Production Process Map

Basics

Recommended Format

Generic Example

Basics

- Production Process Map

  An evolution of a production flowchart, identifying

  - Inputs – What's needed at this step
  - Outputs – What's the product/result of this step
  - Key Activities – What actions yield the step's output
    - Processing of inputs and previous steps' outputs

- Safety Critical Characteristic (SCC) Notation

  All SCC-related information employs red color font or shapes

  Non-SCC information employs black color font

Recommended Format

Contractor format is acceptable, provided the alternate format is explained

(as in the following slides)

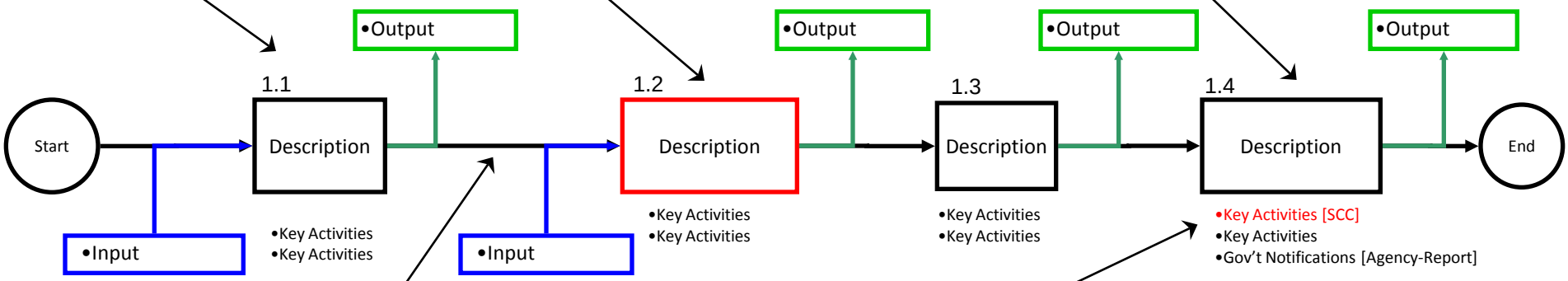
Production Process Format

Level "n" Process Map

"1.1" means this is a 2nd Level Map of Level 1's Step 1

Red box means there is an SCC created or detected at a lower level Map

Red Letters in Input, Output or Key Activities mean the SCC is created or detected at this very point in the Map



See next slide for Steps' nomenclature

Black lines denote Process Flow

Government notifications include the Agency(ies) and reports/documents used to communicate SCC

Key:

