

09/05/2019

Documentation Management

Documentation Management CU example

III. Documentation management



Situational
Analysis



Updating the
documentation



Document Control
Procedure

Scientific and Technical Requirements Specifications - CU(KM3NeT).
Erreur ! Source du renvoi introuvable. Page 1 of 35
Date: 12/07/2018

Scientific and Technical Requirements Specifications - CU

APC -Team

Abstract

This document describes the scientific and technical needs through an explicit set of requirements to be satisfied by the calibration unit. On this basis, the resulting applicable needs are then identified.

Recipients

The KM3NeT Collaboration

Document Status

Revision	Date	Comment	Reviewed by	Approved by
3	12/07/2018	Accepted by referees	Giorgio Scoppeo Pascale Keller	YY
2	07/04/2014			
1	21/03/2014			

Revision History

Revision	Date	Description
Draft	12/07/2018	First draft

Product Design Report

Needs Description

Availability
requirements

Technical & Scientific
requirements

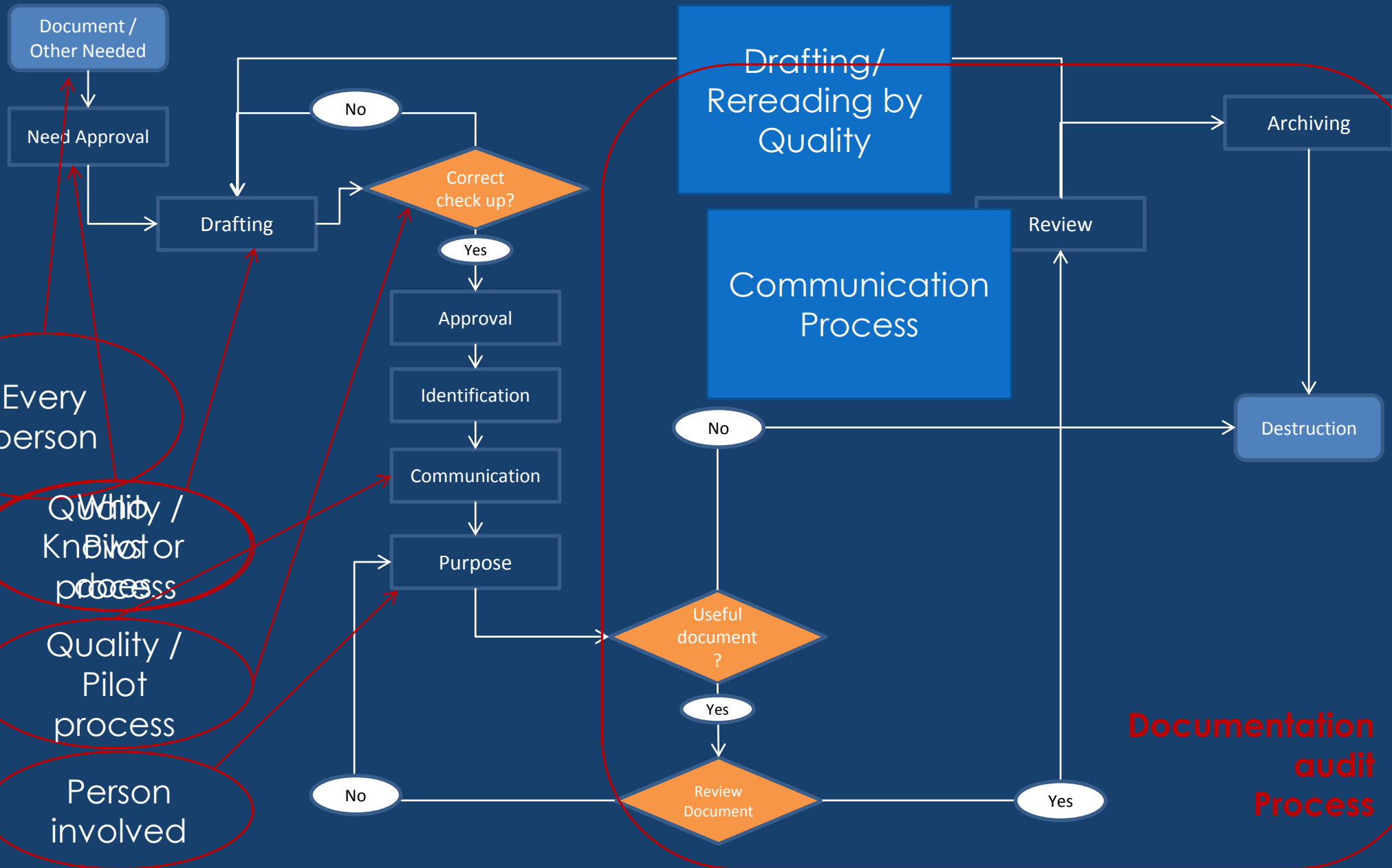
Imposed solutions

Environnemental
constraints

Acceptation Conditions



Document Control Procedure



Every person

Quality / Knowledge or process

Quality / Pilot process

Person involved

Documentation audit Process

IV. Components Experiments



Phase D: Achievement / Qualification



Phase A: Feasibility



Phase B: Preliminary definition

Determine if they meet
the requirements



Phase C: Detailed Definition

Demonstrate that they
are fit for purpose



Phase D: Achievement / Qualification



Phase E: Running

Detect anomalies



Phase F: Withdrawal Service

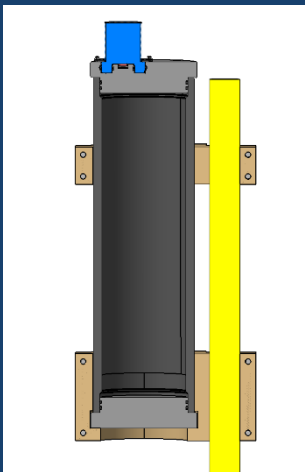
HALI / HASS Hydrophone and Laser example

VQV Procedure introduction

(Verification – Qualification – Validation)

