Bundesamt für Wehrtechnik und Beschaffung

German IM Position

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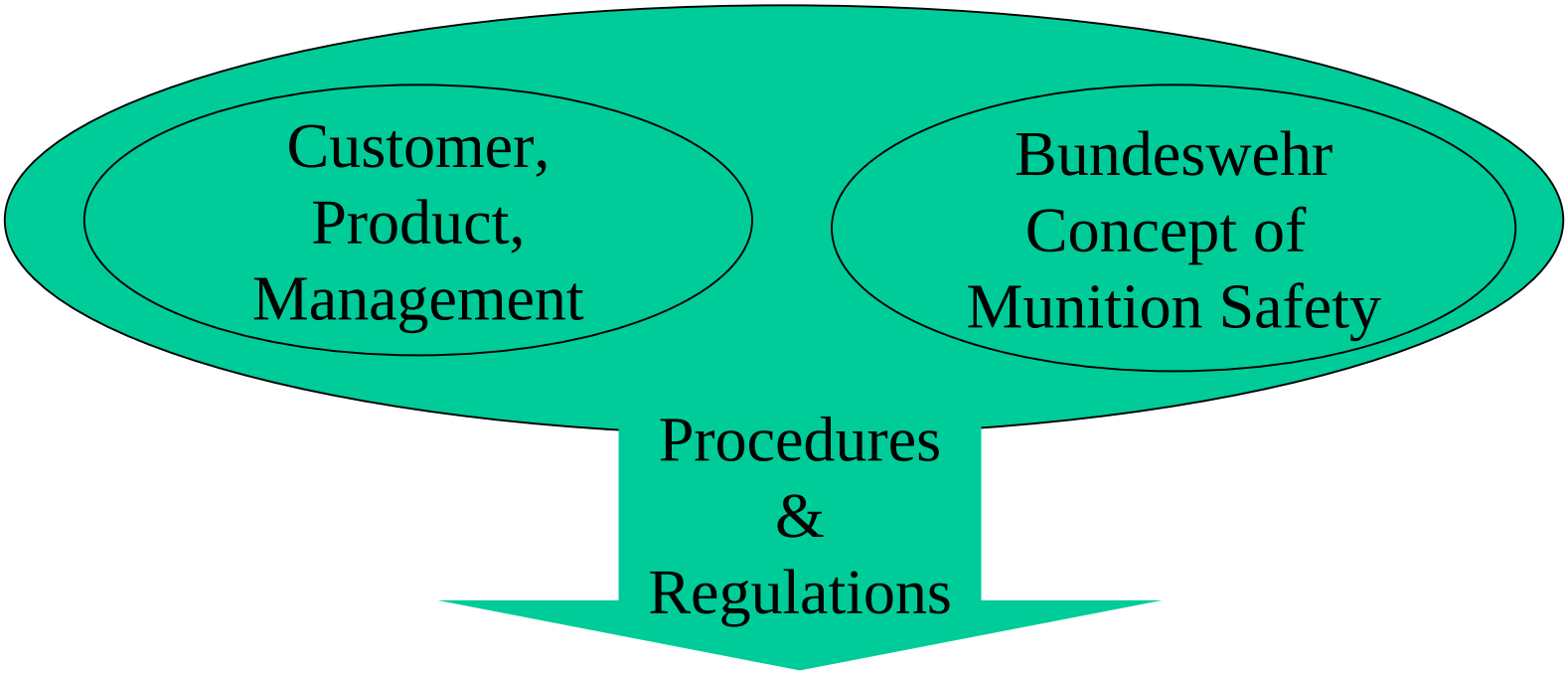
Bundeswehr

