

# Achieving Assets Data Integrity

**How to audit, cleanse and populate your CMMS to  
achieve data integrity**

Master best practices in building the CMMS data during the pre-optimal phase or carrying out major clean ups of the equipment, spares data and good cataloguing process as well as writing effective PM job plans.

13<sup>th</sup> – 15<sup>th</sup> June 2016 Ho Chi Minh, Vietnam

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# Program Overview

Most of the CMMS builds that we have seen are performed very badly. Usually, engineering consultants or companies who specialise in this type of activity are used to develop the data for CMMS population. The main reason is a lack of standards and guides so the people involved do what they think is the right way, but everyone has different ideas.

One also must remember data building of CMMS is part of the project, if we get it wrong, we are stuck with the problems for years or it will require major re-work. The trainer had experienced many CMMS implementations where a company has assembled a team of disciplined engineers but these engineers may have a lot of practical experience but have no experience of building the data to go into CMMS.

This workshop shows delegates best practices in building the CMMS data during the pre-optional phase or carrying out major clean ups of the equipment and spares data (by downloading the data from the CMMS to Excel). In addition we will also cover writing effective PM job plans. Job Plan reviews we have carried out reveal they are often confusing, poorly formatted, have sequencing errors, etc.

In this workshop, we will be using MS Access and Excel, delegates will leave the workshop with a very good knowledge of MS Access. This course will be presented in a very structured approach.

## **This course aims to combat the current top challenges:**

- Poor failure coding set up, leading to poor reliability reporting.
- Poor hierarchy builds so spares are harder to find and an inability to roll up to maintainable items so inadequate performance reporting.
- Poor naming conventions for spares which mean spares can't be found resulting in duplications and higher inventory costs.
- Poor structure and written PMs which mean PMs Not used and work is not carried in the manner intended leading to poor reliability.
- Consultants used who are expensive and yet often deliver poor populated systems leading to rework and extra costs.

## **Attend this course to Master:**

- Better understanding on how to audit the quality of your CMMS data.
- Effective process on how to build a populated CMMS with quality data and includes all aspects equipment, attributes, failures code structures, PMs and Spares.
- Creating the spares inventory data, good cataloguing process.
- Understand how to achieve good cataloguing of spares, perhaps the activity carried out badly the most.
- Deciding on the equipment level to raise the preventive routines.
- Setting up performance standard for safety critical items.
- Conduct equipment & Spares build without using consultants or be able to manage data builds carried out by consultants.
- Write more effective and quality preventive maintenance job plans
- Develop simple database in MS access and same techniques can be used to build other applications including slick tricks.
- Applicable for company who want to build good quality data before mapping the data to CMMS (Maximo, SAP, Datastream and etc)

## **PRACTICAL INVOLVEMENT:**

Exercises in using MS Access, Building equipment tables in MS Access, Building Job Plans in MS Access, Conducting Data quality checks, Assigning maintainable groups, Discussion on PM Titles, Discussion on location and equipment naming conventions, Discussion on cataloguing spares and how to create CMMS upload tables.

## **I'm using SAP, Maximo and etc, will this be beneficial to me:**

CMMS is a generic term, the principle of the build are the same whether you use SAP, MAXimo, Datastream, JD Edwards, Coswin etc to name just a few. (The data is never entered directly into the CMMS but is created in Excel or mostly MS Access, so you have to map the data to the CMMS (maximo, SAP, datastream or etc). Irrespective of the CMMS used you have build it following strict guideline and the data is always developed in a database and uploaded to the CMMS.

# This program is intended

Industry: Oil & gas, Process, Manufacturing, Cement, Mining, Power and Water Utilities.

Maintenance Engineers and support engineers – Maintenance planners – Preventive Maintenance - CMMS Engineers – CMMS IT administrators – CMMS planners or anyone who populated data into CMMS – Project – Engineers responsible for specifying, buying spares and setting up the spares information in the CMMS – PMS and equipment Engineers – Spares personnel – Anyone who want to understand how to achieve an effective CMMS system (Equipment, Assets, PM routines, Spares)

## Program Focus:

Equipment and associated data	Spares	PMs	Understanding MS Access
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<p><b>Introduction and common problems</b></p> <ul style="list-style-type: none"> <li>Delegates problems</li> <li>Common problems seen by consultant</li> <li>Use Excel or MS Access</li> </ul> <p><b>Data handling Techniques in Excel</b></p> <ul style="list-style-type: none"> <li>Data clean from "as received" documents</li> <li>Concatenation of data</li> <li>Splitting information for sorting</li> </ul>	<p><b>Using MS Access to build Equipment and spares Database</b></p> <ul style="list-style-type: none"> <li>Introduction to MS Access</li> <li>Creating Tables</li> <li>Creating queries, forms and reports</li> <li>concatenation</li> <li>Hints and tips used in Equipment &amp; Spares builds</li> </ul> <p><b>Codes used in Maintenance &amp; Material systems</b></p> <ul style="list-style-type: none"> <li>Criticality</li> <li>Equipment Class</li> <li>Failure Classes</li> <li>Shutdown codes</li> <li>WO priority Codes</li> <li>ABC</li> <li>Different between ROP and Min-Max control</li> </ul>	<p><b>Developing the Asset Register</b></p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Developing Assets Hierarchy Guide</li> <li>Prepare naming conventions for both locations and equipment including the Abbreviations Guides</li> <li>Define maintainable groups</li> <li>Building the location and equipment Database</li> <li>Create the drill down report for reviewing hierarchies before upload</li> <li>- <u>Exercise 1</u> : Conduct an initial build</li> <li>- <u>Exercise 2</u> : Build after applying standard</li> </ul>
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## ACHIEVING ASSET DATA INTEGRITY ( 3 DAYS)