Verification

Check the characteristics and performance of the instrument



Qualification

Define instrument's functional limits



Validation

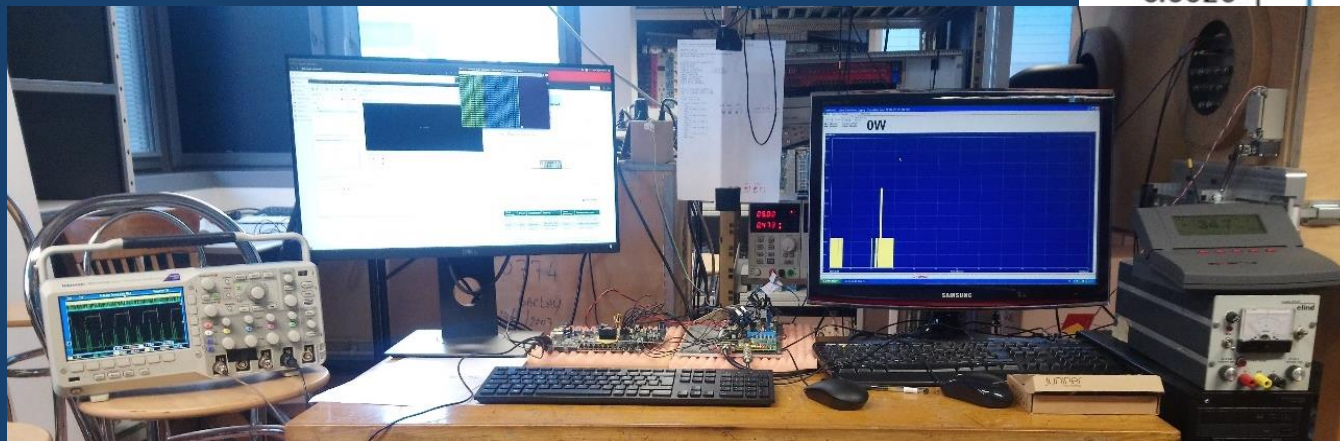
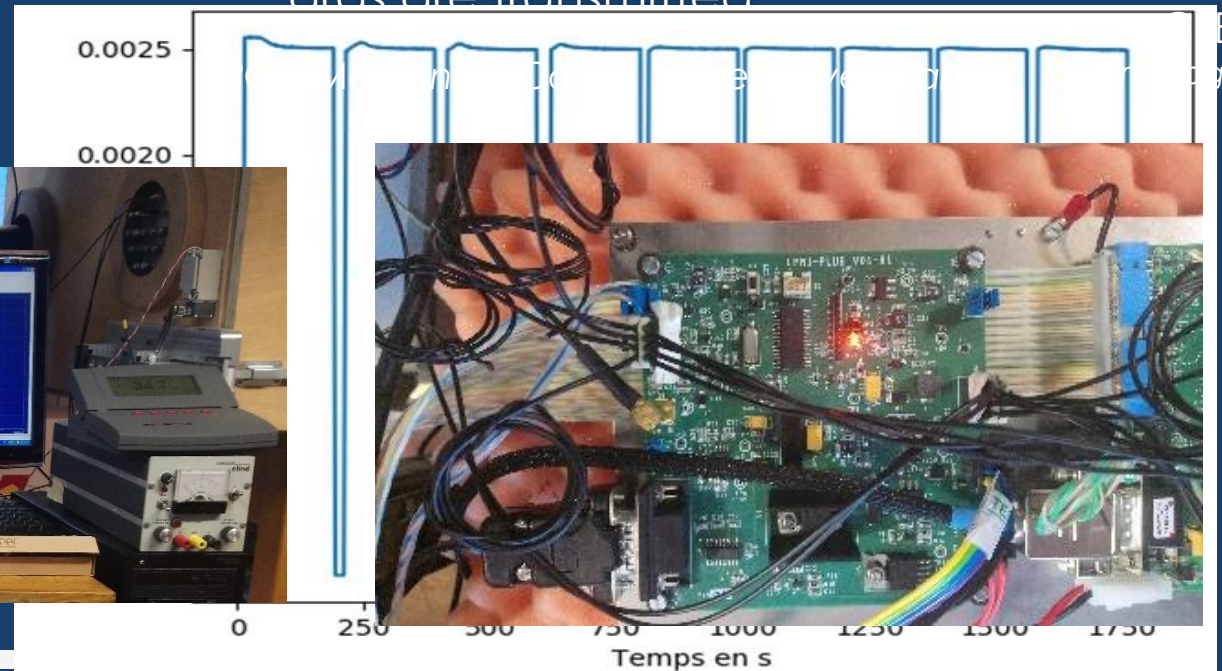
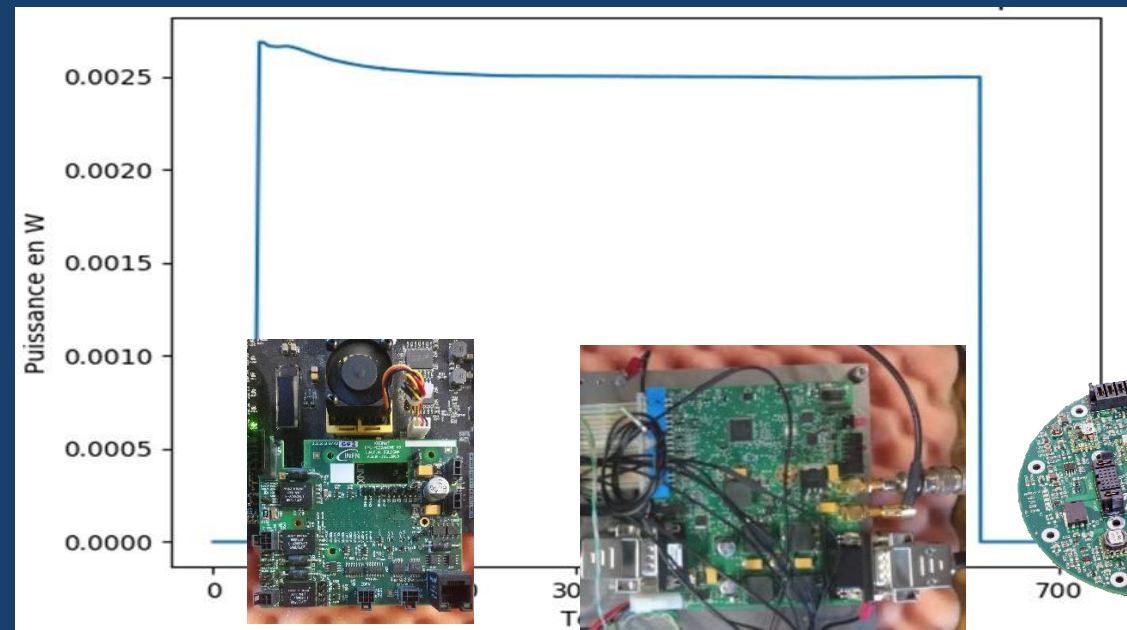
Validate the conformity of requirements