Input: -----

Output: -----

Process: -----

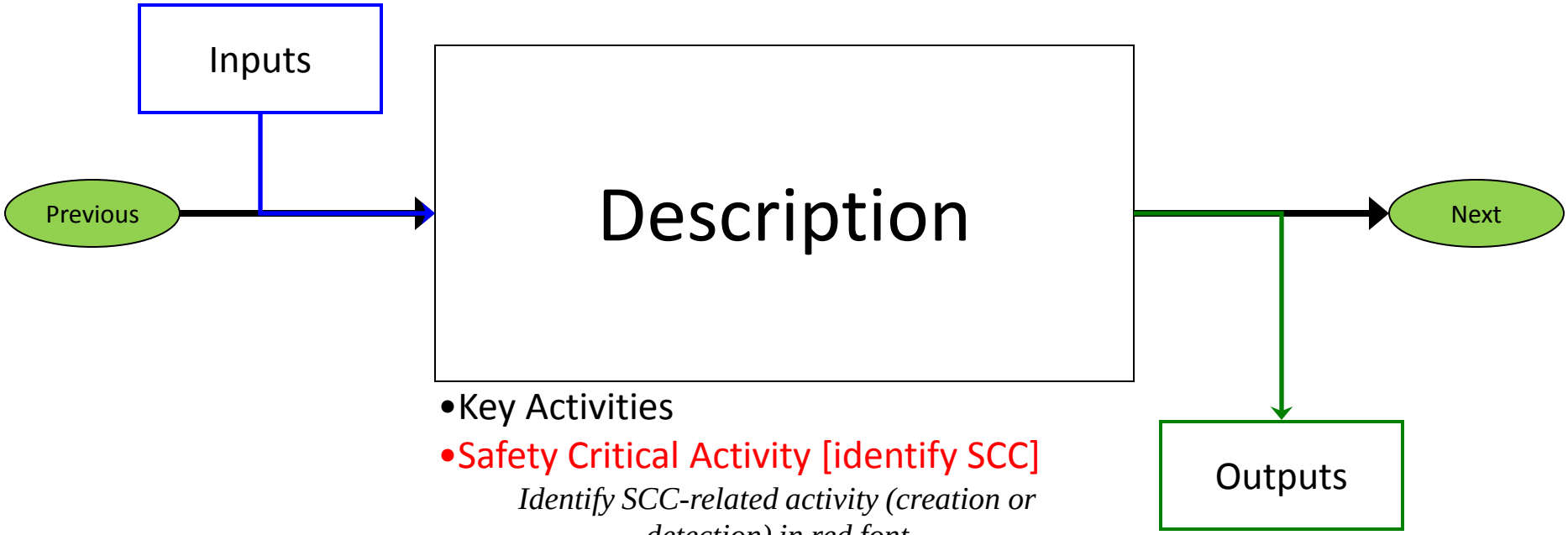
Critical Defect -----

Step Nomenclature

1.2.1

Means

Numbering	Level	Step
1	1	1
1.2	2	2
1.2.1	3	1



- Key Activities
- Safety Critical Activity [identify SCC]

Identify SCC-related activity (creation or detection) in red font
Spell out SCC within [brackets]

Place blue/green boxes as to best fit within map

Example

Representation of a Production Line for illustration and reference purposes

Safety Critical Characteristics (SCCs) Identified in this Map

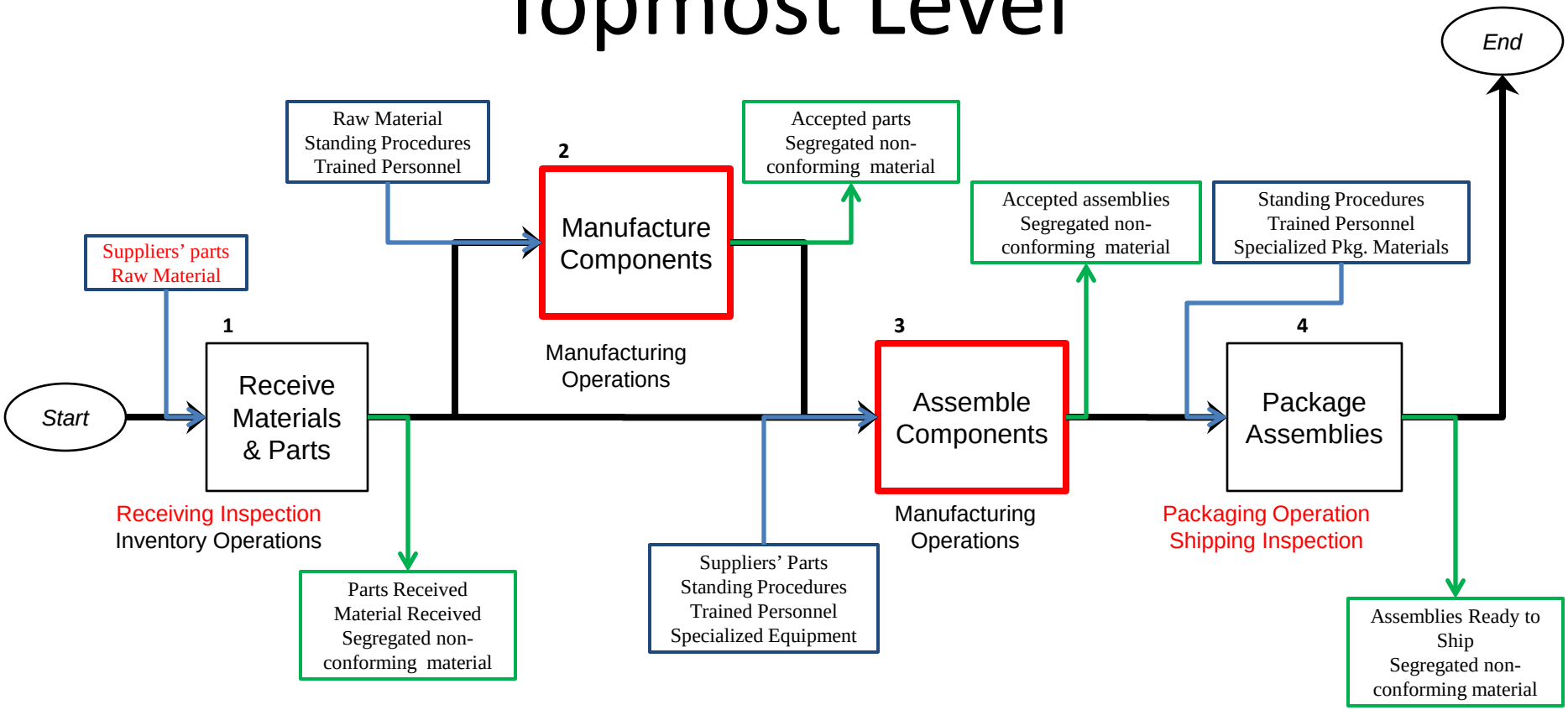
Code	Description
A	Material Structure Unsound
B	Interface Thread Incorrect
C	Leak Rate Over Max
D	Presence of Interface Holes
E	Incorrect Assembly

