the **and** means more

Implementing Clinical and Performance Evaluation Reports for Your Medical Device

Best Practices for Getting Them Right the First Time

Regulatory & Quality Solutions (R&Q) provides industry-leading regulatory and quality consulting and engineering for medical devices, IVDs, and combination products.

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- 20+ years of medical device experience
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- Involved in R&Q MDR and IVDR Leadership Councils

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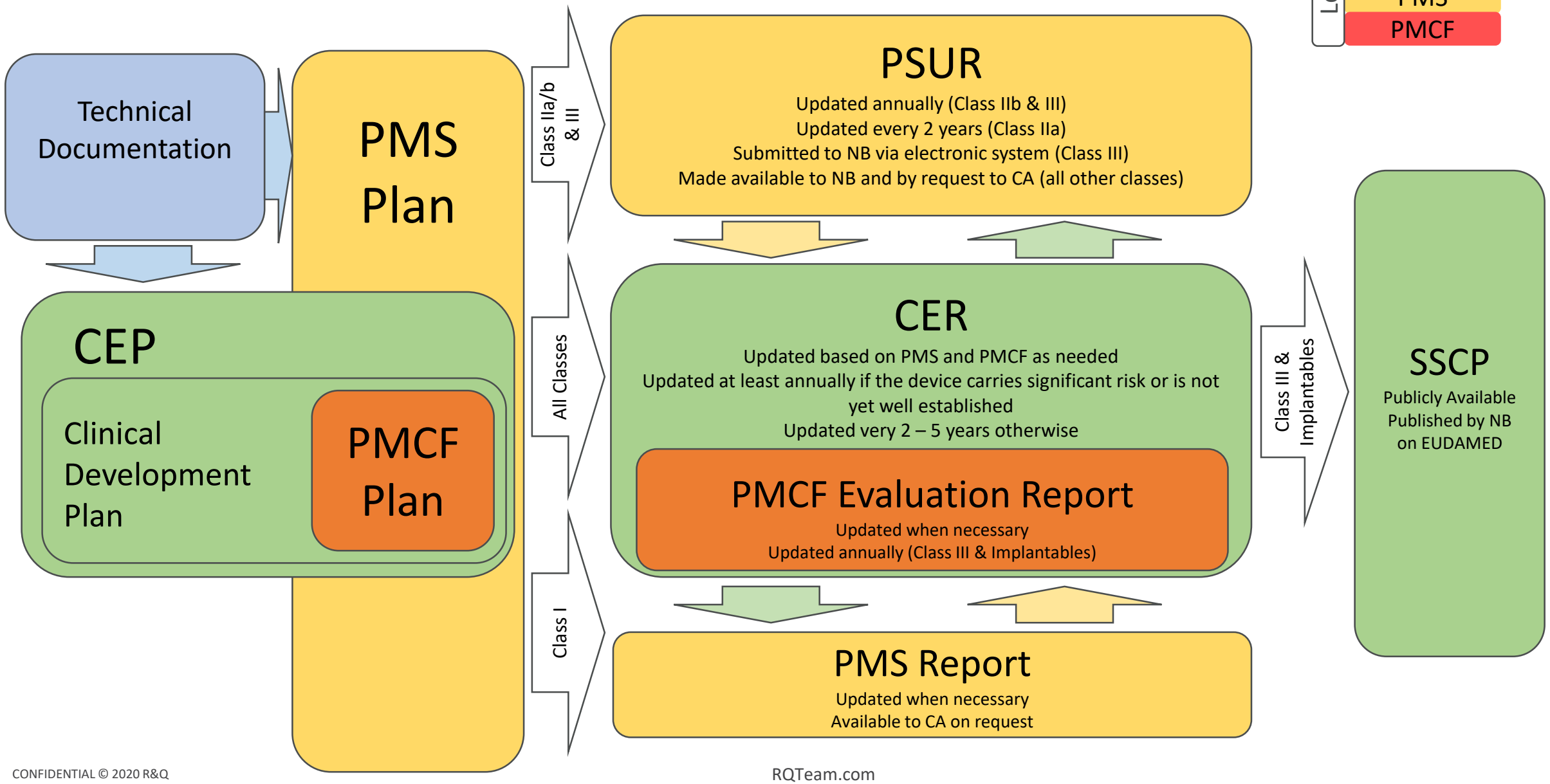
Agenda

- Background and Requirements
- Common Notified Body Findings and Tips to Overcome Them
- Example Process
- Performance Evaluations

Documentation requirements



Clinical Evaluation and Performance Evaluation

Needed for:

- All EU MDD and MDR Compliant Devices
- All EU IVDR Compliant Devices

Clinical Evaluations – MDR Article 61

- Manufacturers shall plan, conduct and document a clinical evaluation
  - **Demonstrate conformity with relevant GSPRs**
  - **Evaluation of the undesirable side-effects**
  - **acceptability of the benefit-risk- ratio**
- The manufacturer shall specify and justify the level of clinical evidence necessary to demonstrate conformity with the relevant GSPRs
  - **Clinical data should provide sufficient clinical evidence**
  - **The level of clinical evidence shall be appropriate in view of the characteristics of the device and its intended purpose (proportionate to the nature, classification, risks, intended purpose, and claims)**

TIP: Refer to MDCG 2020-6 Guidance on sufficient clinical evidence for legacy devices

Clinical Evaluations – MDR Article 61

- A clinical evaluation shall be based on the following:
  - **Relevant scientific literature**
  - **Results of all available clinical investigations**
  - **Currently available alternative treatment options**
- Investigations shall be performed for implantable and class III devices, except:
  - **the device has been designed by modifications of an equivalent device with sufficient clinical data marketed by the same manufacturer (or with a contract)**
  - **the devices has sufficient clinical data, has been placed on the market under the MDD, and is in compliance with the relevant product-specific CSs**
- The notified body shall check that the PMCF plan is appropriate and includes post market studies to demonstrate the safety and performance of the device

Clinical Evaluations - MDR Article 61

- Where demonstration of conformity with the GSPRs based on clinical data is not deemed appropriate
  - **adequate justification shall be given based on the**
    - Results of risk management
    - Consideration of the specifics of the device/body interaction
    - Clinical performance intended and the claims of the manufacturer.
  - **manufacturer shall substantiate why conformity with GSPRs based on the results of non-clinical testing methods, including performance evaluation, bench testing and pre-clinical evaluation, alone is adequate**

CER Structure – MEDDEV 2.7/1 rev 4 A9

- Summary
- Scope and device description
- Clinical background and State of the Art
- Device under evaluation
  - **Demonstration of equivalence**
  - **Non-clinical data**
  - **Clinical Investigation data**
  - **PMS / PMCF data**
  - **Clinical literature data**
- Analysis of the clinical data
- Conclusions, PMS/PMCF plan, and additional information

Table of contents	Example of contents
1. Summary	Executive summary, summary for external purposes. This section should summarise the determination of the benefit/risk profile in the intended target groups and medical indications, and the demonstration of acceptability of that profile based on the state of the art in the medical fields concerned.
2. Scope of the clinical evaluation	See Section 7 and Appendix A3. Identification of devices covered by this clinical evaluation report, products, models, sizes, software versions, accessories, their proprietary names, code names assigned during device development. Name and address of the manufacturer. Whether this clinical evaluation is submitted to the AIMDD as amended by directive 2007/47/EC, or to the MDD as amended by directive 2007/47/EC. Concise physical and chemical description, including materials. Whether the device incorporated medicinal substances (already on the market or new), tissues, or blood products. Mechanical and physicochemical characteristics; others (such as sterile vs. non-sterile, radioactivity etc.); picture or drawing of the device. Technologies used, whether the device is based on a new technology, a new clinical application of an existing technology, or the result of incremental change of an existing technology. Description of innovative aspects of the device. Device group the device belongs to. How the device achieves its intended purpose. Positioning in relation to available treatment/ management/ diagnostic options. Exact description of the intended purpose as described in the device's IFU[20], with exact medical indications (if applicable) and contraindications; claims made in available promotional materials. Name of disease or condition, clinical form, stage, severity, symptoms or aspects to be treated/ managed/ diagnosed, target patient population, target user group. Intended application of the device, single use/reusable, invasive/non invasive, implantable, duration of use or contact with the body, maximum number of repeat applications. Identification of organs, tissues or body fluids contacted by the device. Precautions. Claims on clinical performance and clinical safety foreseen by the manufacturer. Whether the device is already CE marked, whether it is on the market, since when, in what regions, history of the device, including date of past modifications with reasons and description, sales volumes. Changes since the last report, whether the device has been