<p><b>Failure coding system</b></p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Coding structure</li> <li>Full tree Versus Partial Tree structures</li> <li>ISO14224</li> <li>Boundaries in practice</li> <li>- <u>Exercise 1</u> : Building a Partial tree structure</li> </ul> <p><b>Building Equipment Attributes</b></p> <ul style="list-style-type: none"> <li>Class and sub class</li> <li>Attributes</li> <li>Sources of attributes</li> </ul>	<p><b>Developing the spares database</b></p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Developing types Guides, Rules and strategies</li> <li>Developing the catalogue Guide</li> <li>Developing an Abbreviations Guide</li> <li>Building the spares database</li> <li>Conducting quality checks</li> <li>- <u>Exercise</u> – describing equipment</li> </ul> <p><b>Creating PMs</b></p> <ul style="list-style-type: none"> <li>Introduction including definitions</li> <li>Common terminology</li> <li>Developing Generic strategy Guide including those based on FMEA concepts</li> <li>Writing effective tasks good practices</li> <li>Job plan formats</li> <li>- <u>Exercise</u></li> </ul>	<p><b>Safety Critical Elements and Assurance Tasks</b></p> <ul style="list-style-type: none"> <li>Introduction to SCEs</li> <li>Implementing SCE into your CMMS with warning and action limits</li> <li>Understand the different data types</li> <li>Typical performance standards</li> </ul> <p><b>Auditing the Build Process</b></p> <ul style="list-style-type: none"> <li>Planning</li> <li>Conducting the audit</li> <li>Identifying the issues</li> <li>Presenting findings</li> </ul> <p><b>Review of workshop and Delegates Action Plans</b></p>
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### QUALITY CHECKS

The trainer will also cover the quality checks of the data before upload, we will be running two phases in the quality checks:

- a) Quality Checks by the person preparing the data
- b) Quality Checks by the client and the person receive the data in stages and in a user friendly format – this is rarely done effectively by consultants who do this type of work or in-house personal.

# Principal Program Facilitator



**RAMsoft, UK**

## David Thompson, RAMsoft UK – MAINTENANCE RELIABILITY CONSULTANT

David extensive experience covers all aspects in Maintenance, Reliability and Operation management. His area of strength covers specifically in maintenance management audit reports , RCA , Shutdown planning and failure code systems ,CMMS , KPIs , Spares Optimization , RCM and RAM Modelling

For the past 40 years, David had been actively involved in:

- Conducted over 400 audits including fast track audits, in-depth audits and distance audits in maintenance management
- Currently working for Worley Parsons in UK writing document for a number of FEED projects worldwide.
- Interest in helping companies collect better data and to try and make reliability of interest to the regular maintenance engineer by concentrating on applications rather than complex mathematical theory.
- Developed Policy and procedures documents for a number of Oil & Gas Companies.
- Wrote standard and guidelines on many topics on maintainability, RCA, work packs, Shutdown planning and failure code systems.
- Wrote over 400 audits reports covering excellence in Maintenance management and in specialist topics spares, CMMS, KPIs and Reliability Management system.
- Presented Papers at several Maintenance & Reliability Symposiums in Europe, Malaysia and Brazil.
- Online distant learning instructor for Robert Gordon University in Assets integrity and Reliability Management.
- Undertaking a major CMMS data Cleansing Project as part of a CMMS upgrading.

### Symposiums

- European & world Maintenance Congress 2007
- Applied Reliability Symposiums – Europe 2009, Brazil 2008, Asia 2006,200, 2010.
- Presented paper at the Applied Reliability Symposium Singapore 2013 (4<sup>th</sup> Year)

David has worked for many blue chip companies either directly or through a consulting role.

### **David,s International Clients :**

Nippon Oil , Talisman , Petrofac , State Oil Dubai Petroleum , Novartis , EGGBOROUGH POWER STATIONS , Chinese Oil & Gas company ,worley parsons , sabic, Qatar petroleum , Scottish power , wood group , shell Nigeria , Hunstman , ENI oil , Saudi Aramco and SONANDOL P&P

David is a certified instructor in RCA and Reliability Methods and Techniques. He has developed and delivered training programs worldwide including both to offshore and onshore facilities, topics include RCM, FMECA, Weibull Analysis, RAM Modelling, Reliability Growth, Analysis, and Fault Tree Analysis, Incident /Root Cause Analysis, Work Planning and Control, Spares Optimisation & Rationalisation. Recent workshops that have been well received are Achieving CMMS Data Integrity, Implementing Asset Management Systems to support ISO55000 and Reducing OPEX costs.