- Identify what SCCs are portrayed within the map

  Defects herein are used solely for illustration

- State “No SCCs in map” for submittals without SCCs

Topmost Level



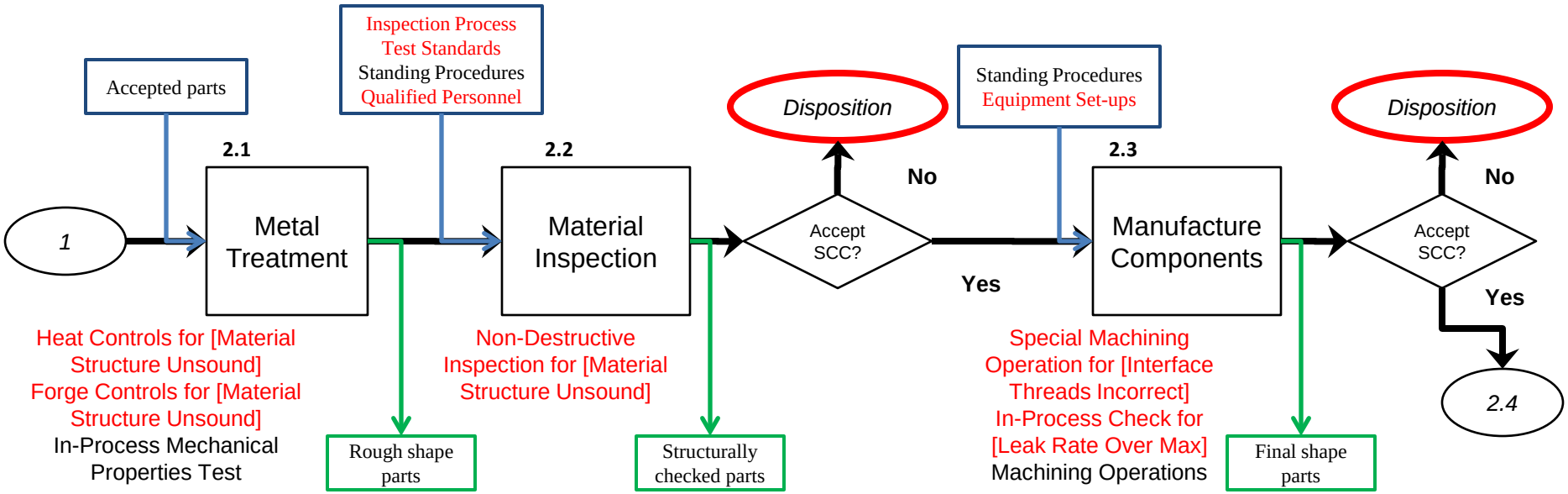
- Steps 1 & 4 identify the creation and detection points for the Safety Criticals (red text).

  A lower level map may not be necessary

- Steps 2 & 3 identify Safety Criticals are either created or detected or both in a sub-processes.

  A lower level map is necessary

Step 2 Detailed [1/2]



