

Infor/EAM: Guideline for recording interventions and status

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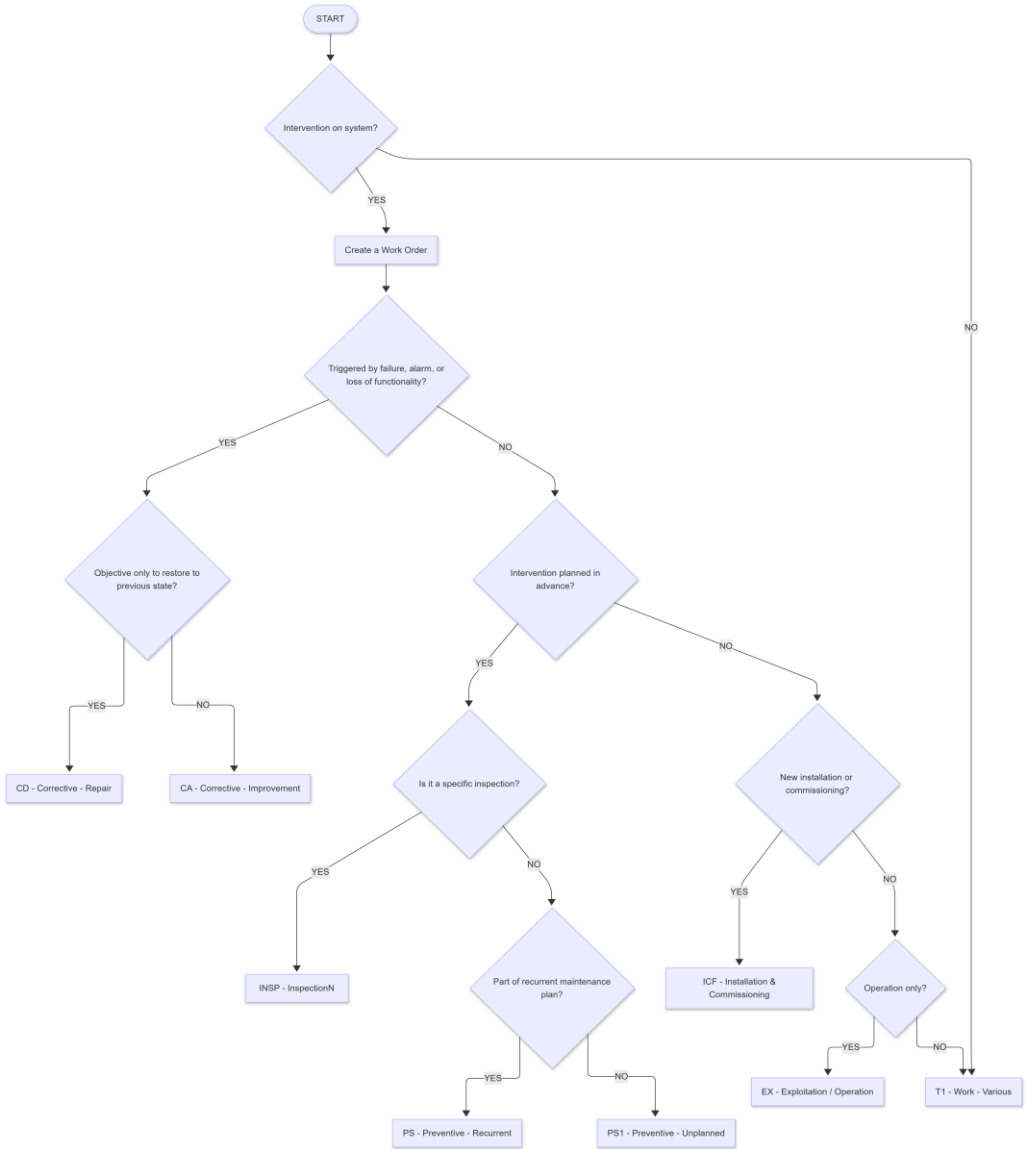
Objectives of EAM WO Classification

Key Points:

- **Ensure proper planning and traceability within the group;**
- **Maintain a reliable history for every gas system system / functional position / asset / part;**
- **Facilitate long-term maintenance and future troubleshooting;**



EAM Work Order types and when to use them



CD – Corrective – Repair

Definition:

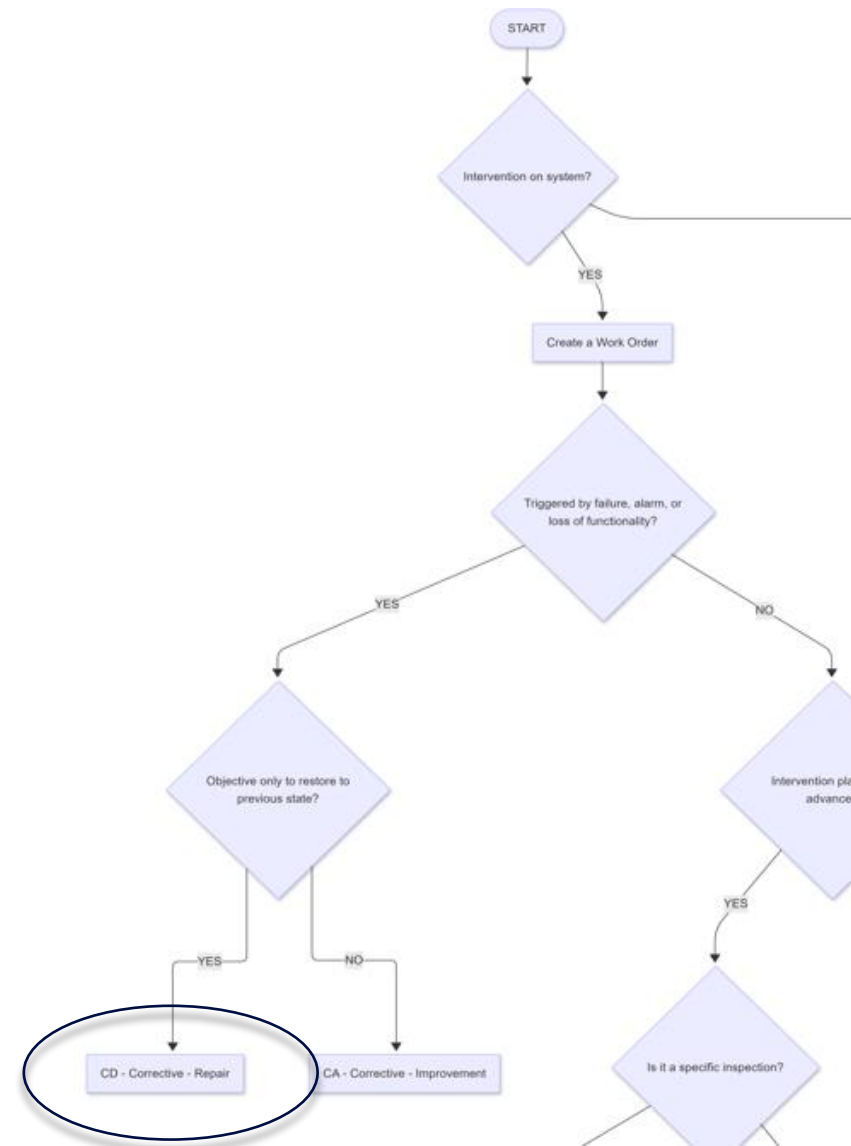
Unplanned work required to restore normal operation after a failure or a deviation from specifications

When to use in EAM:

- A component has physically failed or leaked;
- An alarm requires immediate corrective action;

Gas System Examples:

- Replacement of a flowcell;
- Replacing a filter;
- Adjusting a bypass valve because a pre-alarm was triggered;



CA – Corrective – Improvement

Definition:

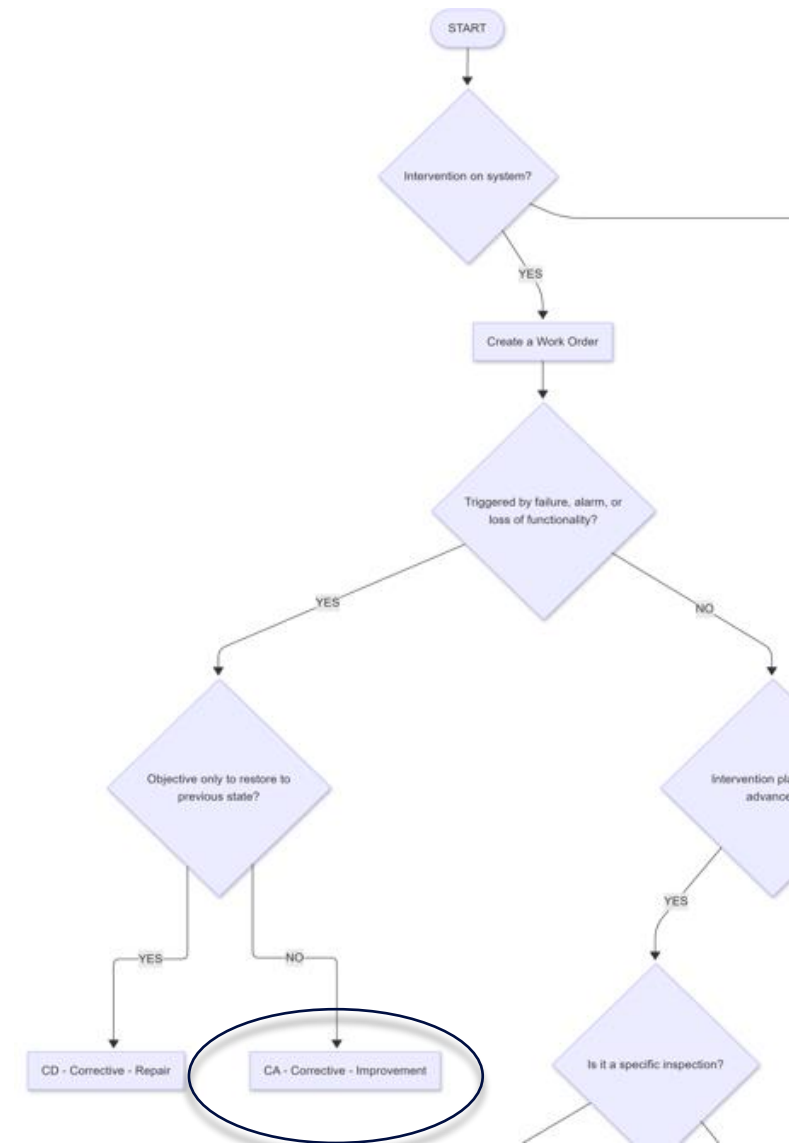
Corrective work performed following a problem or failure where the primary objective is to evolve or upgrade the system, not just return it to its original state

When to use in EAM:

- Failures justify an improvement action;
- Replacing a component with a different brand, model, or specification to increase reliability

Gas System Examples:

- Replacement of a sensor/pump/valve with a new brand/model in order to improve operation of the system;



PS – Preventive – Recurrent

Definition:

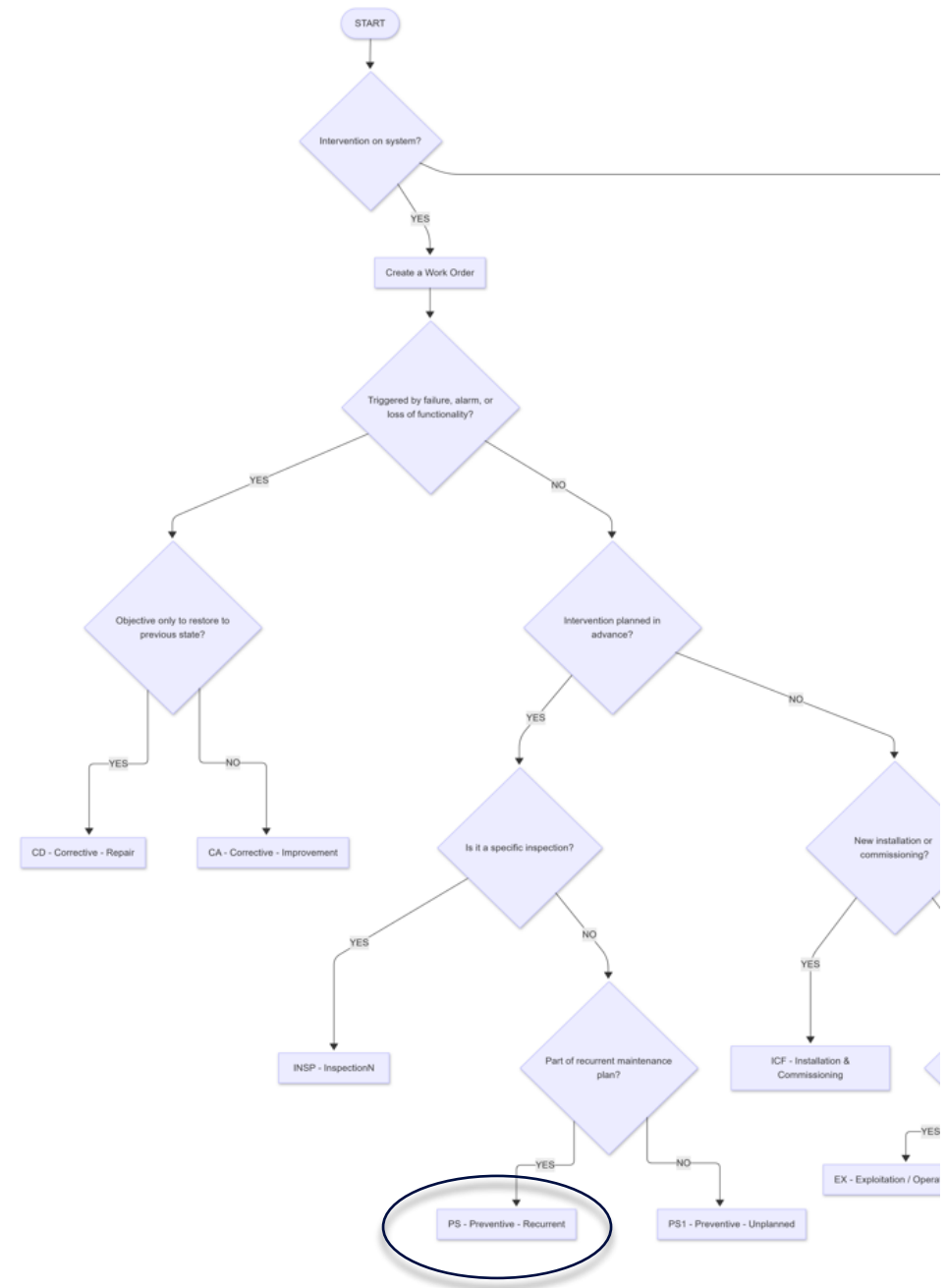
Planned, recurrent preventive maintenance

When to use in EAM:

- Maintenance plans exist;
- Tasks are periodic and systematic;

Gas System Examples:

- Pump membrane change;
- Humidifier tank refill;
- Filter change;
- Annual calibration of components;



PS1 – Preventive – Unplanned

Definition:

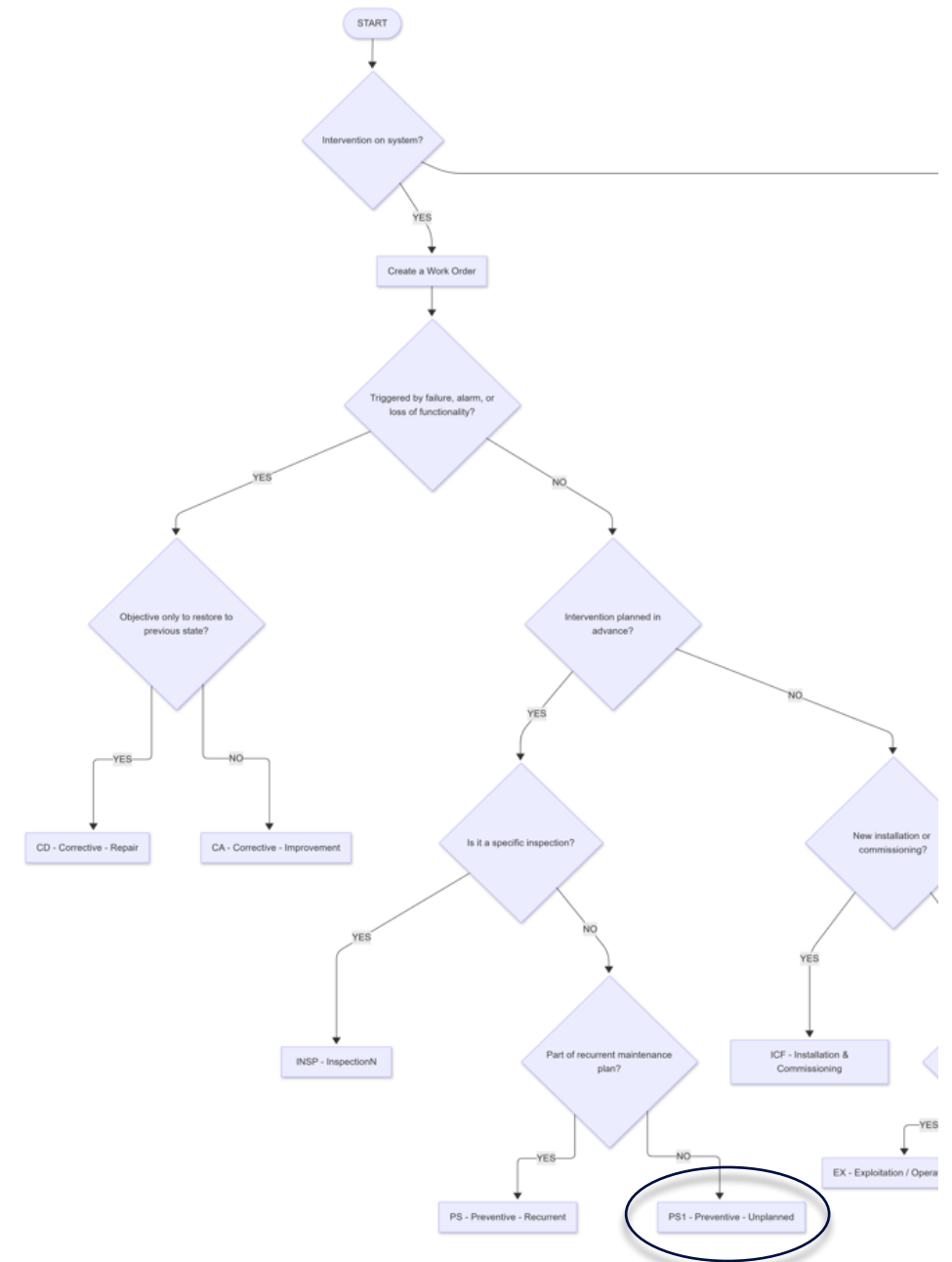
Preventive actions that are not recurrent and not part of a maintenance plan

When to use in EAM:

- Early signs of degradation are detected
- Preventive action avoids future failure of a component or a system

Gas System Examples:

- Finding a small leak during a leak search for a critical primary leak;
- Noticing a pump is making a "different" noise or vibrating more than usual, and performing a diagnostic check;



ICF – Installation and Commissioning

Definition:

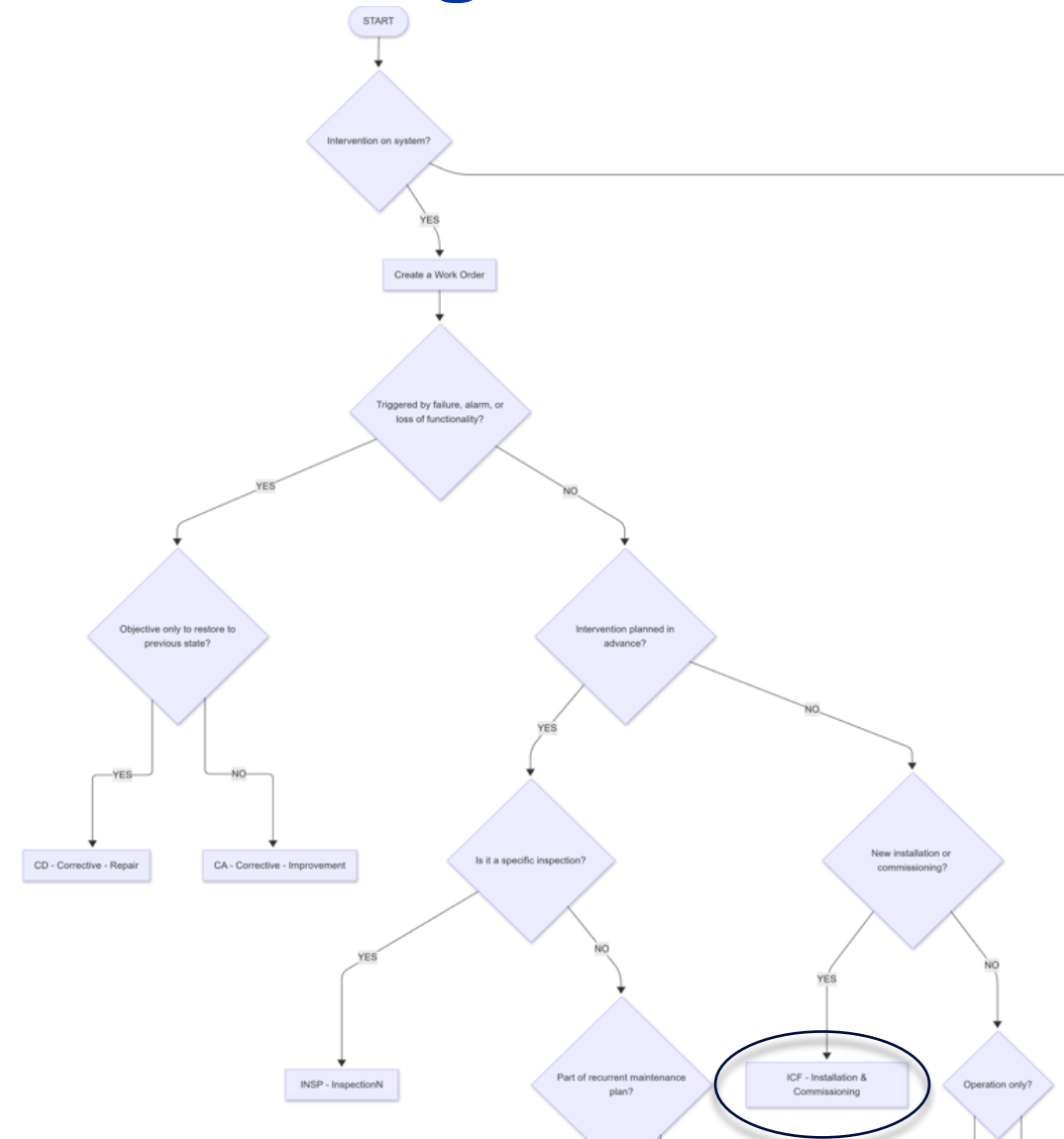
Installation of new equipment or commissioning after installation or modification

