

One small step for you... One giant leap for Process Safety

Congres Process Safety 2019

Lezing Yokogawa



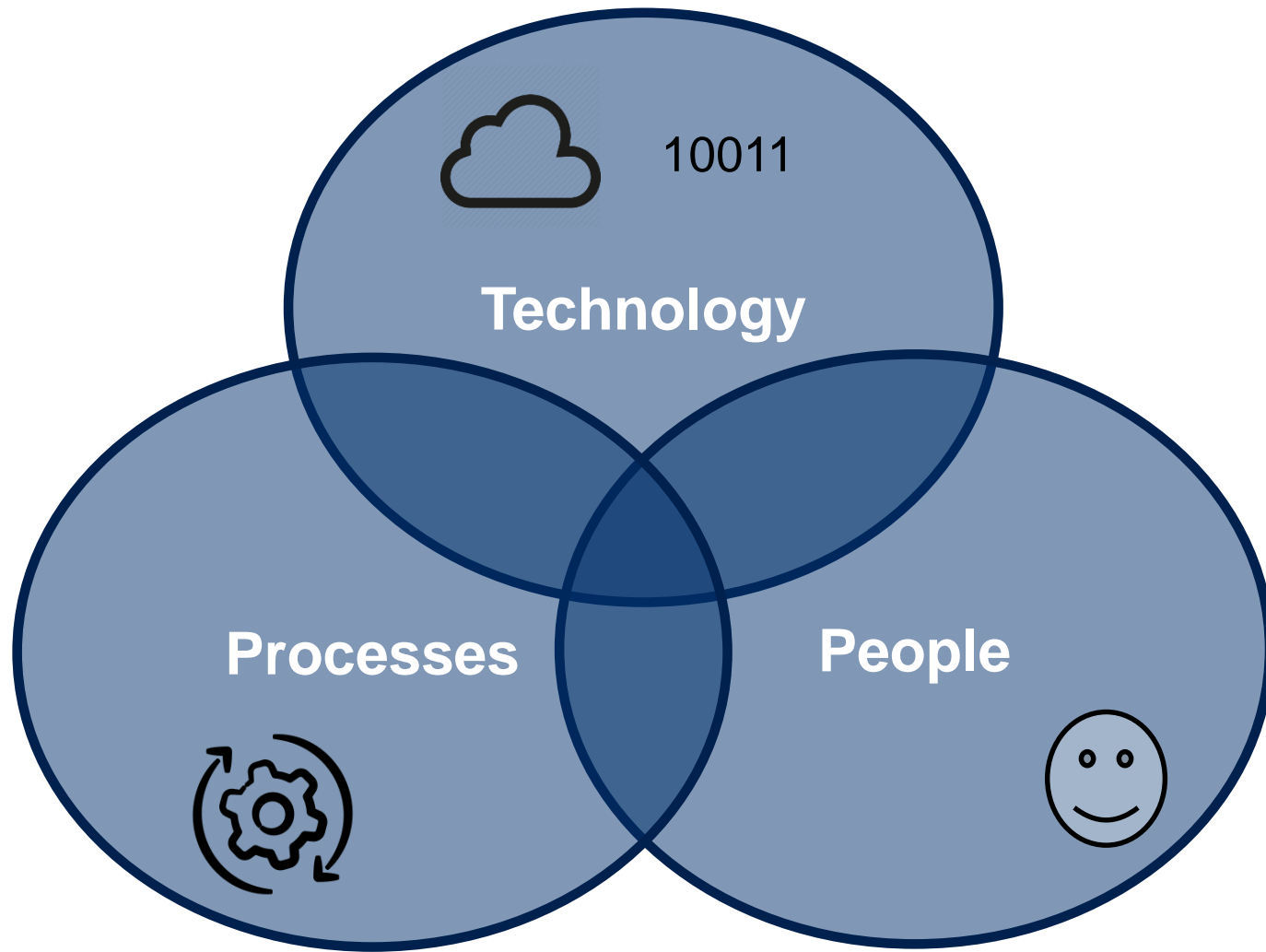
Woensdag 15 mei, 14:30 - 15:00



Kamer 3, Van der Valk Hotel, Dordrecht



Niels Huttenhuis, Ton Beems, Hans Hennekam



DASHBOARD

ACTION

KPI



Reliability

Security

Operations

Safety

- Process Equipment
- Process Sensors
(Transmitters, IIOT)
- Control systems
(I/O, Controllers, Network, Workstations)
- Software

- Patching
- Physical Access
- Virus Scanner
- Vulnerabilities
 - Skills
 - Intrusion
- Message Content
 - SIEM

- Alarms
 - SOP
 - Manual Operations
- Changing setpoints
 - Skills
- Management of Change
- Maintenance Strategy

- HAZOP, LOPA etc.
 - SIF testing
 - Overrides
- Safety System
- (SIL, Demand)
- **Systematic capability**