IV. Components Experiments

✓ Comments

- the opening angle
- the capacity of use of the battery
- the stability of the laser according



Programming sequence & Laser's Top & Bottom view Visualization sequence

Search tests on the peak beginning of the sequence Laser Power Management Interface

Hydrophone Qualification



Goal

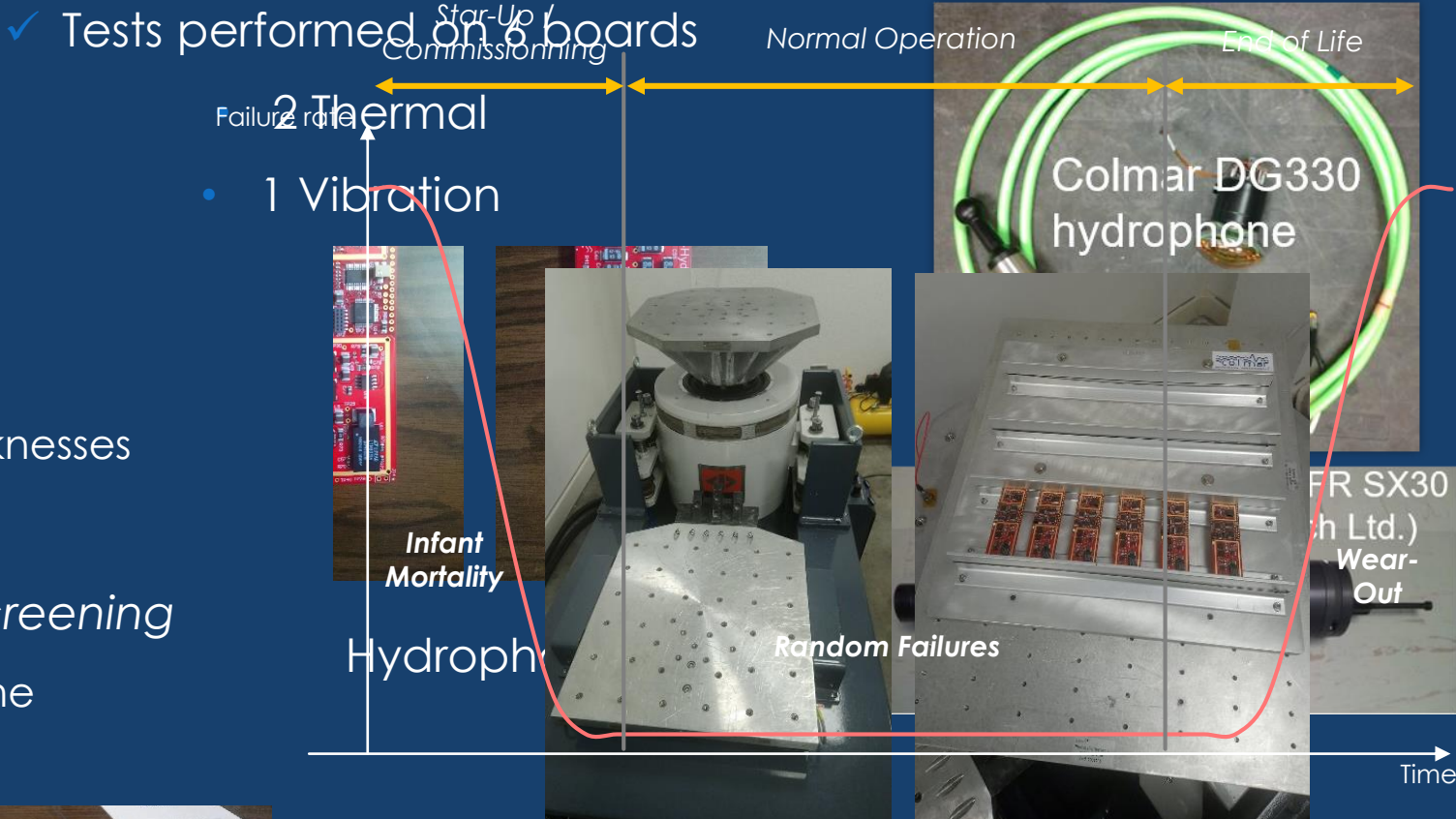


Test Bench



Results

IV. Components Experiments



✓ HALT & HASS

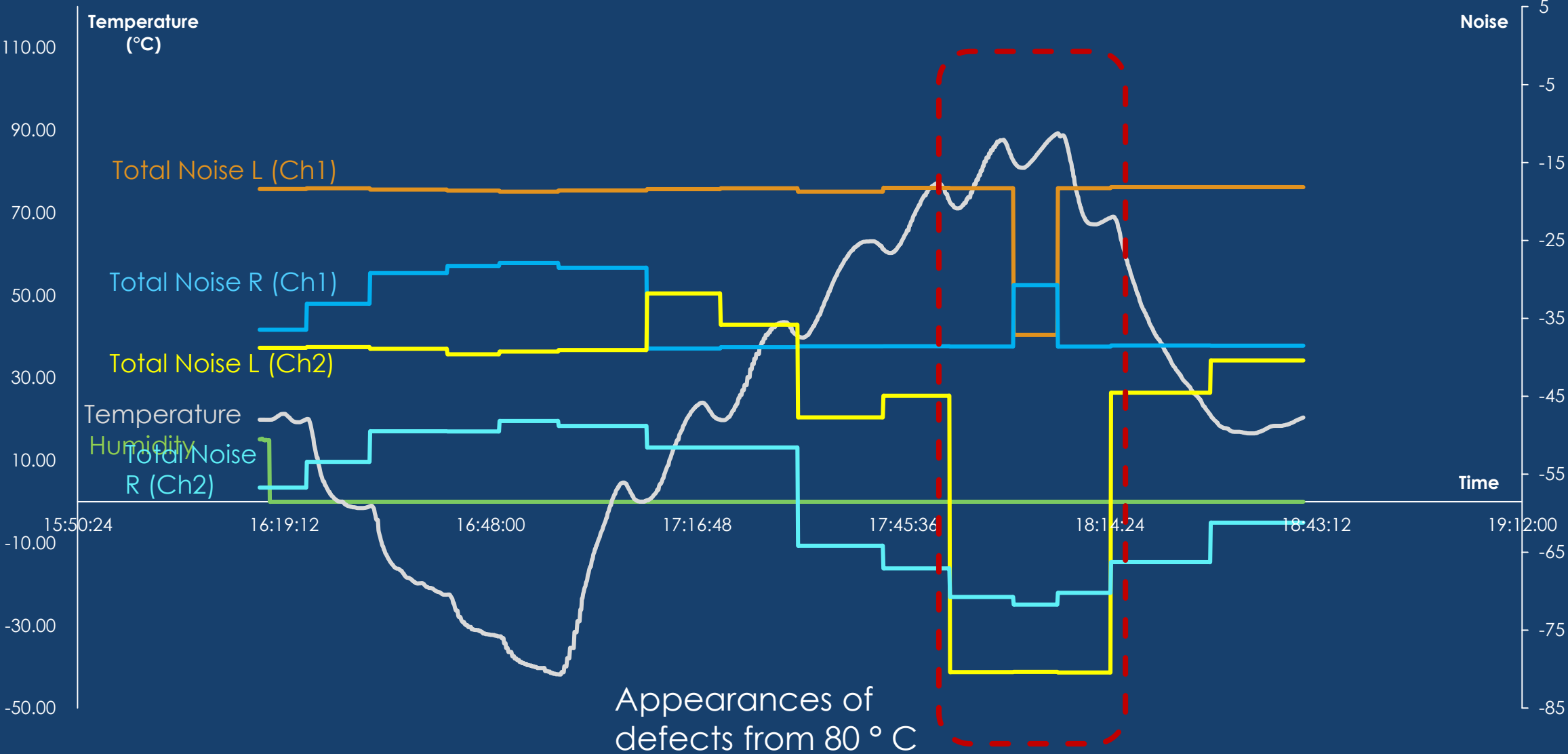
- ❖ **Highly Accelerated Life Test**
 - Detect design flaws & weaknesses
- ❖ **Highly Accelerated Stress Screening**
 - Detect defects related to the manufacturing process