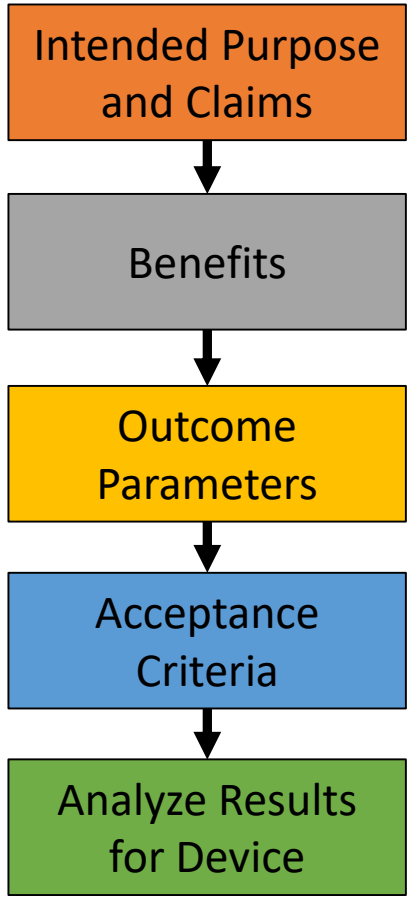
Planning – Common NB Findings

- Provide the specific and measurable safety and performance objectives for the device alongside the measurable acceptance criteria for each objective
- MDR excerpts
  - **Annex XIV 1(a) "…a detailed description of intended clinical benefits to patients with relevant and specified clinical outcome parameters."**
  - **MDR Article 2(53) " 'clinical benefit'…expressed in terms of a meaningful, measurable, patient-relevant clinical outcome(s)…"**
- MEDDEV 2.7/1 rev 4 excepts
  - **"Quantification of benefit(s) to the patients: Defining specified endpoints is indispensable for…properly performing the identification, appraisal, and analysis of the clinical data."**
  - **"Benefit(s) are often evaluated…according to specific endpoints or criteria…or by evaluating whether a pre-identified health threshold was achieved."**
  - **Based on the current state of medical knowledge, the evaluators shall justify and document the clinical relevance of endpoints used for the clinical evaluation**

TIP: Also review FDA Guidance Document: Factors to Consider When Making Benefit-Risk Determinations

Planning - Recommendations

- List Intended Purpose/Indications for Use and claims in scoping section
  - **Describe benefits based on indications and claims**
  - **Identify clinical outcome parameters associated with those benefits**
  - **Best to have a team agree on outcome parameters**
- Define acceptance criteria
  - **Use prior investigations, literature, and state of the art**
- Compare the outcomes for the subject device against acceptance criteria in analysis section



State of the art – Common NB Findings

- Notified body findings and observations
  - **State of the art needs to include data from similar devices**
  - **Competitive devices and available treatment options are not discussed**
  - **State of the art does not include references or appraisals**

TIPS:

- *Perform a systematic search -> Include terms for similar devices and alternatives*
- *Include:*
  - *appraisal of included articles*
  - *table summarizing individual articles*
  - *narrative section with references*
  - *table summarizing safety and performance outcomes -> May be used to define acceptance criteria*
- *Consider one SOTA report across multiple product lines (when intended patient population and intended use are the same)*

Type of evaluation – Common NB findings

- Notified body findings and observations
  - **Conformity is based on a mix of preclinical and literature data.**
  - **Pre-clinical data is not sufficient evidence for annex X via any route but 1.1d**

TIPS:

- *Clearly describe whether clinical evaluation is based on*
  - *Clinical data, e.g., clinical investigations and literature*
  - *Clinical data is "not deemed appropriate"*
- *Provide justification if clinical data is "not deemed appropriate"*
- *Provide a summary of the available clinical data regardless of the type of evaluation*

Non-clinical testing – Common NB Findings

- Notified body findings and observations
  - **CER does not include a summary of internal testing**

TIPS:

- *Include a summary of internal testing, especially for new or novel devices*
- *At a minimum, list relevant testing and reference location*
- *Link testing performed to standards/guidance documents in the state of the art*

Equivalence – Common NB Findings

- Equivalence has not been established. Please explain the risks that could arise from the individual differences between the subject and equivalent devices. Demonstrating that both devices have been tested per ISO 10993 is not sufficient to establish biological equivalence.
- MDR excerpts
  - **Annex XIV(3) – "Characteristics…shall be similar…that there would be no clinically significant difference in the safety and clinical performance of the device"**
  - **Annex XIV(3) – "Considerations of equivalence shall be based on proper scientific justification"**
- MEDDEV 2.7/1 rev 4 excerpts
  - **"the differences between the device…and…equivalent [device] need to be identified, fully disclosed, and evaluated; explanations should be given why the differences are not expected to significantly affect the clinical performance and clinical safety…"**

TIP: Refer to MDCG 2020-5 Guidance on clinical evaluation – Equivalence

Equivalence – Recommendations

- Don’t count on equivalence being accepted unless
  - **it is a modification to a device that you manufacture**
  - **Equivalence argument is scientifically valid and robust**
- While a detailed comparison table should be included, focus on differences and why they do not impact performance and safety
- Include PMCF plan to collect clinical safety and performance data when equivalence is used

Literature review – Common NB findings

- Observations and notified body findings
  - **Literature search only covered last 2 years**
  - **Please clarify which publications identified in the literature review pertain to each device**

TIPS:

- *Provide literature data since CE mark*
- *Clearly document which data applies to the subject devices, i.e., a clear distinction should be made between data for similar devices and the device under evaluation*

Literature review – Common NB findings

- Notified body findings and observations
  - **CER does not describe methods for appraisal of literature**
  - **Full-text articles have not been provided for review**
  - **List of excluded articles and reasons for exclusion have not been provided**
- Suggestions and tips
  - **Detail methods in a literature search protocol**
    - Databases used and terms
    - Inclusion-exclusion criteria
    - Appraisal criteria -> see MEDDEV 2.7/1 rev 3 and IMDRF MDCE WG/N56:2019
  - **Detail results in clinical evaluation report**
    - Provide search results and appraisal of all included articles
    - Include a table summarizing individual articles
    - Include tables summarizing safety and performance outcomes
    - Include a copy of all full-text articles included and list of excluded articles with reasons for exclusion

PMS – Common NB findings

- Notified body findings and observations
  - **Please provide complaints, sales, and the complaint rate per year separately for EU and the ROW**
  - **Please provide information on any CAPAs associated with vigilance activities**
  - **The search for vigilance did not include any international databases. Only the FDA MAUDE database was searched**
  - **There is no explanation why the complaint rate is acceptable**
- Suggestions and tips
  - **Consider searching at least one international database**
  - **Provide PMS data for at least the last 3-5 years by year**
  - **Consider adding a justification for why the complaint rate is considered acceptable instead of just stating that it is low**

