WorleyParsons

resources & energy

Asset Improvement and Optimisation

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EcoNomics

Introduction

- Apologies
- WorleyParsons NZ
- Asset Improvement and Optimisation
  - Integrated asset management model
- Explain a process to develop and deliver an Asset Improvement Plan
  - D5 – Discuss, Diagnose, Dive, Deliver, Display

WorleyParsons NZ

- Multi-national engineering company
  - 350 Staff in five offices around NZ
  - Servicing clients across a range of industries
- Key involvement in winery developments
  - Crossroads
  - Craggy Range
  - Murdoch James
  - Delegat

What is asset improvement and optimisation

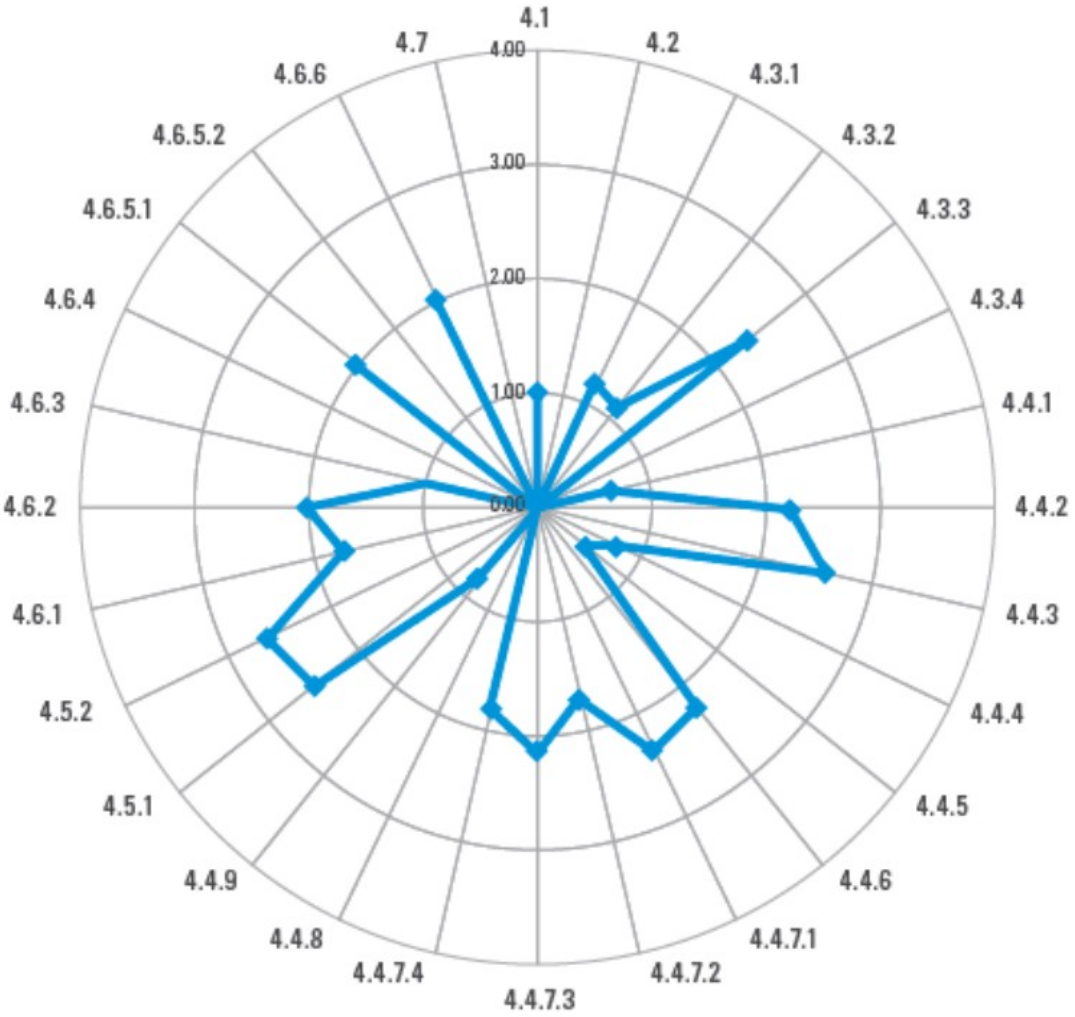
- Improvement
  - Upgrade processing capability
    - New technology
    - Greater capacity
- Optimise
  - Make the most effective use of your asset
    - Minimise downtime
    - Restore original performance

