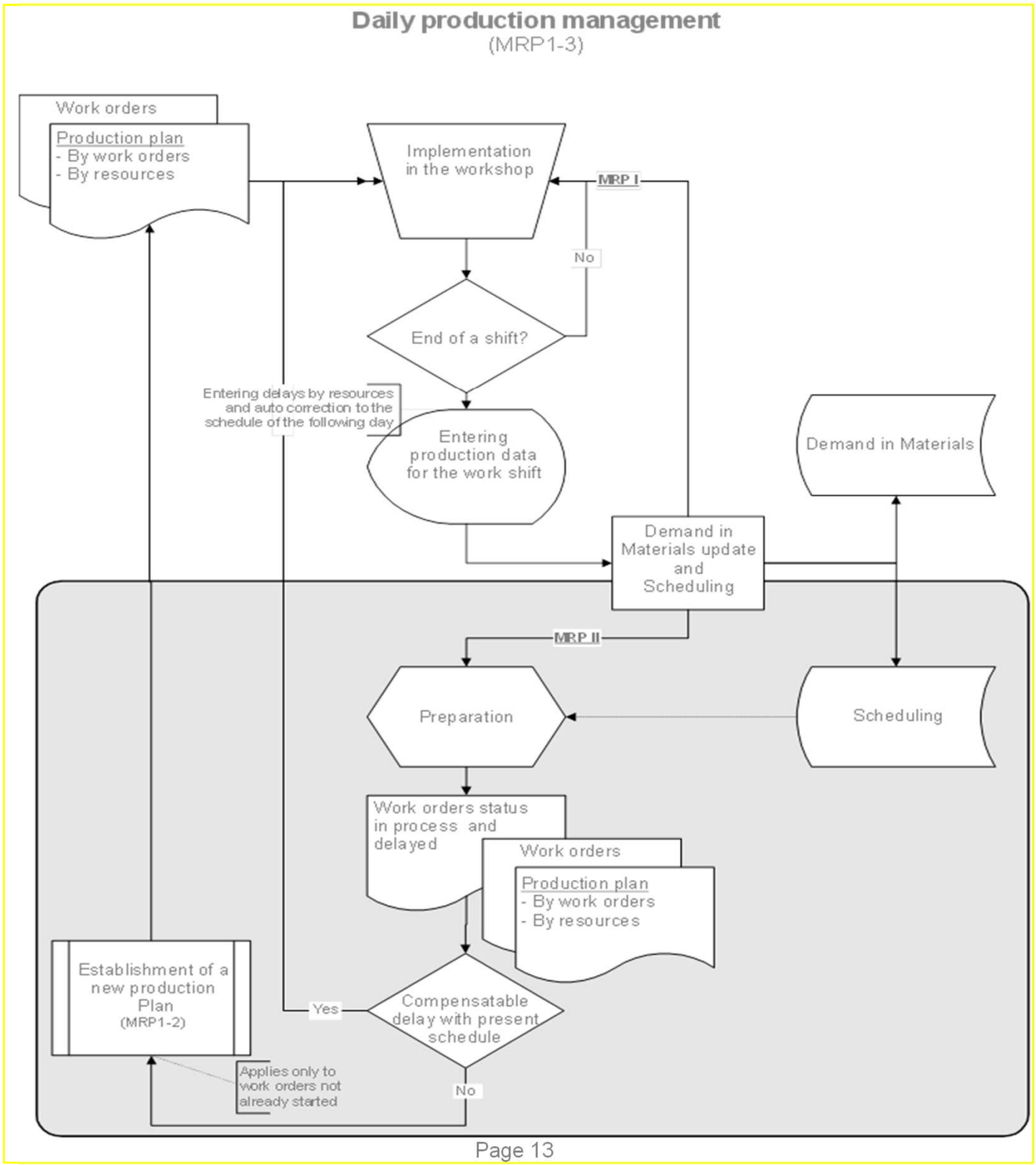

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