International databases

Recalls / FSCAs

- FDA recalls database (US) https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRES/res.cfm
- BfArM Field Corrective Actions (Germany) https://www.bfarm.de/SiteGlobals/Forms/Suche/EN/kundeninfo_Filtersuche_Formular_en.html
- MHRA Alerts and Recalls (UK) https://www.gov.uk/drug-device-alerts
- SWISSMEDIC (Switzerland) https://fsca.swissmedic.ch/mep/#/
- ANSM (France) https://ansm.sante.fr/content/search?SearchText=device
- Health Canada Recall (Canada) Recall
- TGA Recall (Australia) https://www.tga.gov.au/recall-actions-database

Incidents / Adverse Events

- FDA MAUDE database (US) https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfMAUDE/search.CFM
- BfArM Recommendations (Germany) https://www.bfarm.de/EN/MedicalDevices/RiskInformation/Recommendations/_functions/_node.html
- MHRA Alerts and Recalls (UK) https://www.gov.uk/drug-device-alerts
- Health Canada Medical Device Incidents (Canada) https://hpr-rps.hres.ca/mdi_landing.php
- TGA DAEN (Australia) https://apps.tga.gov.au/prod/DEVICES/daen-entry.aspx

Analysis – Common NB findings

- Notified body findings and observations
  - **Please clarify if all the relevant devices are adequately covered in this clinical evaluation**
  - **Please provide details about devices used, patients treated, complications, and an analysis against the performance and safety objectives**
  - **It has not been demonstrated that the data provided is sufficient to establish safety and performance**
- MDR excerpts
  - **“Confirmation of conformity with relevant general safety and performance requirements…shall be based on clinical data”**
- MEDDEV 2.7/1 rev 4 excerpts
  - **“analysis of clinical data…explains whether there are adequate data for all aspects of the intended purpose and for all products/ models/ sizes/ settings covered by the clinical evaluation.”**

Analysis – Recommendations

- Ensure that it is clear what data pertains to each device and indication
  - **May need to provide a separate summary for each device and indication**
- Consider gaps in the data for devices, indications or claims and provide a sound justification that gaps are acceptable
  - **Keep in mind that data needs to be sufficient to demonstrate conformity**
  - **Be prepared to remove indications and claims not supported by clinical data**

Analysis – Common NB Findings

- Notified body findings and observations
  - **Please state where in the hazard analysis the clinical risk of X found in the literature analysis is identified? Also, please state if this risk is addressed in the instructions for use?**
  - **Please explain why the IFU and risk analysis are not aligned and why all residual risks identified in the risk analysis and complications identified in the literature review are not included in the IFU.**
- MDR and ISO 14971 excerpts
  - **Article 32 paragraph 2 (h), GSPR 4 and 23.4 (g) require manufacturers to *inform users of any residual risks*…in the SSCP and/or information supplied with the device.**
  - **GSPR 23.1(g) states that residual risks *which are required to be communicated to the user and/or other person* shall be included as limitations, contra-indications, precautions or warnings in the information supplied by the manufacturer.**
  - **Clause 8 of ISO 14971:2019 whereby manufacturers *decide which residual risks to disclose*…in the accompanying documentation…**

Analysis – Recommendations

- Provide a summary of the risks identified in the clinical evaluation
  - **Evaluate whether they are identified in the risk documentation and labeling**
  - **Compatibility matrix may be useful that lists clinical risks identified and where they can be found in the risk management file and IFU**
  - **Consider performing a review with relevant department experts**
- Based on a BSI webinar, BSI will accept two approaches
  - **disclosing all residual risks in IFU**
  - **disclosing only those that are required to be communicated in the IFU**
- In the latter case, the manufacturer must have clear documented rationales within their risk documentation for why a specific residual risk has been communicated in the IFU or not.

PMS / PMCF Plan – Common NB findings

- Please provide a proactive PMS/PMCF Plan that is in line with the safety and performance objectives
- MDR excerpts
  - **For implantable and class III devices based on equivalence, "the notified body shall check that the PMCF plan is appropriate and includes post market studies to demonstrate the safety and performance of the device."**
  - **"The clinical evaluation…shall be updated throughout the life cycle of the device concerned with clinical data obtained from…implementation of the…PMCF plan…and the post-market surveillance plan**
- MEDDEV 2.7/1 rev 4 excerpts
  - **"the notified body assesses the...PMS plan and PMCF plan…"**

PMS / PMCF Plan – Recommendations

- Ensure that a MDR compliant PMS plan and PMCF plan is created and referenced in the CER
  - **Refer to MDCG 2020-7 and -8 and GHTF MEDDEV 2.12/2 rev.2**
- Keep in mind…clinical data obtained from PMS and PMCF studies are
  - **Not intended to replace the pre-market data necessary to demonstrate conformity**
  - **Intended to monitor clinical performance and safety throughout the expected lifetime of the device, e.g.,**
    - Uncertainties regarding medium and long term performance
    - Safety under wide-spread use
    - Monitor residual risks such as undesirable side-effects and rare complications
- If PMCF is not conducted, ensure a sound justification based on data is provided. Consider elements in MEDDEV 2.12/2.
- Ensure the PMS/PMCF aligns with the objectives of the clinical evaluation and is statistically sound

Notes on Justifying Not Performing PMCF

- Unlikely to work on high risk devices
- Exception, not the rule
  - **Where device is being discontinued (monitoring end of lifetime of device)**
  - **Common Specifications exist and exempt PMCFs**
  - **Performance standards exist for the device and good data exists on real life use for the lifetime of the device**
  - **Lower risk devices (Class I)**
- Need sufficient clinical data
- ***Tip**: May be better to use low-level proactive activities (like literature searches) rather than attempt to justify*

MDR Definitions: PMS
Activities carried out…to **proactively** collect and review experience gained from devices…

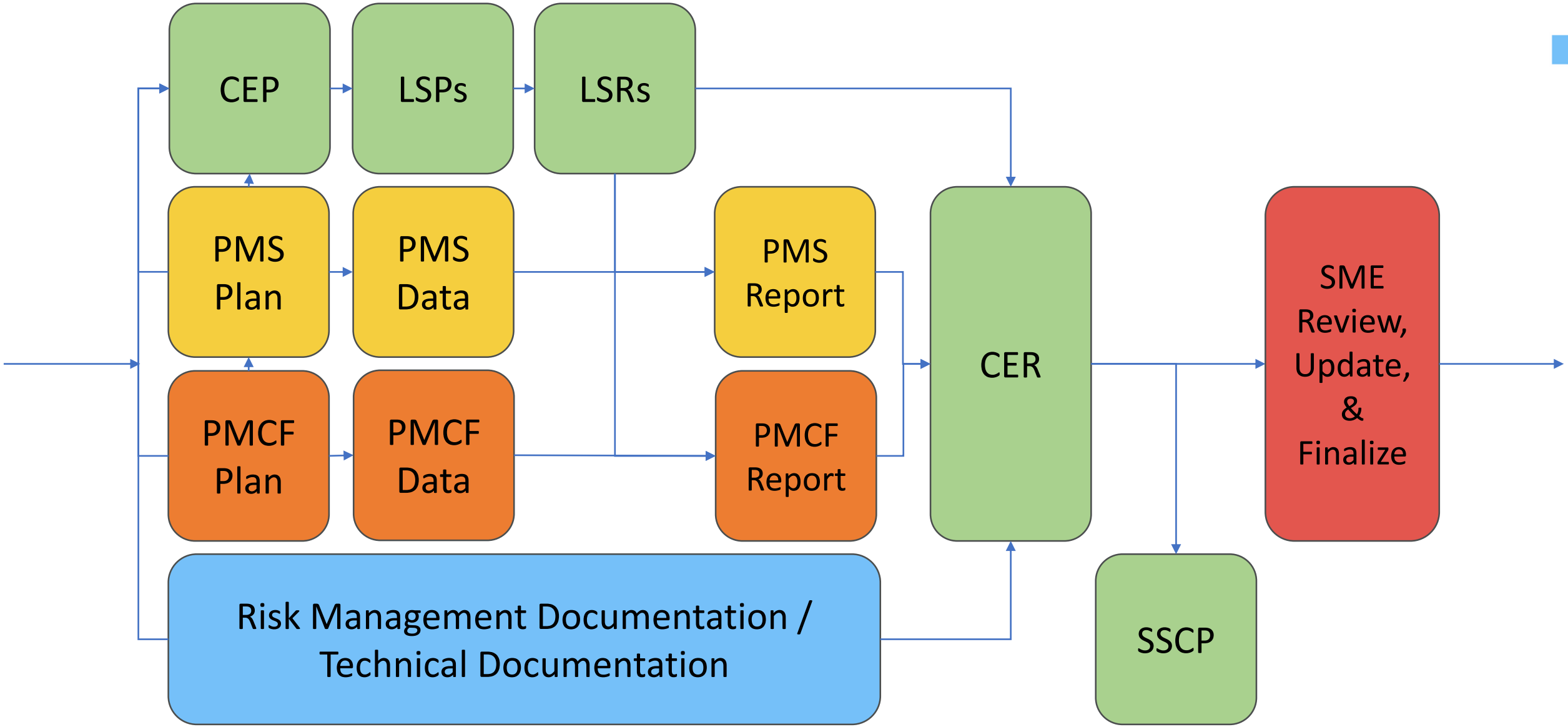
MDR Article 86: Class IIa, IIb, III
PSUR requires **main findings of the PMCF**

