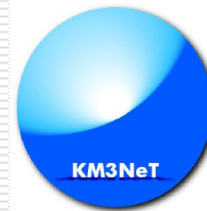


The Future of High-Energy Neutrino Astronomy

VLVnT Workshop 2011
12 -14 October 2011 - Erlangen, Germany

*“Quality Control Considerations
for the KM3NeT Very Large
Volume neutrino Telescope”*



*C.Sollima
INFN - University of Pisa
for the KM3NeT Consortium*



Contents

- Quality control and qualification process
- Data base for quality control
- Conclusions

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Quality Control and Qualification Process

SOME DEFINITIONS

- 1) **Quality Assurance** is a set of preventive activities, which are focused on processes whereas
- 2) “**Quality Control** encompasses the operational techniques and activities that are used to fulfill requirements for quality” (ISO 9001)
- 3) Quality Control is a **detection activity**, which is focused on detecting the defects once the product is manufactured

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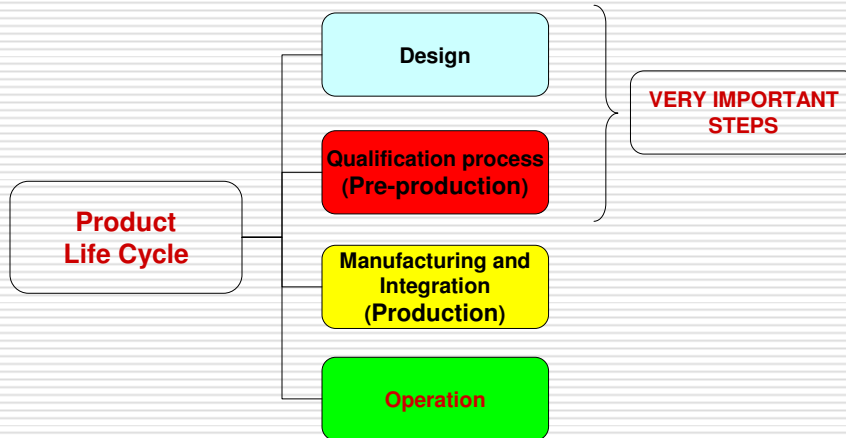
Quality Control and Qualification Process

KM3NeT quality assurance and dependability analysis

- 1) showed the need for qualification and optimization processes.
- 2) To allocate reliability to various components (e.g. using accelerated testing) in order to examine (and guarantee) the performance of the required function by the overall system

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Quality Control and Qualification Process



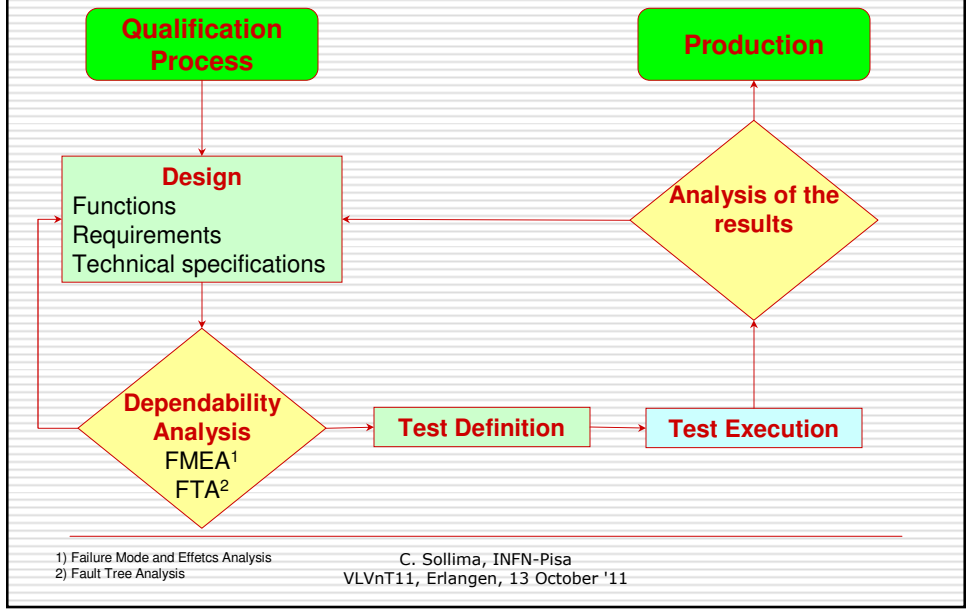
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Quality Control and Qualification Process