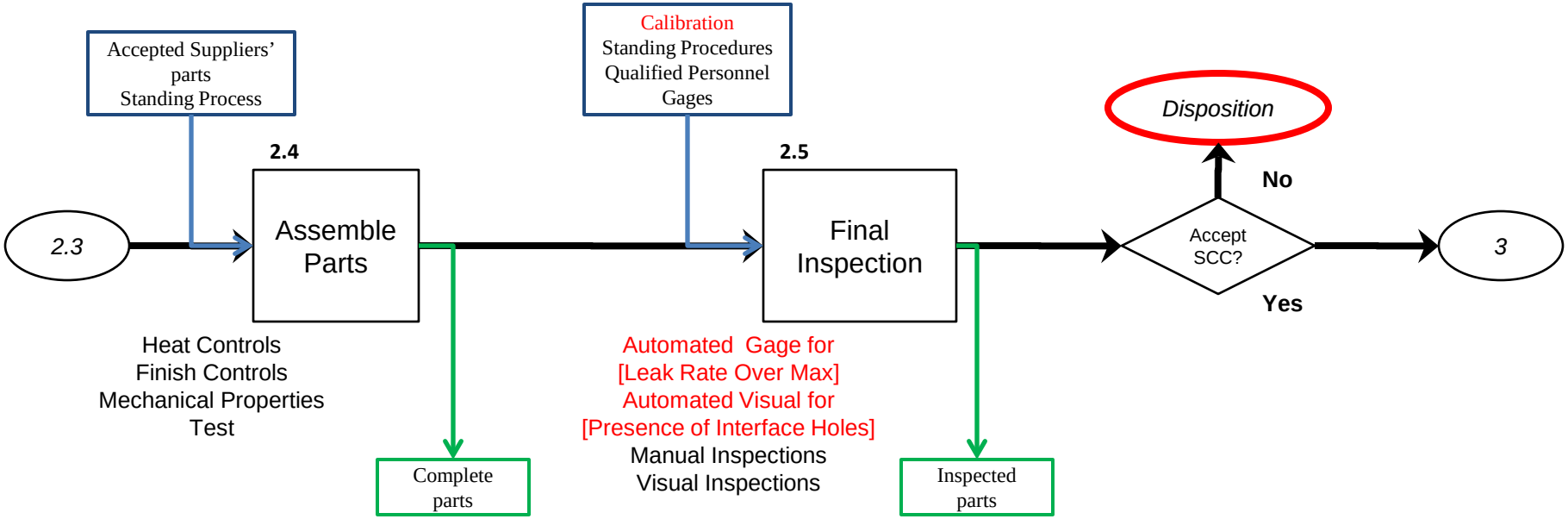
- Sub-Steps identify creation and detection of SCCs, as well as proactive measures to prevent them (e.g., in-process check)

  Sometimes the process inputs can be enable creation of SCCs

- Ovals are off-page connectors

  Disposition off-page connector refers to SCC non-conformance process handling

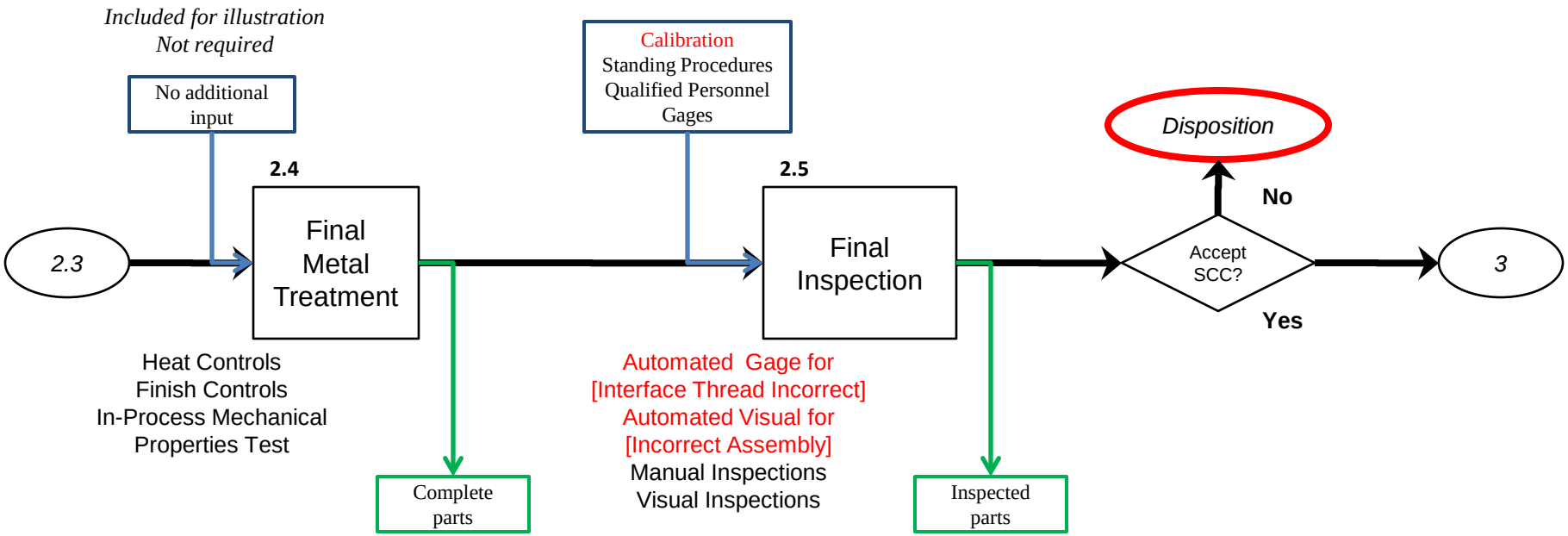
Step 2 Detailed [2/2]