MDR Article 61(4): Class III and implantable Clinical investigations shall be performed, except if…modified device…and clinical evaluation of marketed device is sufficient…In this case the notified body shall **check that the PMCF plan is appropriate and includes post market studies to demonstrate the safety and performance of the device.**

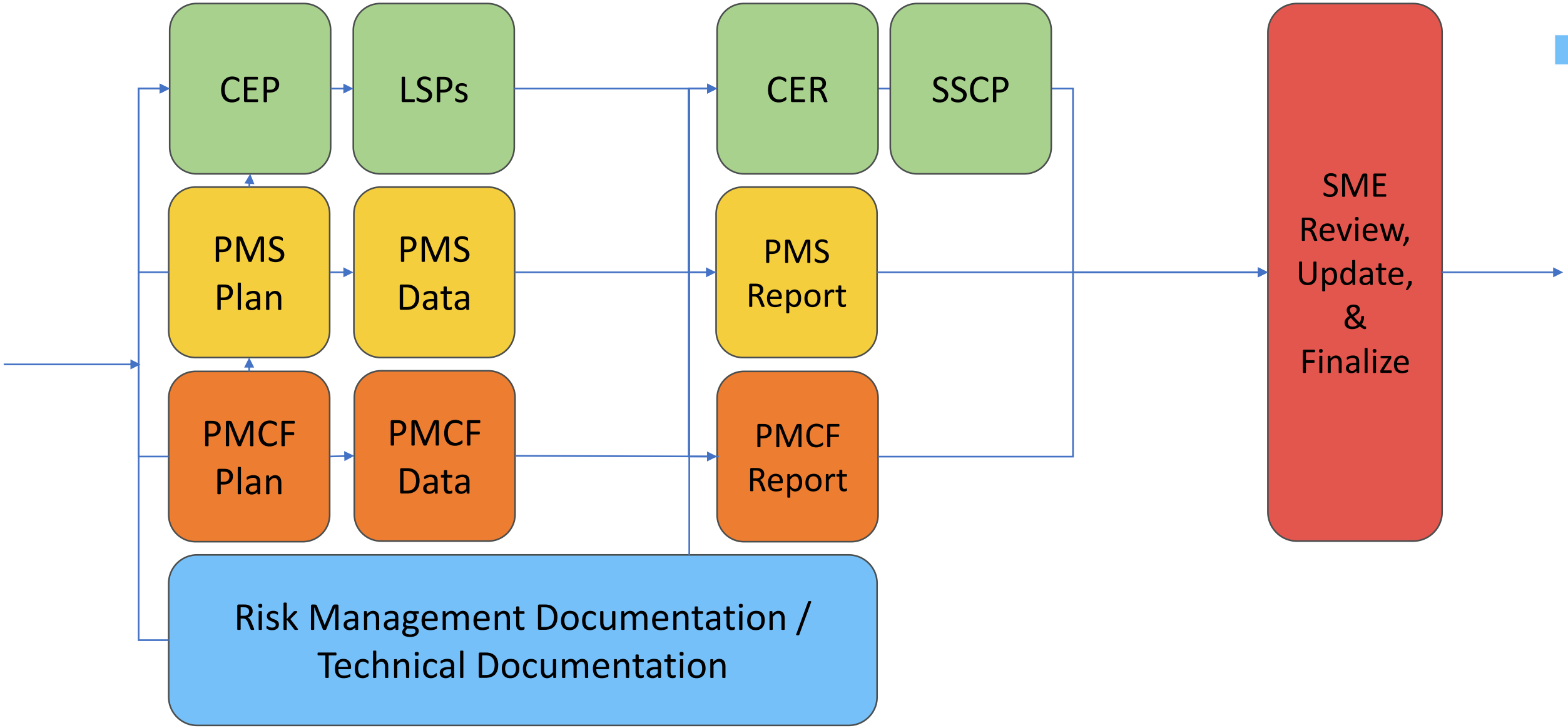
Be prepared

- Increased focus on PMCF and clinical evidence
- Companies (small and large) have lost CE marking due to lack of adequate PMCF (class IIa to class III devices).
- When you get a finding, you need to take it seriously
  - **Limited opportunities to respond (3 rounds of questions and then done)**
  - **Clinical experts for the NB may be reviewing your CER**