When to use in EAM:

- New gas systems are installed;
- Systems are commissioned for the first time;

Gas System Examples:

- Installation and commissioning of a new system;



EX – Exploitation – Operation

Definition:

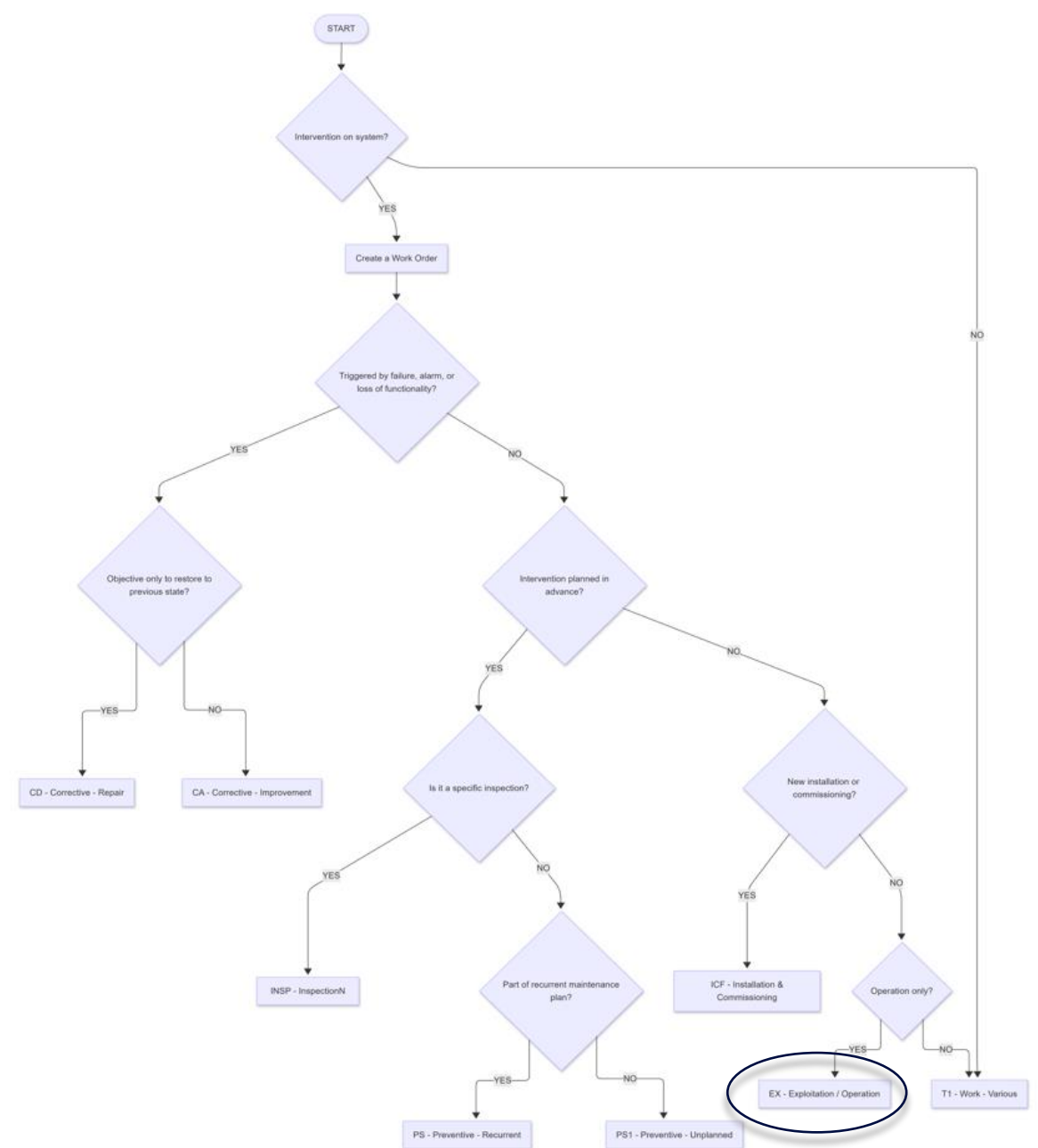
Routine activities required for the standard daily operation of the gas systems

When to use in EAM:

- No maintenance or modification is performed;
- Work that supports normal operation;

Gas System Examples:

- Changing the parameters of a system (i.e. flow increase/decrease);
- Restart of a system following a planned stop;



INSP – Inspection

Definition:

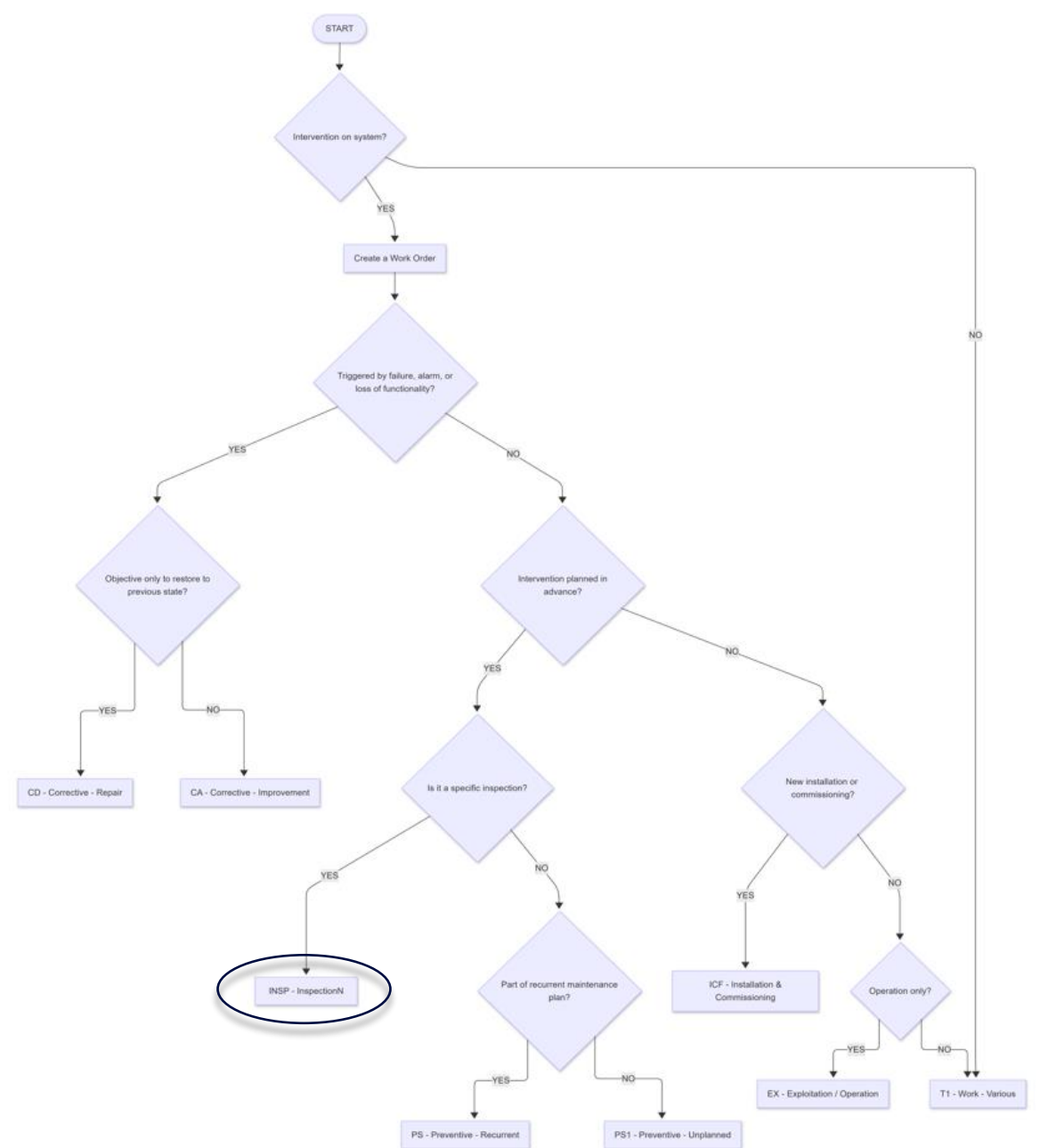
Diagnostic or safety-focused verifications where the primary goal is to assess the condition of a system or component without necessarily performing a repair or replacement

When to use in EAM:

- Verification-only tasks;
- Diagnostic triggered by suspected issues;
- Annual or periodic safety checks;

Gas System Examples:

- Systematic search for leaks on a gas rack after a suspected deviation;
- Annual verification of sensors;



T1 – Work – Various

Definition:

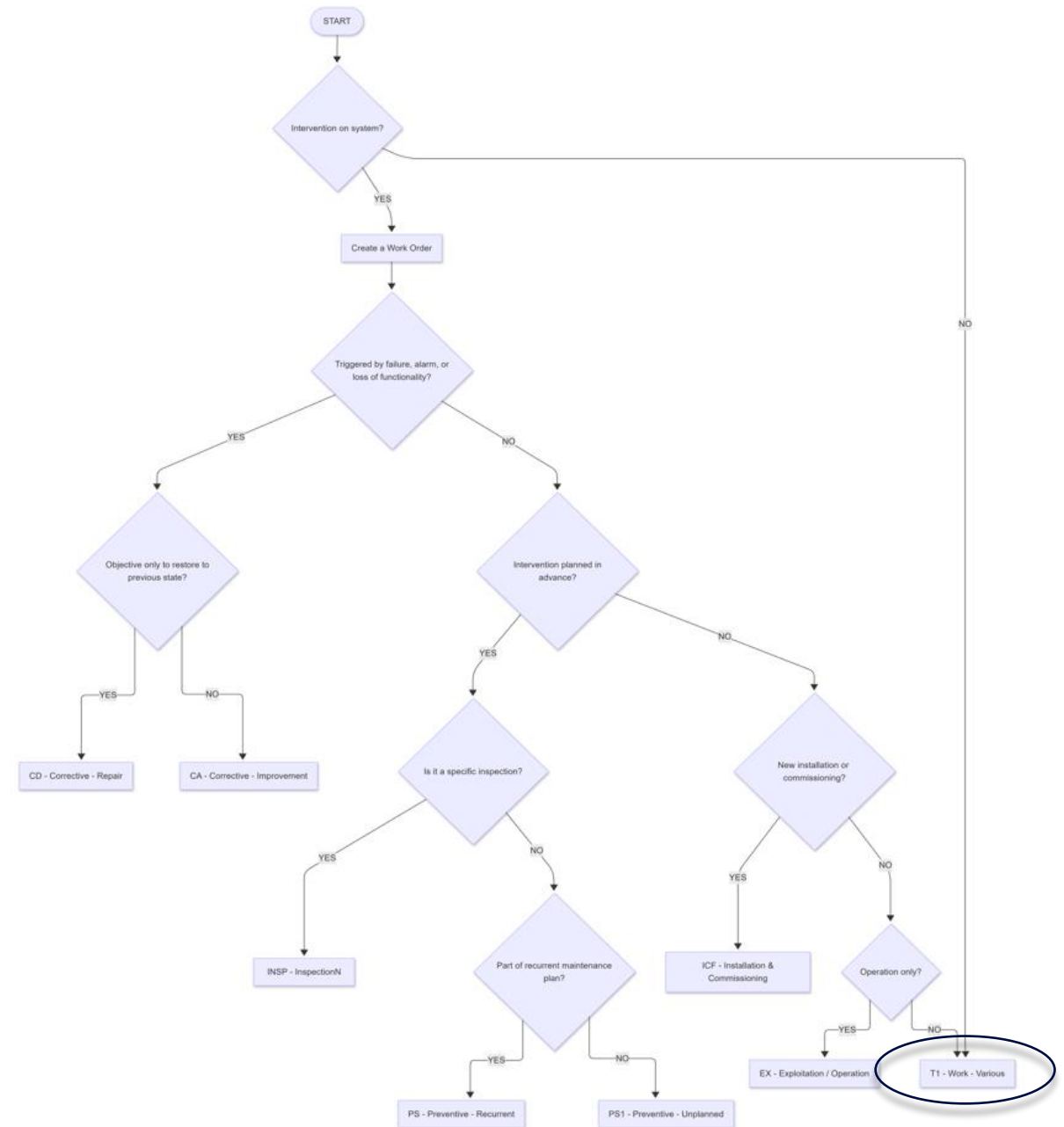
Minor work with no impact on safety or equipment condition

When to use in EAM:

- No other WO type fits;
- Work is of minor importance;
- Organizing the gas workshop or cleaning the storage area;

Gas System Examples:

- Moving spare parts between storage areas;



Work Order Examples

Work Order Type	Example	ELOG	EAM WO
INSP – Inspection	ALICE TOF Distribution Bubbler Check	ELOG	Work Order 36066339
CA – Corrective / Improvement	Installation of flexible pipe in Linac4 LEBT	ELOG	Work Order 35936741
CD – Corrective – Repair	LHCB RICH 1 Repair of Small Leaks	ELOG	Work Order 36065337
	New flowcells in rack 63	ELOG	Work Order 36104556
EX – Exploitation, Operation	ATLAS MDT Input Flow Increased	ELOG	Work Order 36063640
	CMS RPC Back to Standard Mixture	ELOG	Work Order 36189821
PS – Preventive – Recurrent, Systematique	Pump Membrane Change	ELOG	Work Order 36065342
PS1 – Preventive – Unplanned	LHCb Exhaust Filter Change	ELOG	Work Order 36191909
	CSC mixer at 100% CF4 recovered	ELOG	Work Order 36104154
T1 – Work – Various / Divers	ATLAS RPC secondary mixer pipes	ELOG	Work Order 36189742

Creating a Work Order: Mandatory Fields

The mandatory fields represent the minimum data required to register an intervention within the CERN infrastructure. For our group, we added 3 mandatory fields that every work order must have, to ensure that every action is properly identified and localized:

- 1. Description:** Summarize the work
- 2. Equipment:** Select the specific System/Functional Position/Asset/Part
- 3. Type:** Select one of the approved codes
- 4. Location:** Where the intervention was made
- 5. Department / Service Unit:** XG01 (For our group)
- 6. Scheduled Start Date:** When the work began.
- 7. Assigned To:** The responsible for the intervention
- 8. Comments:** Use for the intervention summary and additional information

The screenshot displays the EAM system interface for creating a Work Order. The interface is divided into several sections, with blue numbers 1 through 8 highlighting specific mandatory fields:

- 1:** Work Order Title: CMS CSC Purifier Back In The Loop
- 2:** Equipment: HXGCMSCSCP1
- 3:** Type: EX - Exploitation, Open
- 4:** Location: SGX5
- 5:** Dep./Service Unit: XG01
- 6:** Scheduled Start Date: 19-JAN-2026
- 7:** Assigned To: 165357
- 8:** Comments: (indicated by a blue '8' in the top navigation bar)

Other visible fields include: Work Order Status (R - Launched, Lancé), Safety, Warranty, Service-Now Number, Linear Reference Details, Work Order Details (Class, Problem Code, Criticality, PM Code, Work Package, Standard WO, Priority, Budget Code, Target Value, Downtime Hours, Original PM Due Date), Activity (Trade, Task Plan, Material List, Estimated Hours, Hours Remaining, People Required), and User Defined Fields.

Creating a Work Order: Activities and Part Usage

Activities define the specific technical tasks performed in each intervention, while Part Usage records the components used in those steps.