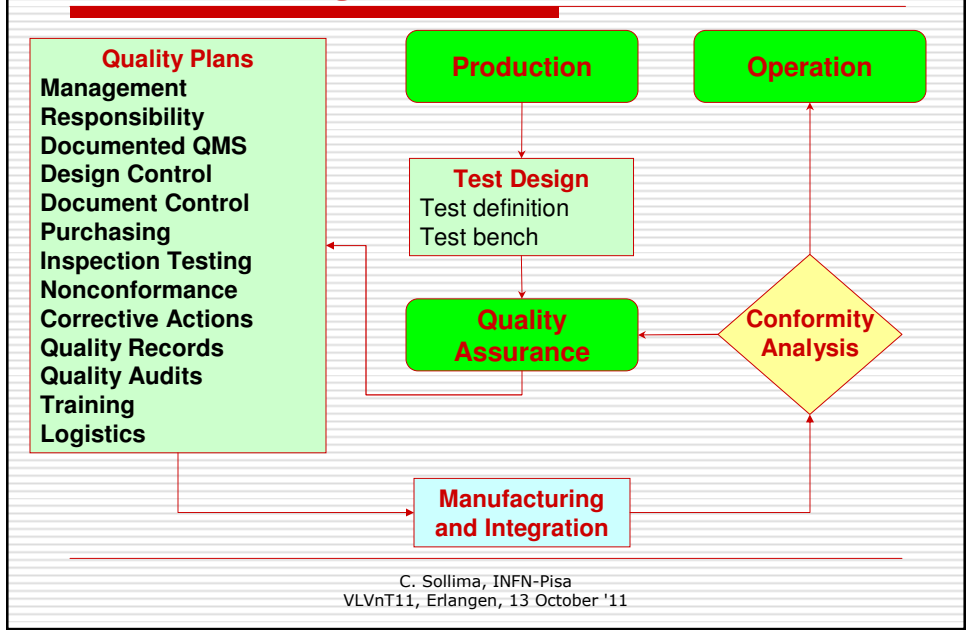
System Macro area	Optical Module	Storey	Detection Unit	Junction Box	Shore
Data Electronics					
Power Electronics					
Optics					
Acoustics					
Mechanics (Cables, Sea operations,etc)					
Software					

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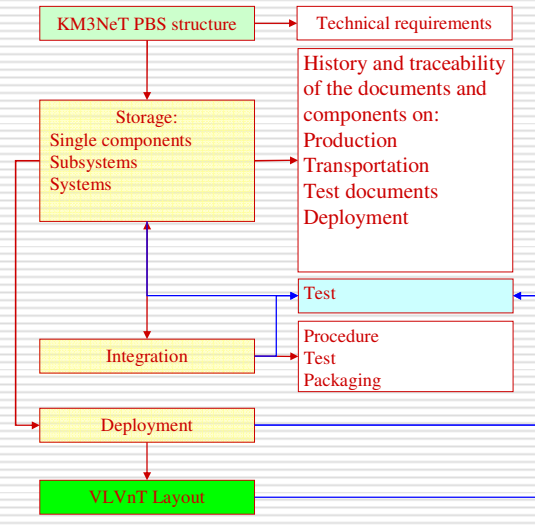
Quality Control and Qualification Process



Quality Control and Qualification Process



Data Base for Quality Control



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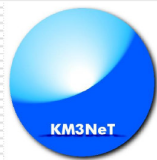
Conclusions

- ❑ The use of QA standard as ISO 9001's can help in the quality management system of a VLVnT
- ❑ The QC for a VLVnT is a complex process that implies an iterative activity between designers and specialists
- ❑ A DB for QC is very useful in the implementation of a QMS as well a QC.

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THANK VERY MUCH FOR YOUR KIND ATTENTION

*“Design Study for a Deep Sea Facility in the
Mediterranean for Neutrino Astronomy and
Associated Sciences”*