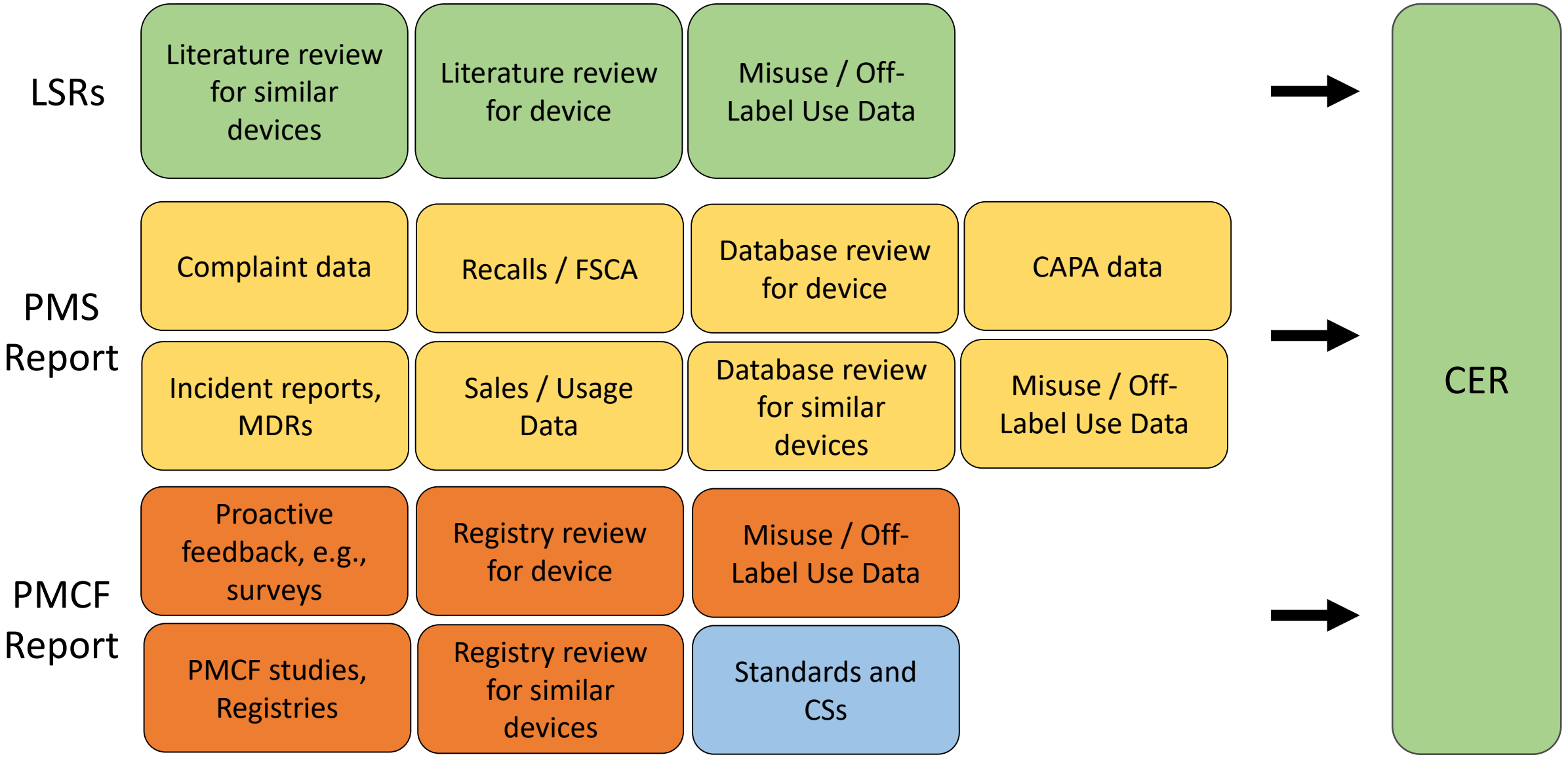
Process Flow – Example 1



Example Process Flow – Example 2



Data for CER



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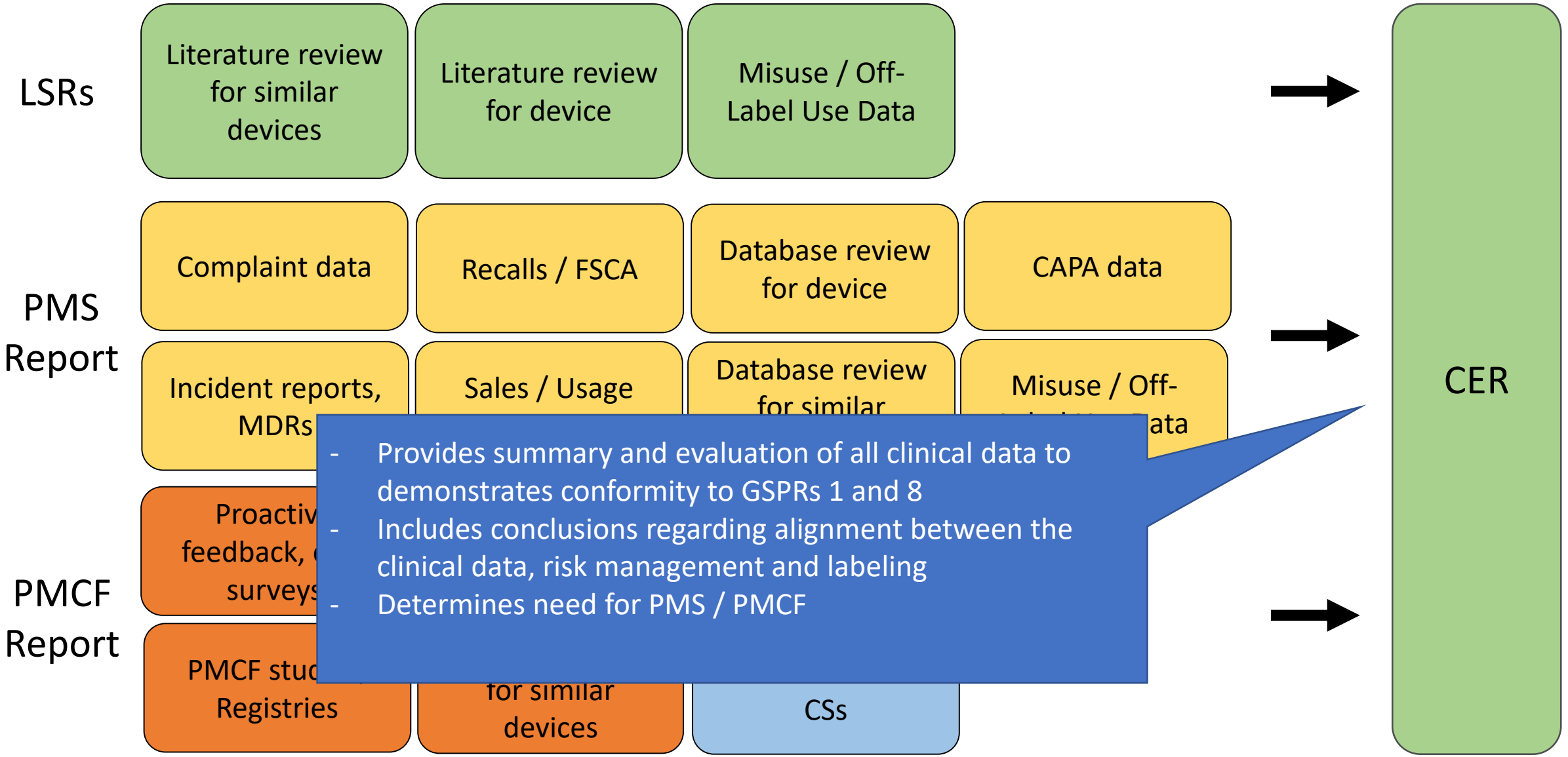
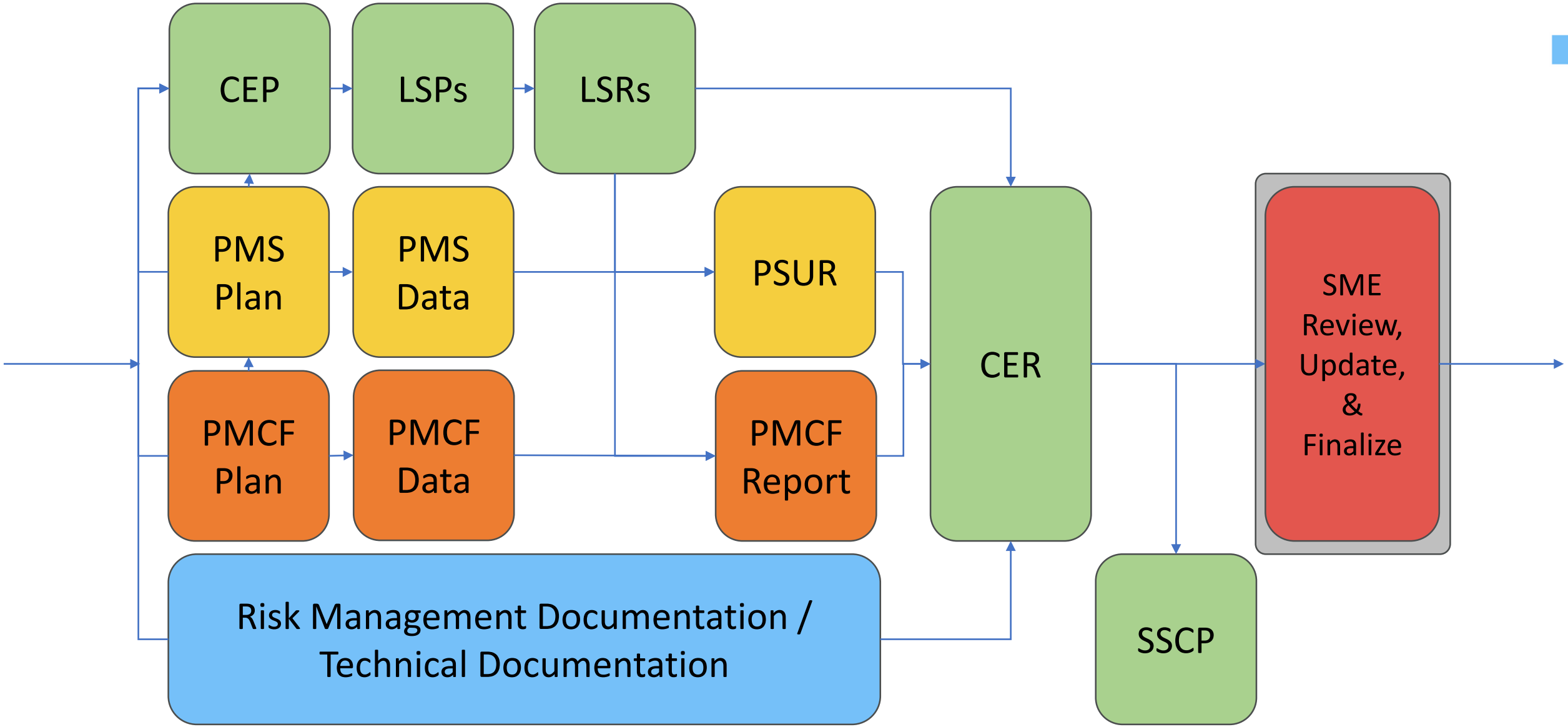
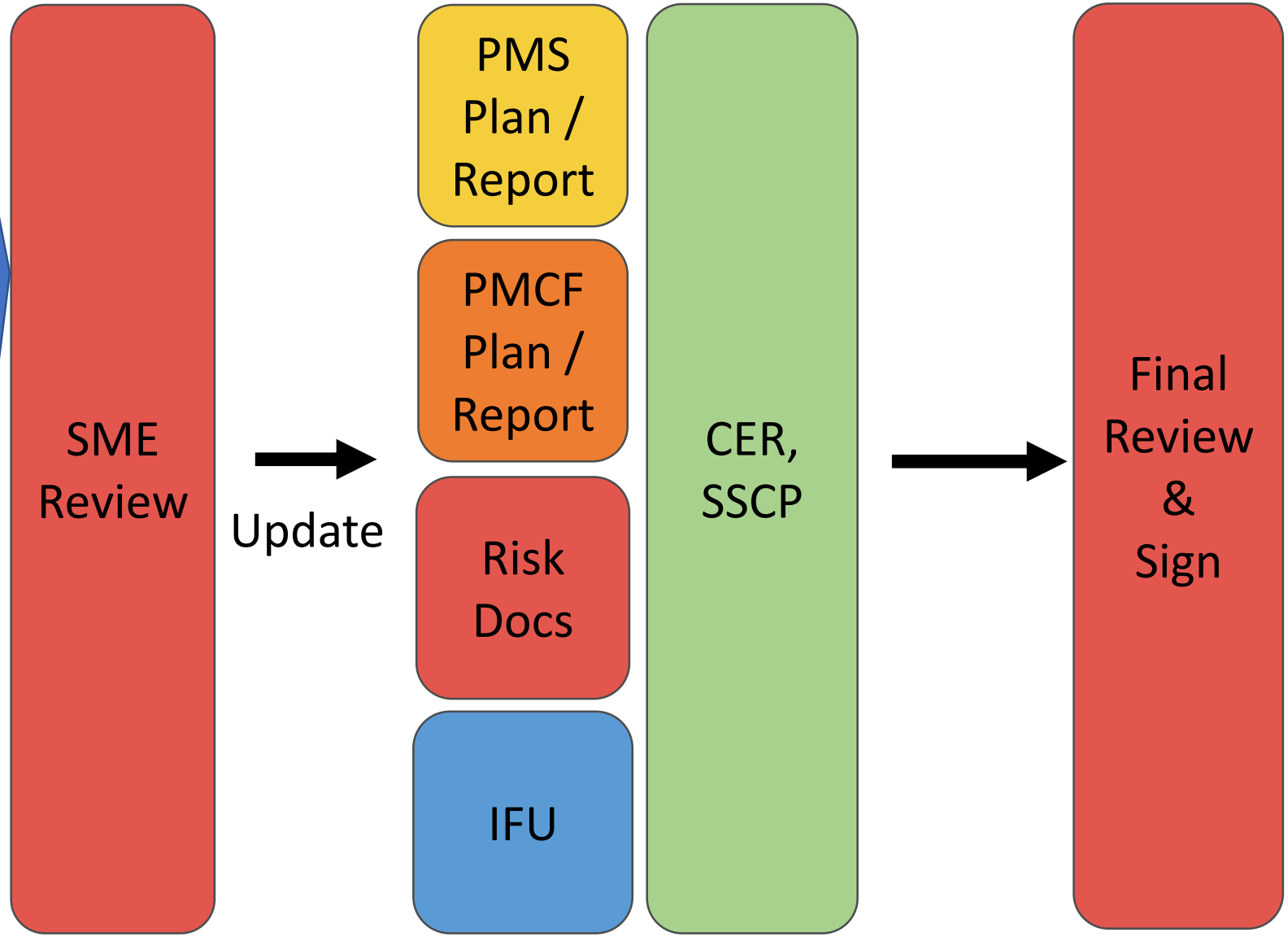

