

1809797

by Lourens Brits

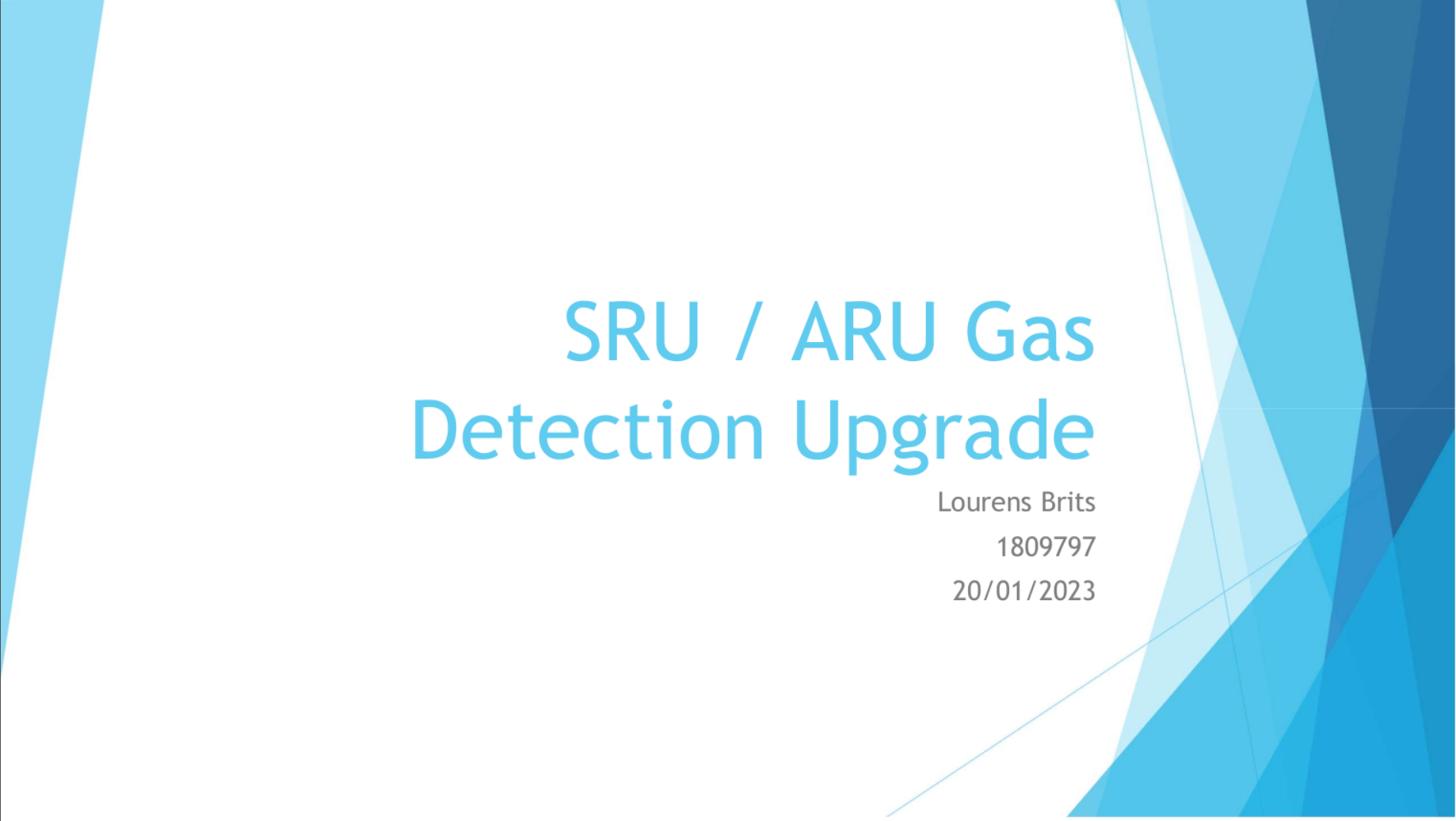
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SRU / ARU Gas Detection Upgrade