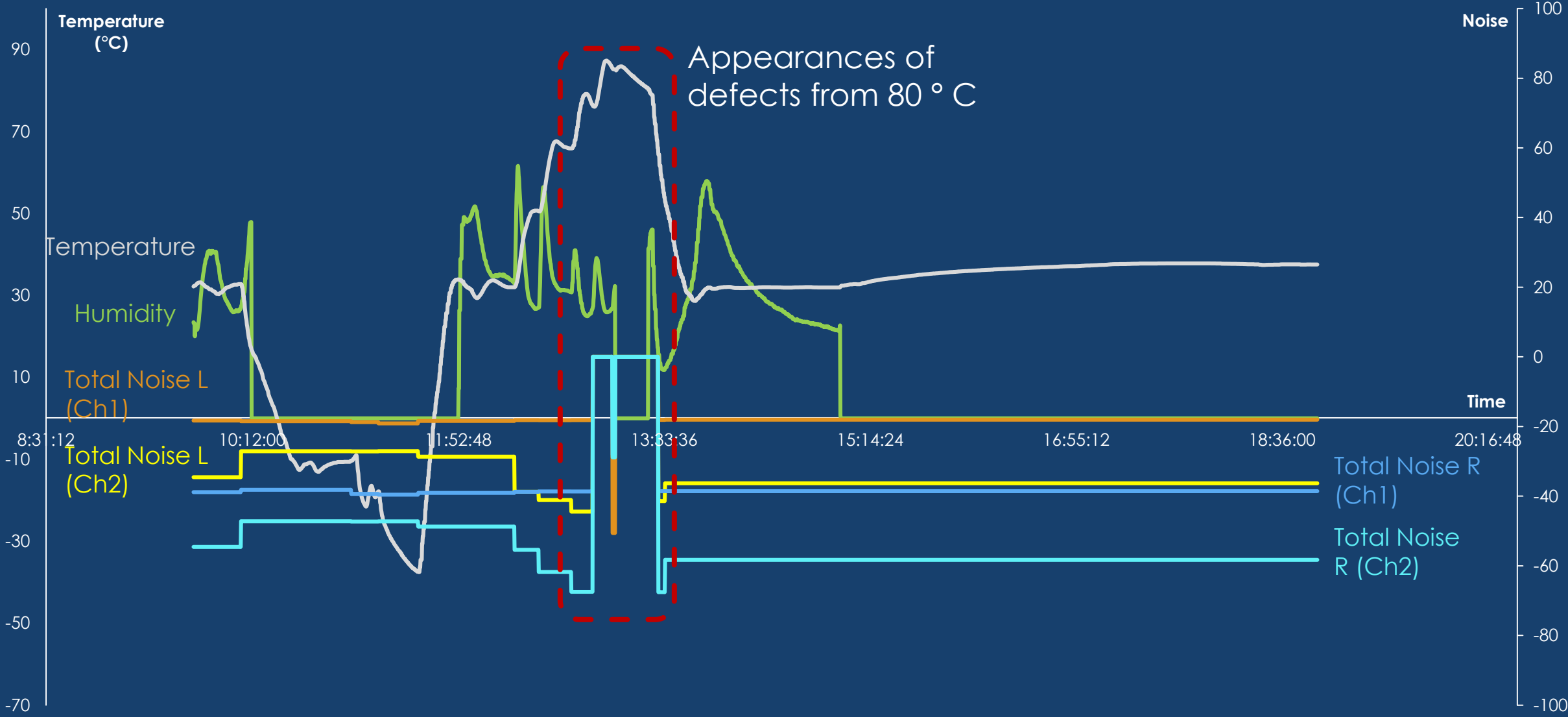
Thermal Test

Product Life cycle
Vibration Test

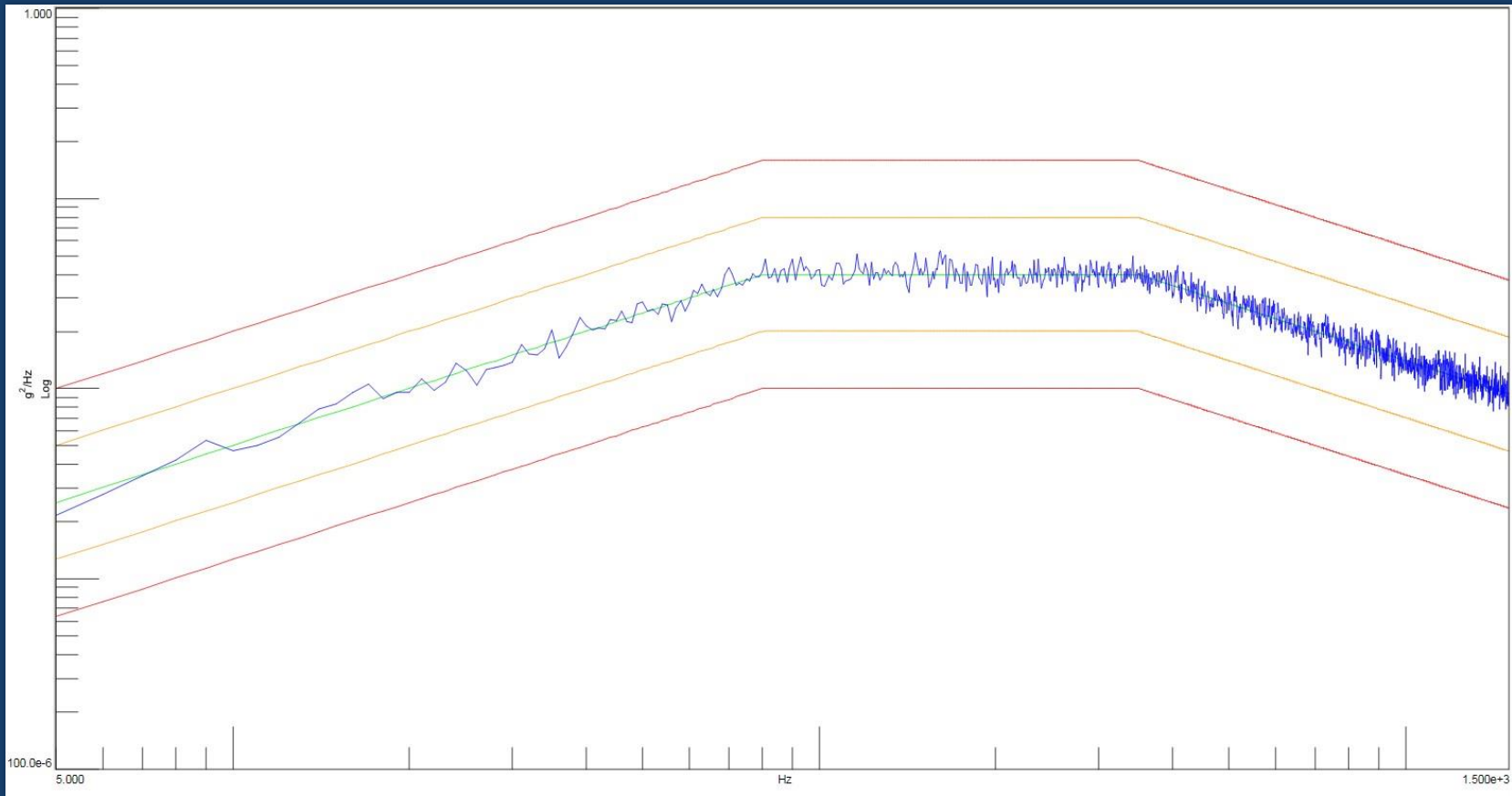
Thermal Test -40°C to +120°C



Thermal Test -60°C to +95°C



Vibration Test



Vibration test Chart





Continuation

IV. Components Experiments

✓ Following Steps

❖ Perform the **HASS test**

- *Vibration*
2 cycle of 20 minutes: x or y axis & z axis
- *Thermal*
10 thermal cycles on all cards

❖ Referencing all **anomalies**

- ❖ Improve the **test setup** in collaboration with Colmar
- ❖ Update the **Qualification procedure**

Conclusion

- Implementation of a document management plan highly appreciated
- Anticipate the adequate procedures for the operation phase
- Actions can be lead only if there is the resources and collaboration of all