LSRs
Literature review for similar devices
Literature review for device
Misuse / Off-Label Use Data
PMS Report
Complaint data
Recalls / FSCA
Database review for device
CAPA data
Incident reports, MDRs
Sales / Usage
Database review for similar
Misuse / Off-
ata
PMCF Report
Proactiv
feedback,
surveys
PMCF stud
Registries
for similar devices
CSs
- Provides summary and evaluation of all clinical data to demonstrates conformity to GSPRs 1 and 8
- Includes conclusions regarding alignment between the clinical data, risk management and labeling
- Determines need for PMS / PMCF
CER

Example Process Flow



Process Flow

- Includes experts from quality, risk management, regulatory, engineering / product development, clinical, etc…
- Confirms conclusions and determines action items
- Benefits
  - Facilitates integration of different areas
  - Provides documentation of decisions
  - Enables experts to align on actions
  - Allows actions to be integrated into CER



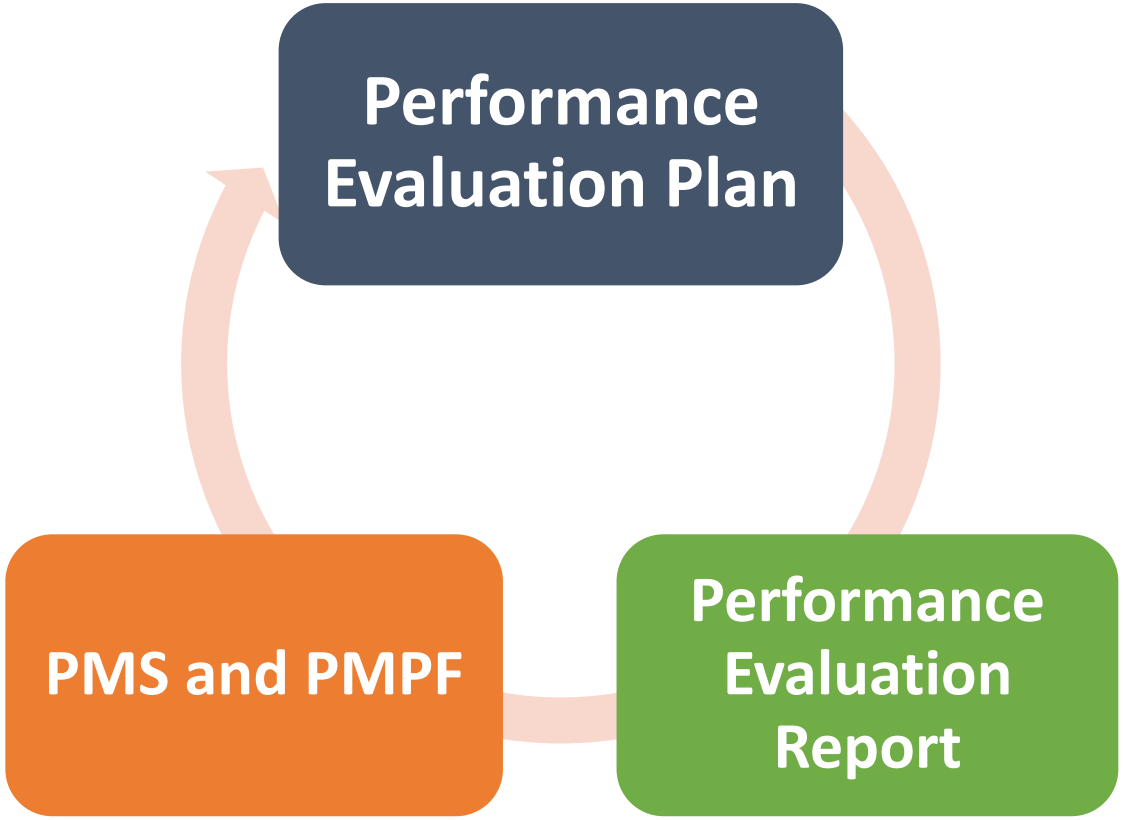
IVD Performance Evaluations: Pillars of Performance