David has presented papers at several Maintenance & Reliability Symposiums in Europe, Malaysia, and Brazil. He is an Online Distant Learning Instructor for the Robert Gordon University for a distance learning MSc Course in Asset Integrity and Reliability Management. David's workshops include many case studies and examples gaining from working in the Middle East, Africa, and Asia.

David has conducted many reliability studies over the past 20 years. He has a particular interest in helping companies collect better data and to try and make reliability of interest to the regular maintenance engineer by concentrating on applications rather than complex mathematical theory. He has worked for many blue chip companies either directly or through consultants.

### Early days

David initially started in the steel making and mining sectors and for the past 15 years in the oil & gas sector. David was the UK partner for Reliasoft one of the world's leading reliability engineering companies, and is currently part of a team to implement improved Asset Reliability in the Middle East, including RAM and RCM studies.



PETRO1 provides Oil & Gas Trainings & Consultancy services ranging from Petroleum Engineering, Exploration & Production, Subsurface and business related activities in the oil & gas industry. We had successfully made impact to petroleum professional mainly the Top 50 Oil & gas players in the south East Asia Region.

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|----------------------|------------------------------|---|
| ▪ Total E&P          | ▪ Petrofac                   | ▪ SGS                                   |
| ▪ Petronas           | ▪ Keppel Corporation         | ▪ Halliburton                           |
| ▪ Murphy Oil         | ▪ Singapore refining Company | ▪ Brunei LNG                            |
| ▪ JX Nippon          | ▪ Salamander Energy          | ▪ Shell Chemical                        |
| ▪ Scomi Oil          | ▪ Binh Son Refining Vietnam  | ▪ Worley Parson                         |
| ▪ Hess               | ▪ PTT Global                 | ▪ China university of petroleum Beijing |
| ▪ Saipem             | ▪ Newfield                   | ▪ Thailoil                              |
| ▪ Mubadala Petroleum | ▪ Brunei Methanol            | ▪ Star Petroleum                        |
| ▪ Bureau Veritas     | ▪ Technip                    | ▪ Jurong Shipyard                       |
| ▪ Pertamina          | ▪ Premier Oil                |   |

## Investment Packages

Achieving Asset Data Integrity	Early Bird Full 3 Days	Standard Price Full 3 Days
Per Delegate	SGD 2795 ( )	SGD 2995 ( )

**REGISTER 3 AND SENT THE 4<sup>TH</sup> FREE**  
- Early Bird Promotion Deadline – 13th May 2016  
Please Note that a SGD\$40 will be incur for Administration Fee.

## Delegate Details

1. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

2. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

3. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

Head of Department: \_\_\_\_\_

## Invoice Details

Invoice Attention to: \_\_\_\_\_

Company: \_\_\_\_\_

Industry: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Authorized Signature : \_\_\_\_\_

## REGISTRATION FORM

### PROGRAM DETAILS

Venue: Ho Chi Minh, Vietnam

Date: 13<sup>th</sup> – 15<sup>th</sup> June 2015

#### REGISTER NOW

CONTACT: kelvin

MAIN: +603 7727 3952

FAX: +603 7722 5278

Email: registration@petro1.com.my

Please Debit my Credit card :

VISA  MASTERCARD

Card Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Security Code:       Expiry Date:

Named printed on card: \_\_\_\_\_

Signature: \_\_\_\_\_

#### Payment Method

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By Direct Transfer: Please quote invoice numbers on remittance advice.

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BANK : HSBC Amanah Malaysia Berhad

ACCOUNT NO : 054 – 048061 – 701 (SGD)

SWIFT CODE : HMABMYKL

**All bank charges to be borne by payers. Please ensure that PETRO1 SDN BHD received the full invoice amount.**

**\* Credit card payment will include a charges 2.8%**

**Payment Policy:** Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Payment is required with registration and must be received prior to the event to guarantee the seat. Payment has to be received 7 working days prior to the event date to confirm registration.

**Venue:** All of our training courses are held in 4 – 5 star venues.

The course fee does not include accommodation or travel cost. It's recommended to book the hotel room early as there are only limited room available at the discounted corporate rate.

#### DATA PROTECTION

The information you provide will be safeguarded by Petro1 that may be used to keep you informed of relevant products and services. We take it seriously when it come s to protection of our client data.

**Cancellation & Substitutions:** Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Should you be unable to attend, substitutes are always welcome at no additional cost. Please inform us as early as possible. Payment is non-refundable if cancellation occurs 7 working days prior to event commencement. However a substitute is welcome at no additional charges. If cancellation occurs 5 working days prior to the registration date and there is no substitute, the organizer reserves the right to charge 50% of the total investment from your organization.

PETRO1 SDN BHD is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. PETRO1 SDN BHD shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, war, fire, labor strike, extreme weather or other emergency.

**Walk in Registration:** Walk-in participants with payment will only be admitted on the basis of seat availability at the event and with immediate full payment.

**Program Change policy:** The organizer reserves the right to make any amendments and/or changes to the workshop, venue, facilitator replacements and/or modules if warranted by circumstances beyond its control.