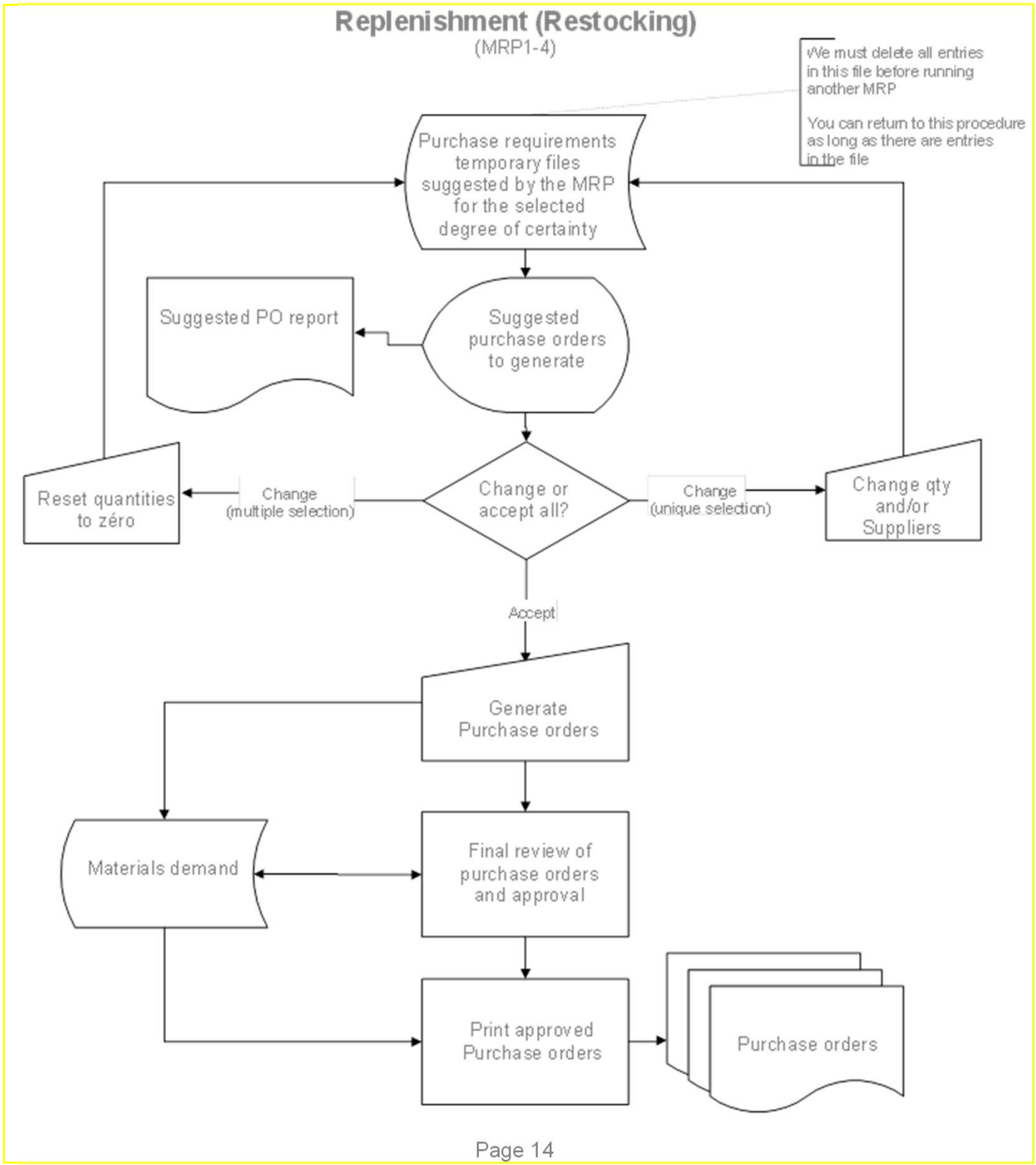

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