Clinical evidence and performance evaluation

- Pre-market performance evaluation and clinical evidence now explicitly required in the regulation
- New plans and reports are introduced (e.g., performance evaluation plan, performance evaluation report, PMPF plan,…)
- Requirements similar to EU MDR and GHTF documents
  - **GHTF/SG5/N6:2012 Clinical Evidence for IVD Medical Devices – Key Definitions and Concepts**
  - **GHTF/SG5/N7:2012 Clinical Evidence for IVD Medical Devices – Scientific Validity Determination and Performance Evaluation**
  - **GHTF/SG5/N8:2012 Clinical Performance Studies for In Vitro Diagnostic Medical Devices**
  - **MEDDEV 2.7/1 Rev 4 Clinical Evaluation for Medical Devices**

Performance evaluation process (Annex XIII)

- Performance Evaluation Plan (Annex XIII Part A 1.1)
- Performance Evaluation Report (Annex XIII 1.3.2)
  - **Scientific validity report** (Annex XIII Part A 1.2.1)
  - **Analytical performance report** (Annex XIII Part A 1.2.2)
  - **Clinical performance report** (Annex XIII Part A 1.2.3)
  - **Conclusions drawn from assessment of the clinical evidence** (Article 56.3; Annex XIII 1.3.1)
- PMS and PMPF Plans and Reports



CER vs PER Structure

CER

- Summary
- Scope and device description
- Clinical background and State of the Art
- Device under evaluation
  - Demonstration of equivalence
  - Non-clinical data
  - Clinical investigation data
  - PMS / PMCF data
  - Clinical literature data
- Analysis of clinical data
- Conclusions and additional information

PER

- Summary
- Scope and device description
- Literature search
- Clinical background and State of the Art
- Device under evaluation
  - Demonstration of equivalence
  - Scientific validity report
  - Analytical performance report
  - Clinical performance report
- Analysis of clinical evidence
- Conclusions and additional information

Performance evaluation plan (Annex XIII, Part A)

- Intended purpose, intended use, target patient groups, indications, limitations and contra-indications
- Characteristics of the device
- Analyte or marker to be determined by the device
- Identification of reference materials or reference measurement procedures for metrological traceability
- Identification of the relevant GSPRs
- Methods, including the statistical tools, used for the examination of performance
- Description of the state of the art
- Parameters to be used to determine the acceptability of the benefit-risk ratio
- For software, reference databases and other sources of data used as the basis for its decision making
- Outline of development phases including milestones and acceptance criteria
- PMPF plans

TIP: The Performance Evaluation Plan should be a separate document.

Structure of a PEP

- Introduction and Objectives
- Device Description and Scope
- Literature Search Protocol
- State of the Art
- Device under evaluation
  - **Demonstration of Equivalence**
  - **Scientific Validity Plan**
  - **Analytical Performance Plan**
  - **Clinical Performance Plan**
- Analysis of Clinical Evidence
- Development Phases
- PMS and PMPF Plans

TIPS:

- *Align PEP and Annex II Technical Documentation content*
- *Best to align the structure of the PEP with the PER*
- *Refer to MEDDEV 2.7/1 rev 4 for general structure and concepts regarding equivalence - same analyte and clinical use with similar technology*
- *Data sources may be different for each section*
- *All reports may include literature data*

Literature search protocol

- Typical databases
  - **PubMed**
  - **Embase**
  - **Google scholar**
- Literature selection process
  - **Inclusion criteria**
  - **Exclusion criteria**
- Appraisal
  - **Suitability**
  - **Contribution**

State of the Art

- Systematic reviews, meta-analyses or comparative studies
- Clinical practice guidelines, guidance documents, and textbooks
- High quality clinical studies on similar devices and alternatives

Scientific Validity

- Peer reviewed studies or guidance documents applicable to scientific validity of analyte

Performance Evaluation

- Analytical or clinical performance studies on subject device
- Clinical studies with safety and performance data for subject device
- Other clinical experience data

Pillars of performance

Pillars of performance evaluation

1. Scientific Validity	2. Analytical Performance	3. Clinical Performance
▪ Association of an analyte to clinical condition or physiological state	▪ Ability of IVD to correctly detect & measure analyte	▪ Ability to yield results that correlate to the clinical conditions or physiological state
Annex XIII Part A (1.2.1)	Annex XIII Part A (1.2.2)	Annex XIII Part A (1.2.3)

Performance evaluation report summary

- **Scientific validity report**
  - relevant information on the scientific validity of devices measuring the same analyte or marker
  - scientific peer-reviewed literature
  - consensus expert opinions/positions from relevant professional associations
  - results from proof of concept studies
  - results from clinical performance studies
- **Analytical performance report**
  - analytical performance studies
  - scientific peer-reviewed literature
  - clinical performance study
- **Clinical performance report**
  - clinical performance studies
  - scientific peer-reviewed literature
  - published experience gained by routine diagnostic testing

Pillar 1: scientific validity (additional info from GHTF)

- The association of an analyte with a clinical condition
- For many analytes, the scientific validity is well established
  - **Based on literature, textbooks, historical data and experience**
  - **e.g., haemoglobin and anaemia - brief rationale with references**
- For others, scientific validity needs to be demonstrated
  - **Based on literature, expert opinions, and proof of concept, scientific validity, and/or and clinical performance studies**
  - **e.g., new biomarker for monitoring recurrence of cancer – detailed justification of scientific validity with references**

Pillar 2: analytical performance

- The ability of a device to correctly detect or measure a particular analyte
- Aligns with analytical performance characteristics mentioned in GSPRs
  - **Annex I, Chapter II, Section 9.1(a)**
  - **Annex I, Chapter III, Section 20.4.1(w)**
- Leverage data from performance studies and verification and validation testing

Pillar 3: clinical performance

- Ability of a device to yield results that are correlated with a particular clinical condition in the target population
- According to IVDR, manufacturer shall demonstrate clinical performance
  - **In relation to diagnostic sensitivity, diagnostic specificity, positive predictive value, negative predictive value, likelihood ratio, expected values in normal and affected populations (See Annex 1, Ch II, 9.1(b))**
  - **Unless any omission can be justified as not applicable**
  - **Depth and extent should be proportionate to the characteristics of the device**
- Demonstration based on cumulative assessment of:
  - **Clinical performance studies from initial CE mark to present**
  - **Literature from initial CE mark to present**
  - **Previous experience gained by routine diagnostic testing**
    - Complaints, CAPAs, recalls (3-5 year timeframe)
    - MAUDE and EU database searches (e.g., MHRA and BfarM)
    - PMPF studies