1. Record an activity;
2. Select the component / part used;
3. The stock in the workshop will be automatically reduced;

Every component must be linked to a specific activity in the Work Order;

Recording parts ensures we never run out of critical spares and helps us identify which components are failing most frequently across our systems;

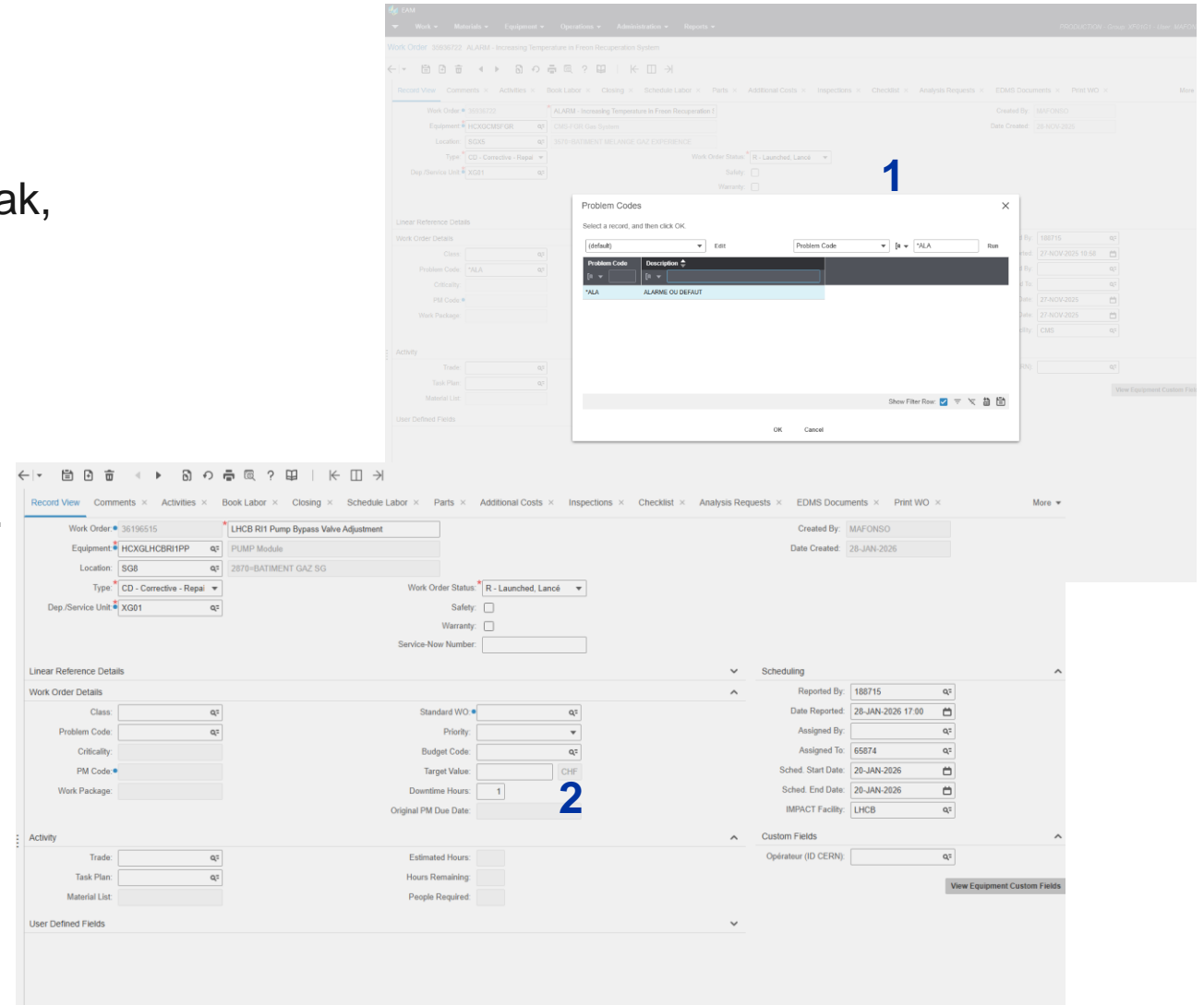
The top screenshot shows the 'Activities' tab in a software interface. It features a table with columns: Activity, Task Plan, Description, Task Plan Qty., UOM, Start Date, End Date, Total Estimated Hours, People Required, Hours Remaining, Warranty, Trade, and Material List. Below the table is a form for recording an activity, with fields for Description (Membrane Change), Activity (5), Trade, Total Estimated Hours (1), Scheduled Hours, Hours Remaining (1), Start Date (23-JAN-2026), End Date (23-JAN-2026), Task Plan, Material List, and People Required (1). A red number '1' is overlaid on the form.

The bottom screenshot shows the 'Parts' tab in the same software interface. It features a table with columns: Activity, Part, Description, UOM, Planned Qty., Reserved Qty., Allocated Qty., Used, Store, Stock, Manufacturer Part Number, and Direct Purchase. Below the table is a form for recording part usage, with fields for Part (HCXGPL00022), Description (Diaphragm EPDMPTFE), Activity (5 - Membrane Change), Store (XFEPDT-GAS), Planned Source (Stock), Available (4), Transaction Type (Issue), Date (10-FEB-2026 12:06), Quantity, Return Condition, Asset ID, Tool Hours, and Repairable Spare Return. A red number '2' is overlaid on the form, and a red number '3' is overlaid on the 'Available' field.

Creating a Work Order: Subjective Fields

- 1. Problem Code:** Describe the failure from the perspective of the system's behaviour (alarm, leak, temp);
- 2. Downtime Hours:** Record exactly how long the system was stopped or out of specification;

Not mandatory fields but should be used if possible.



Creating a Work Order: Future Integrations - ELOG

Since the information we record in the Work Orders up to this date is coming from ELOGs, we are currently working with the EAM Support Team to add a specific field for ELOG numbers or links.

This will make it easier to connect daily operational ELOGs directly to Work Orders.

Until the field is ready, the ELOG number or link should be put in the general Comments section.



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