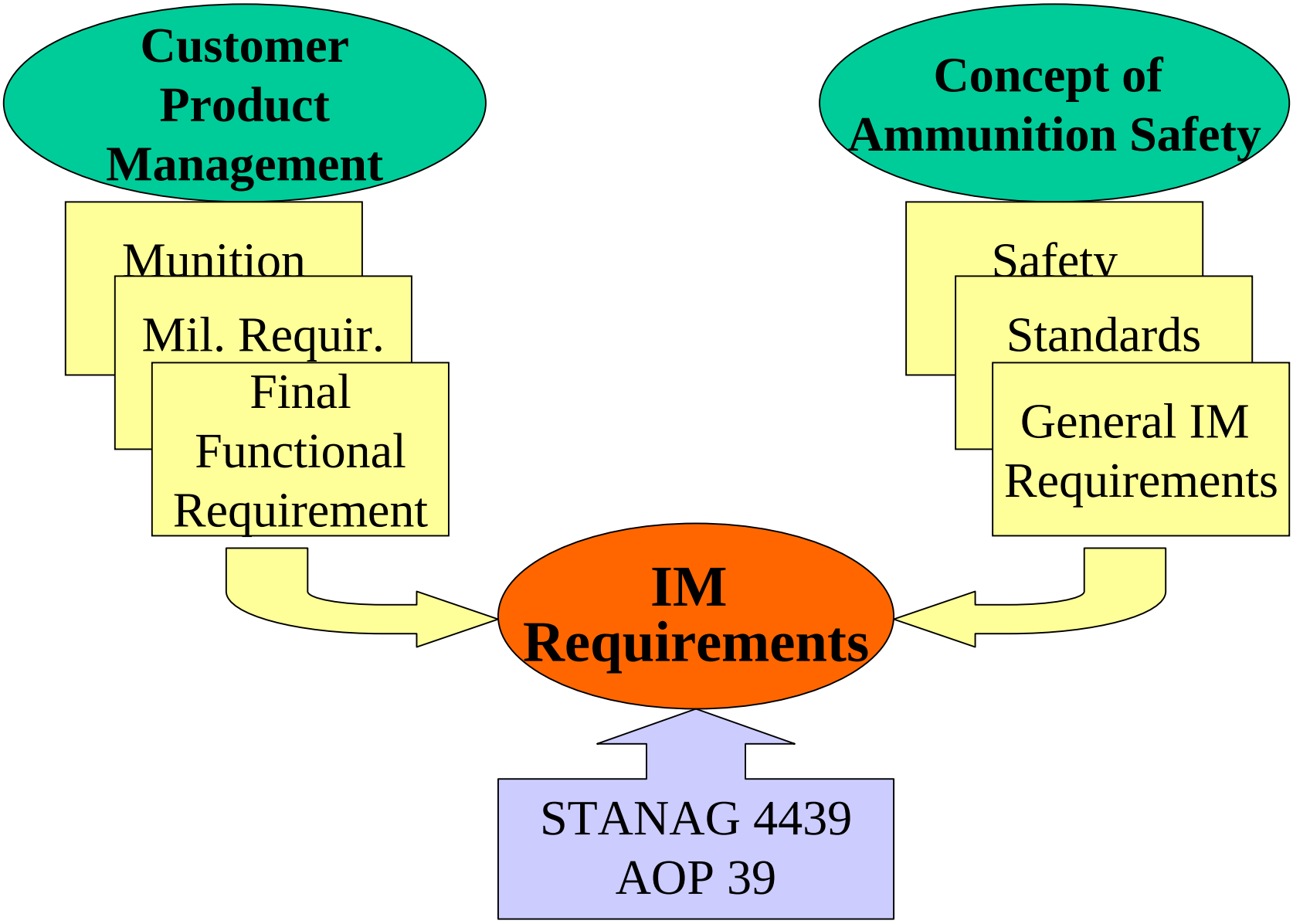
MoD GE Directives



Determining and meeting of the Bundeswehr demand

Basis for safety of munition in service of the Bundeswehr

Development of Munition



Basic Requirements for IM:

- New developed ammunition must fulfil IM requirements according to specification
- IM assessment of ammunition already in service under consideration
- Waiver, if necessary, issued only by MoD
- Testing and assessment i.a.w. STANAG 4439 & AOP 39

Specific IM Requirements

Specific requirements for IM are to be derived from military requirements:

- System requirements (carrier specific)
- Final Functional Requirements (type spec.)
  - Tactical requirements & threat analysis
  - Scenario and environmental conditions
- Performance Requirements
  - Reliability and safety
  - Resistance to selected stimuli

Technical Requirements

Performance parameters:

- target effectiveness, e.g.
  - Shaped charge penetration capability
  - Fragment distribution & velocity etc.
- Selected energetic materials
  - Insensitive explosive components
- Specific design: venting, barriers, etc.
- Packaging & protection

Methods for testing of IM:

to be chosen i.a.w.

- Threat analysis
- STANAG 4439 and related documents
- AOP 39
- Environmental laws
- Safety regulation of test site

Three different levels of insensitivity:

1. **Minimum level:**
   requirement for any new development
2. **Medium level:**
   if level 3 cannot be reached;
   divided in 2 classes
   2a: confined munition, bursting pressure <100 bar
   2b: highly confined, pressure rate ≥ 100 bar
3. **Maximum level**

IM Assessment Criteria

Stimuli	Level 1	Level 2a < 100 bar	Level 2b ≥ 100 bar	Level 3	STANAG
FH	IV	V	V	V	4240
SH	III	V	IV	V	4382
BI	IV	IV	IV	V	4241
FI	I	IV	IV	V	4496
SCJI	I	I	I	III	4526
SR	I	III	I	III	4396

Roman figures refer to max allowed type of reaction i.a.w. related STANAG

MSIAC Support

- **GE signed MSIAC MoU in 2005**
- **Will take advantage of MSIAC support**
- **MSIAC will provide IM expertise and offer support to BWB and Industry**