Clinical performance (Annex XIII, Part A)

- Study needed when data from analytical performance, literature and/or post-market experience is not sufficient
- From GHTF, the need for clinical performance will depend on test
  - **For an established and standardized tests**
    - analytical performance and scientific validity information is likely sufficient
  - **For an established and non-standardized tests**
    - analytical performance and scientific validity information alone may not be sufficient
  - **For novel or high-risk tests**
    - analytical performance and scientific validity information alone most likely will not be sufficient
- Controlled studies conducted by the manufacturer with IRB/ethics committee oversight will have the highest weight

PER analysis and additional information

- Analysis of Clinical Evidence
  - **Performance and Benefits (GSPR 1, 9)**
  - **Safety and Risks (GSPR 1, 9)**
  - **Benefit/Risk Profile and Undesirable Effects (GSPR 1, 8)**
- PMS and PMPF Plans
- Frequency of Updates
- Qualifications
- Attachments

TIPS:

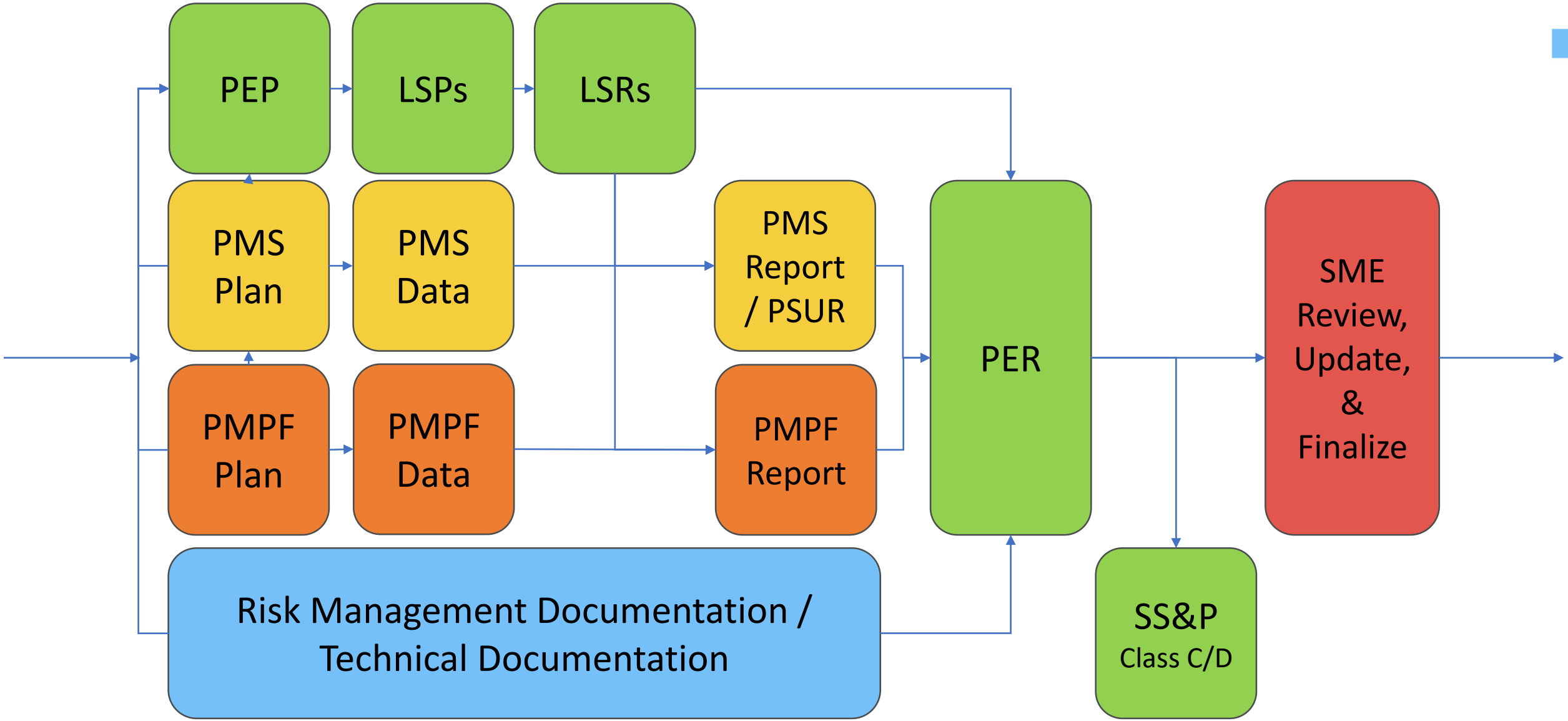
- *Ensure analysis demonstrates intended use, benefits, and claims*
- *Ensure alignment with risk management and labeling*
- *Identify gaps and create PMS/PMPF plans to address gaps*
- *Have a medical professional review PER*
- *Attach*
  - *PEP and literature search protocol*
  - *List of excluded articles and reasons for exclusion*
  - *Full-text of included articles*
  - *CVs/Resumes/Declaration of Interests*

Post-market performance follow up (Annex XIII, Part B)

- PMPF is a continuous process that updates the performance evaluation (see Annex XIII, Part B)
- PMPF plan → PMPF evaluation report
- If PMPF is not deemed appropriate for a specific device, then a justification shall be provided and documented within the PER

TIP: Aim is to proactively collect data to confirm safety and performance throughout the devices expected lifetime and monitor residual risks.

Example Process Flow



Conclusions

- CERs and PERs are similar but not identical
- Experience with CERs can be leverage for PERs
- Start now!!!

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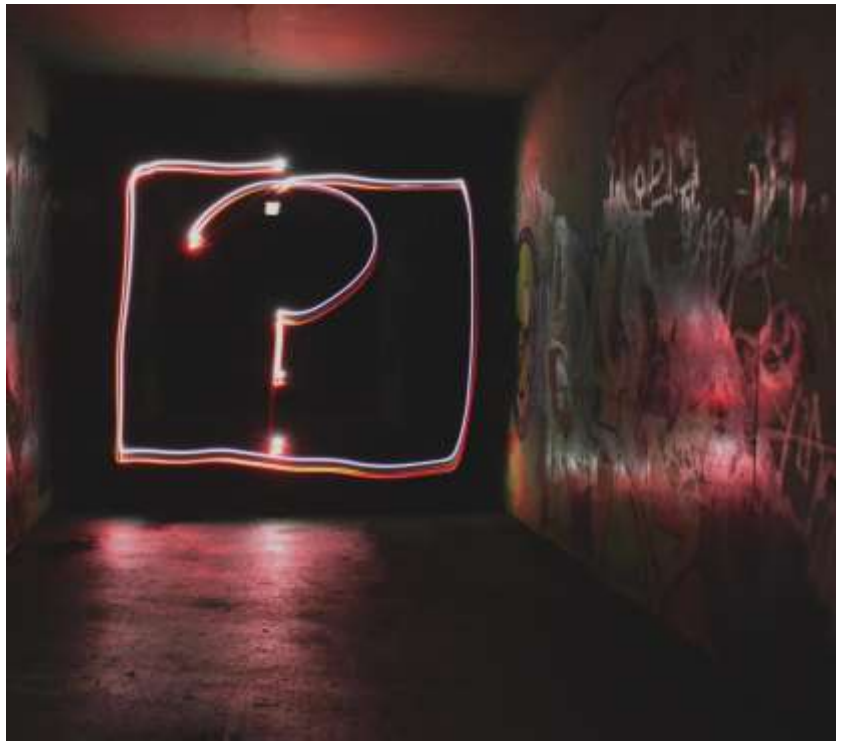

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