Lourens Brits

1809797

20/01/2023

Project Background, Problem Definition & Constraints



General Monitors ExP
Field Controller

No Live Data To DCS as
per DEP 32.30.10.11

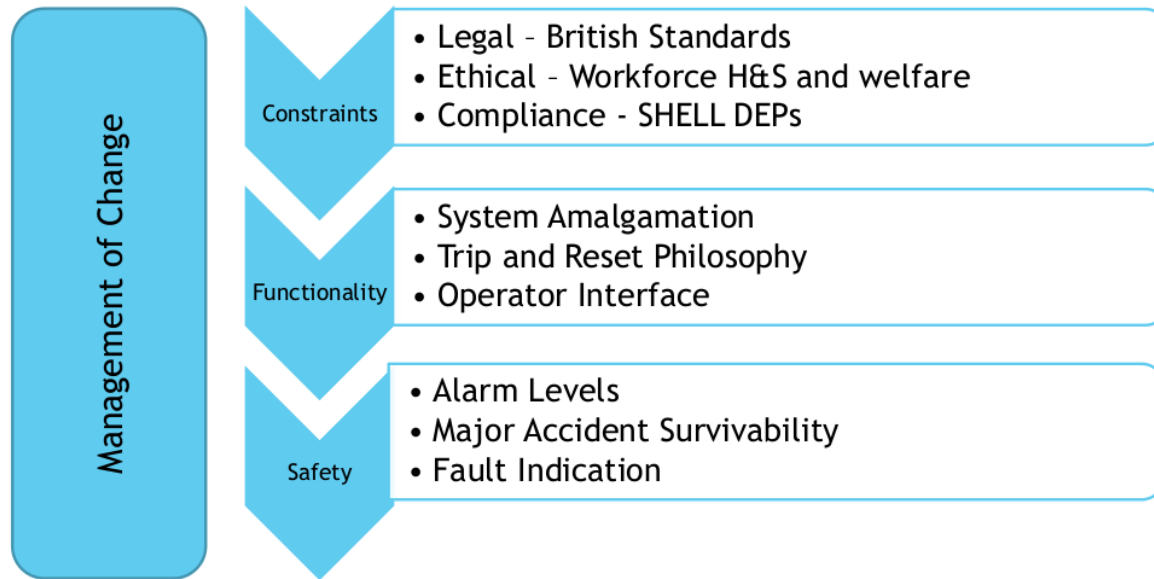


General Monitors H2S
field detector

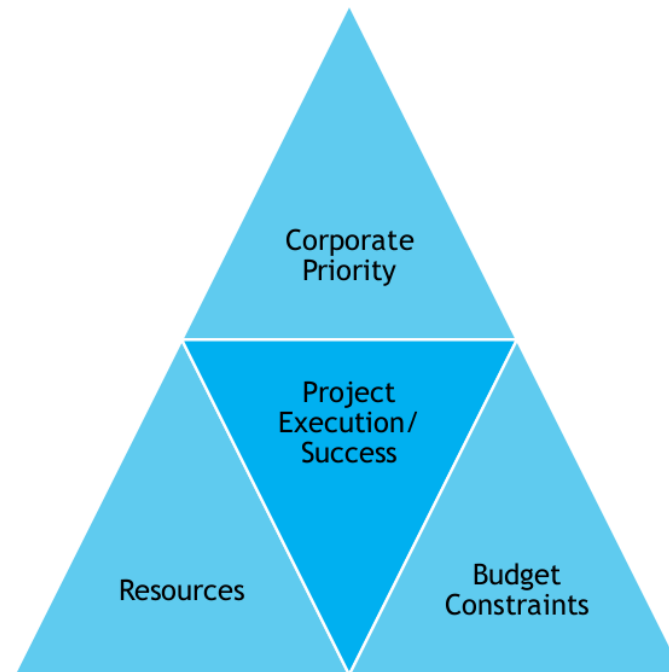
Existing Draeger RIE
Controller



Functional Design Specification

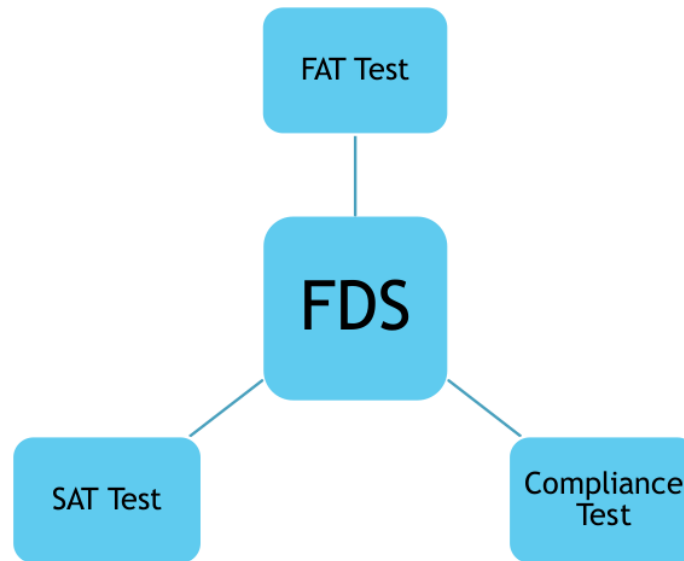