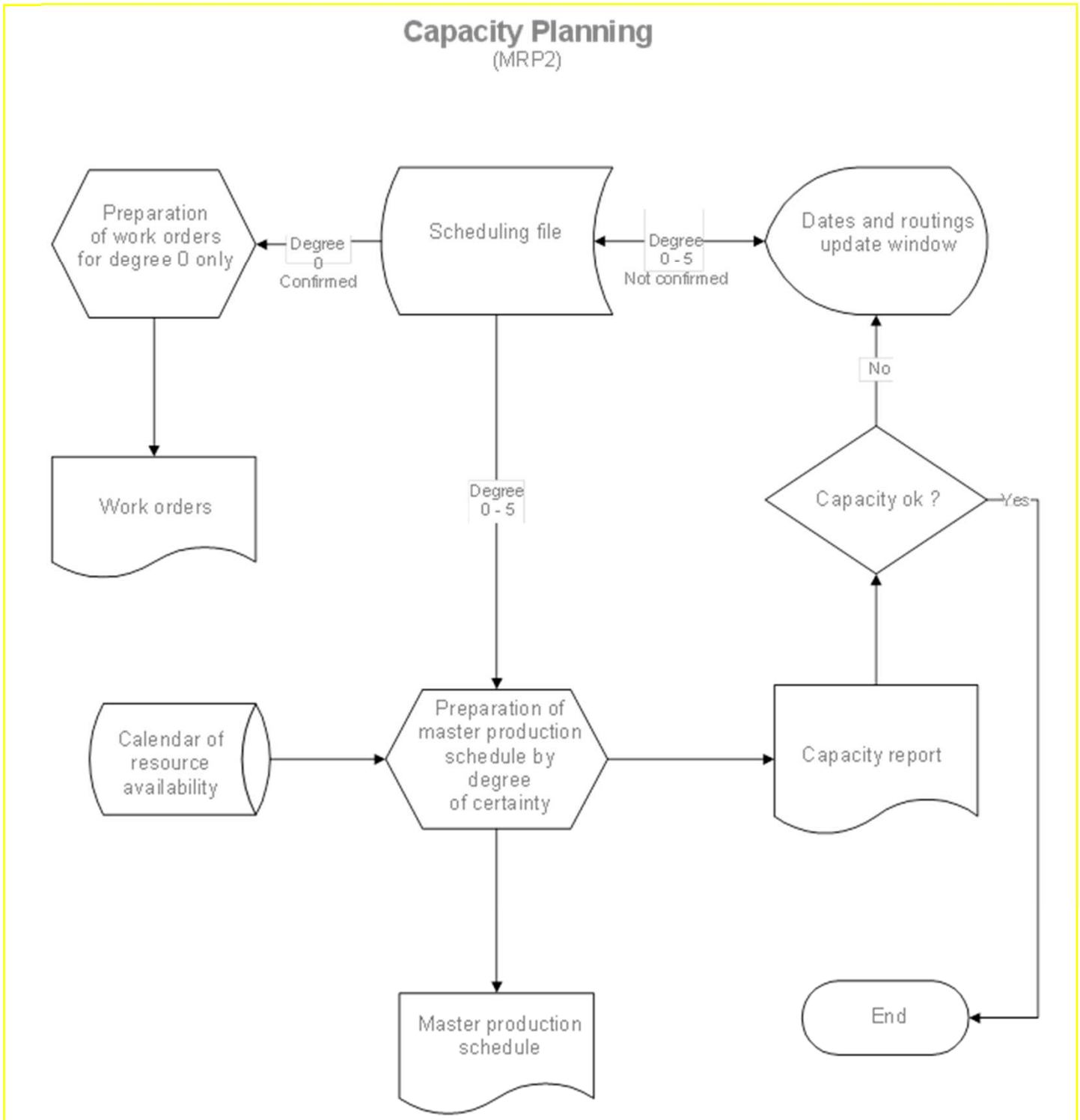

Production Management
Methodology Review

Respect The Business Cycle
(ERP)