- Note not every input or activity is SCC-defect related
- Step numbering reflects lower level

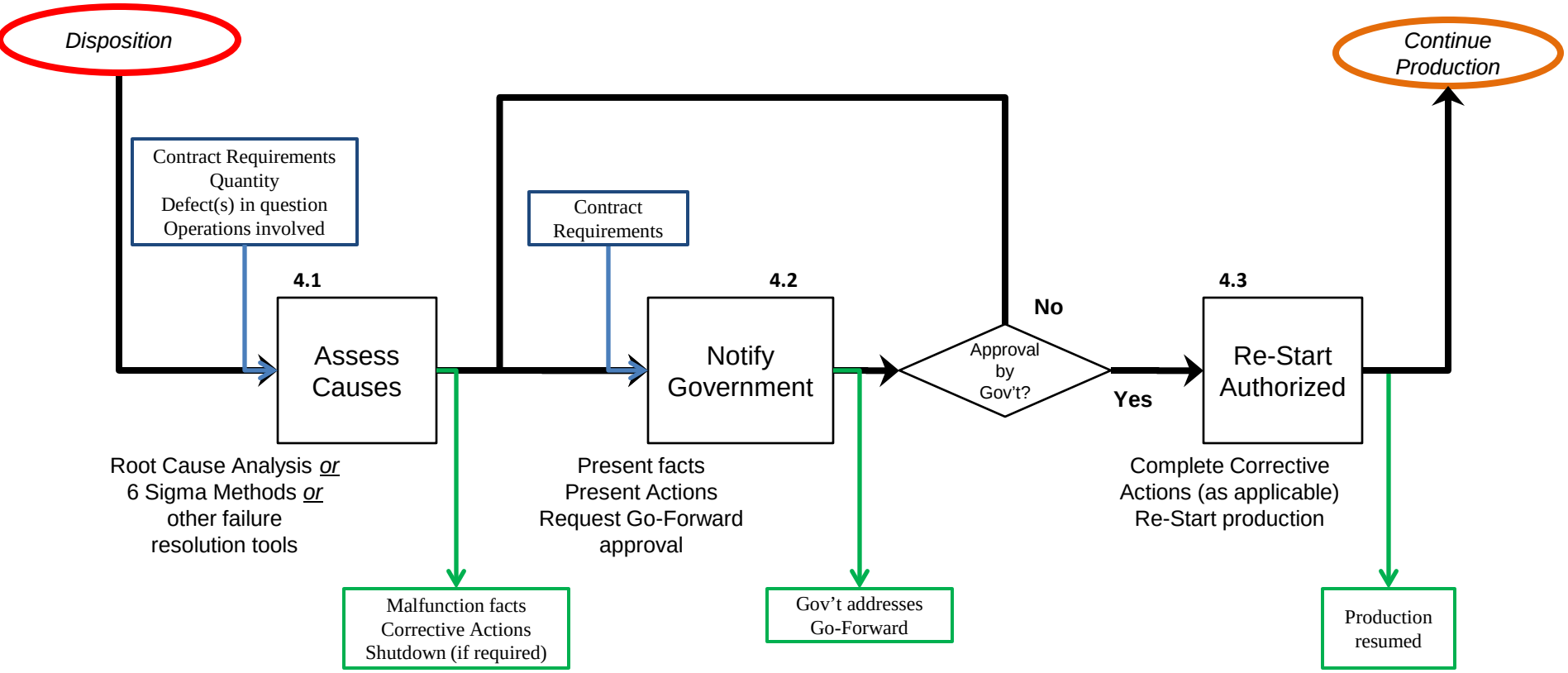
  All 2.x are part of Topmost Level step 2

Step 3 Detailed



- Note inspection can happen at latter stages of production

SCC Disposition



- Include sub-map addressing how SCC dispositions are handled

  Based upon Critical Characteristic Control Plans (CCCP) and/or Critical Plans of Action (CPOA)

- Only applies to SCCs