SYSTEMATIC
CAPABILITY
SC2 or SC3

PROCESS



Only ONE % of the companies are compliant



TECHNOLOGY



Inspection and (pre) testing



PEOPLE

Contractors

End Users

Certification bodies

LED synergy



004
245
020

ACCIDENTS THIS YEAR

DAYS SINCE LAST ACCIDENT

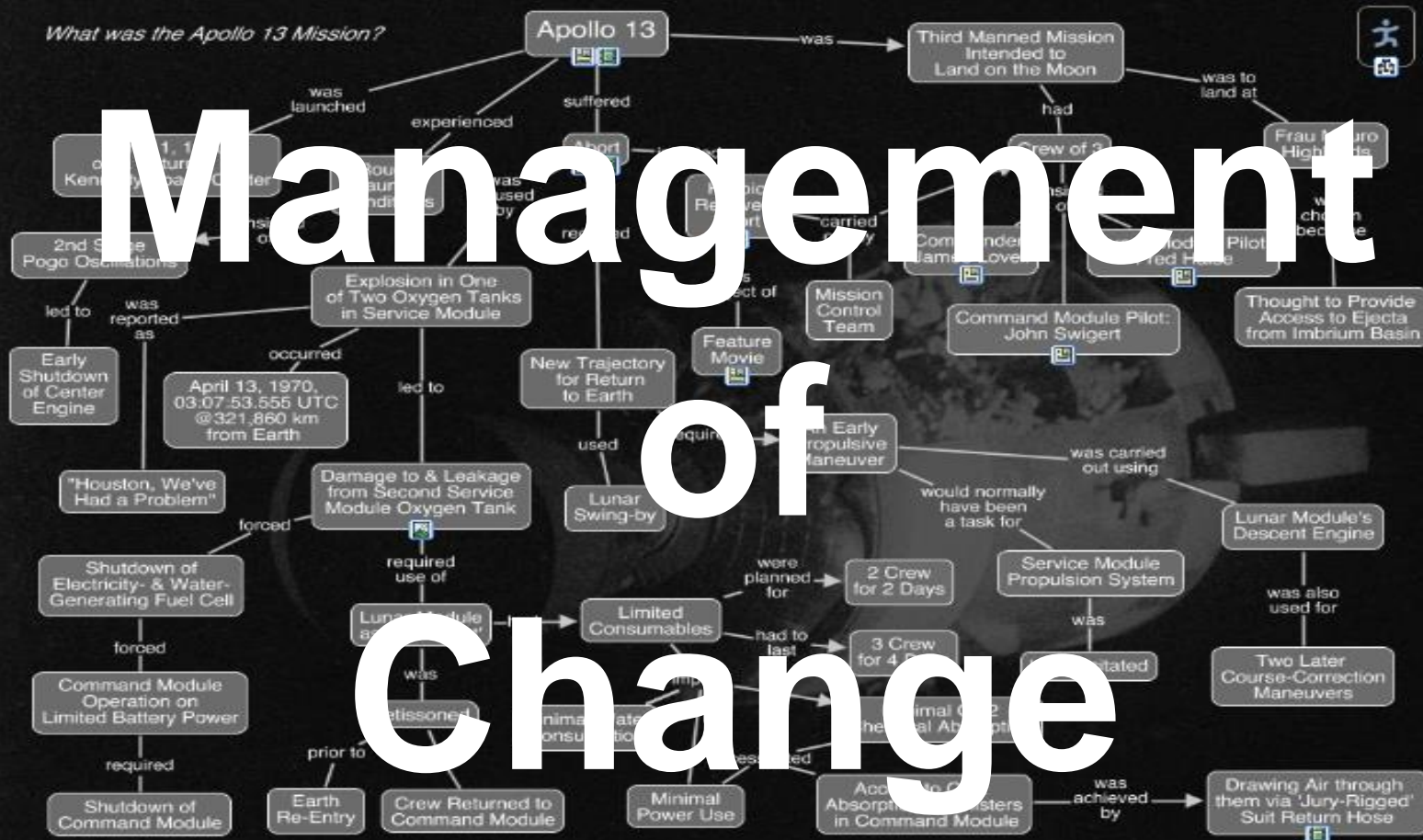
ACCIDENTS LAST YEAR

KRAFT
VISITORS PLEASE
PARK ON THE RIGHT



What was the Apollo 13 Mission?

Management of Change



(Separate) Sources for the Dashboard

Design

Hazard Analyses

- HAZOP
- LOPA
- SIF

SOP

Operational

CMSS

- Asset Inventory
 - MoC
- Permit to Work
- Override Management

Bowtie

SIF testing &
reporting

Systems

Asset Management

- Transmitters
- Analysers

PLC

SIS

DCS

Cyber Security

- Architecture
- Tools



Linking the Sources results in:

- Real-time (100%) auditing
 - 100% compliance
 - No mistakes
- Real-time risk management

Co-innovating tomorrow™

We believe that by leading co-innovation with our partners and customers, Yokogawa can truly create new social and environmental value for our society not only today but also beyond tomorrow.

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