Project Execution Risks / Health and Safety



Test Planning

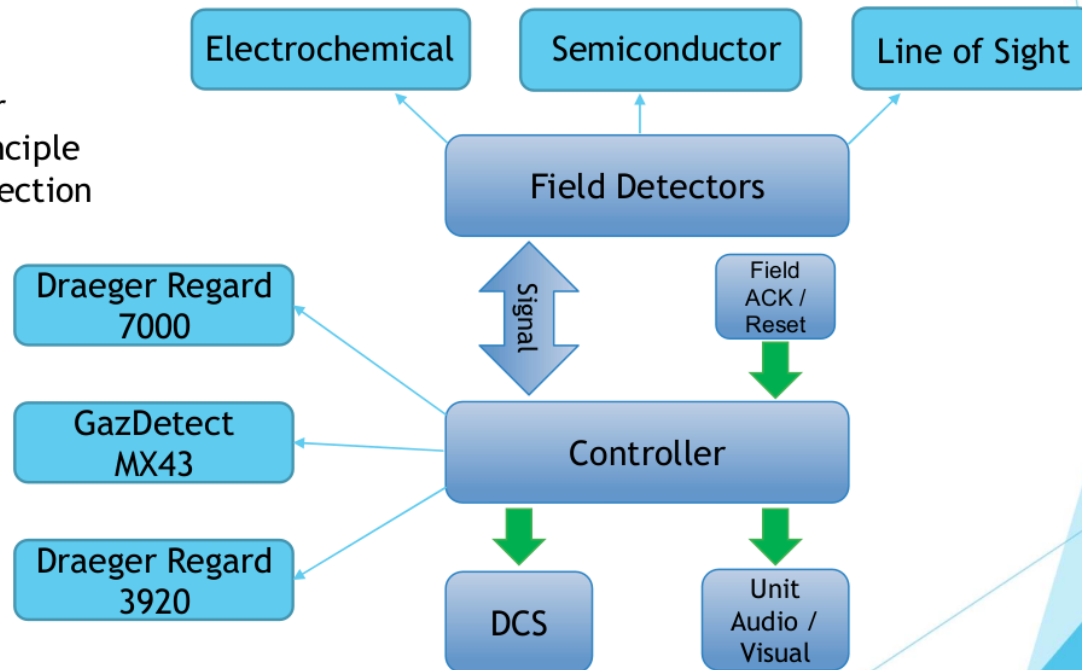
- Purpose - to ensure the FDS specifications have been met
- Testing will be carried out in three parts
- FAT - Overrides / ATEX Rating / HMI Graphic / Alarm Levels / Trip & Reset Philosophy
- SAT - UPS / DCS Interface / Signal & Fault Loops / Trip & Reset Philosophy



Three Project Solutions

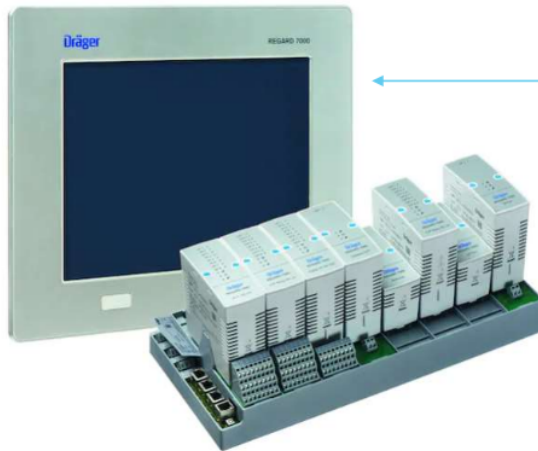
Variables:

- Field Detector Operating Principle
- Controller Selection



Justification for Chosen Solution

Regard 7000 Controller



- RIE HMI
- Modular Design
- Live Data Acquisition

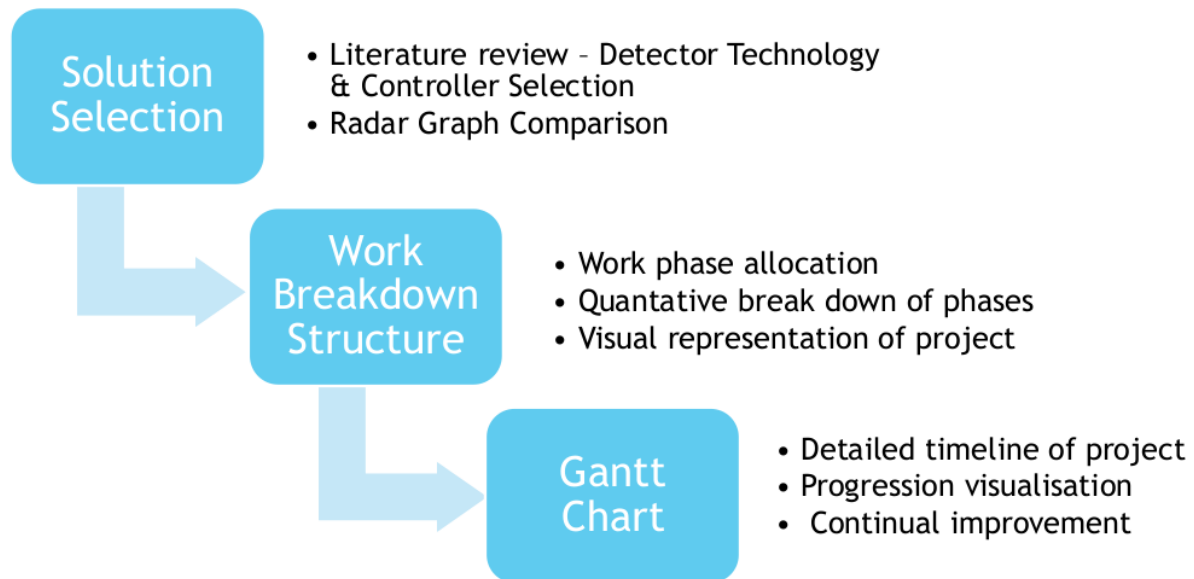
- Solution is within budget
- Future expansion
- Serial link - Live data acquisition

Polytron 7000 Detector



- Proven Site Record
- Efficient
- Stores held Spares
- Sustainable

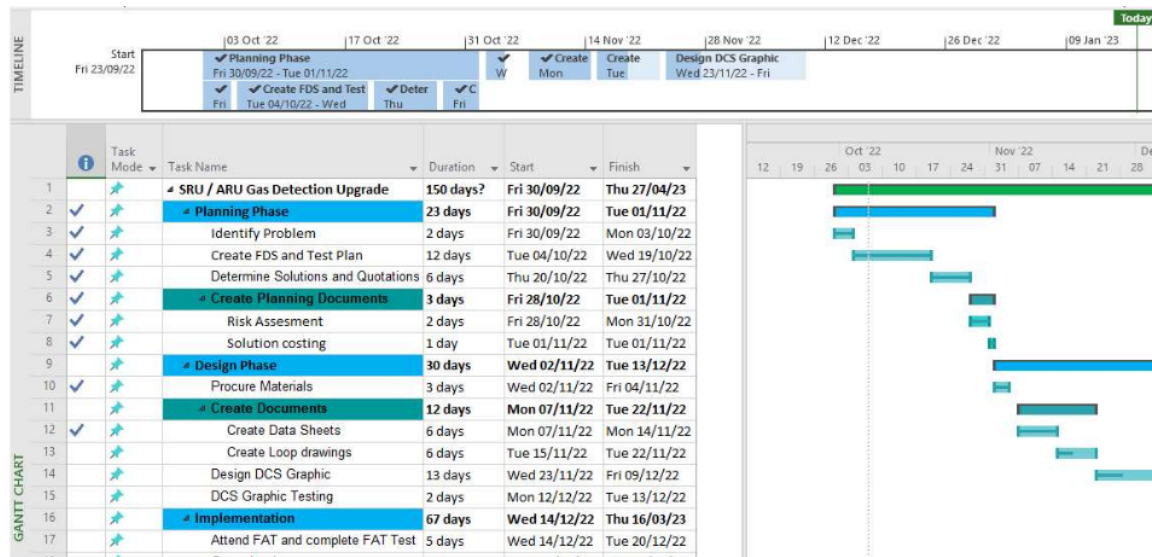
Project Planning and Work Breakdown Structure



Progress Made To Date

- ▶ Progression Has Halted - Strike Action / Annual Leave
- ▶ Procurement Delay - Additional Budget Approval / Justification
- ▶ Project Priority Reduction

Gantt Chart - Project Progress



1809797

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

Instructor

63/100

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

LOURENS BRITS

63

1. ENGAGEMENT WITH LITERATURE

2. KNOWLEDGE AND UNDERSTANDING

 Project background and problem definition (6/10) Project constraints, risks, health and safety (7/10) Response to questions (8/10) Total = 21/20

21

3. COGNITIVE AND INTELLECTUAL

 Functional Design Specification (5/10) Test planning (5/10) Project Planning and management methods (6/10) Total = 16/30

16

4. PRACTICAL APPLICATION

 Review of Solutions (5/10) Justification of final solution (6/10) Total = 11/20

5. TRANSFERABLE SKILLS

Quality of the presentation slides (8/10) Quality of the delivery style (7/10)
Total = 15/20

15