Integrated Asset Management

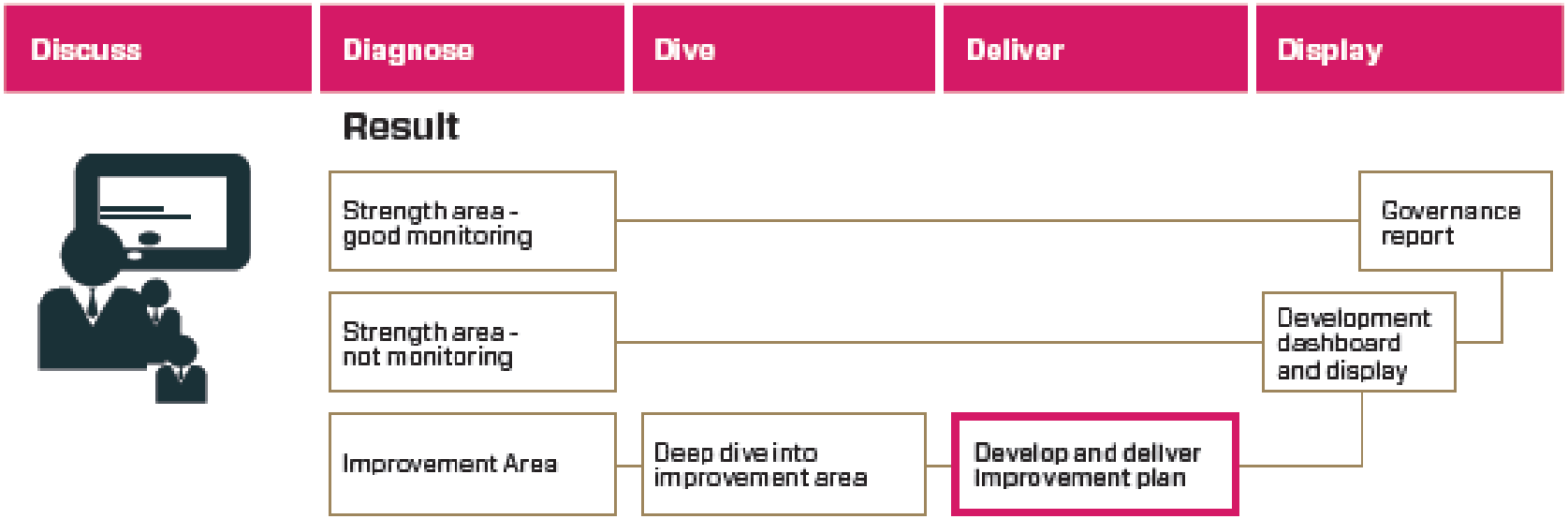
Results

No.	Clauses
4.1	General requirements
4.2	Asset management policy
4.3.1	Asset management strategy
4.3.2	Asset management objectives
4.3.3	Asset management plan(s)
4.3.4	Contingency planning
4.4.1	Structure, authority and responsibilities
4.4.2	Outsourcing of asset management activities
4.4.3	Training, awareness and competence
4.4.4	Consultation, participation and communication
4.4.5	Asset Management System documentation
4.4.6	Information management
4.4.7.1	Risk management process(es)
4.4.7.2	Risk management methodology
4.4.7.3	Risk identification and assessment
4.4.7.4	Use and maintenance of asset risk information
4.4.8	Legal and other requirements
4.4.9	Management of Change
4.5.1	Life Cycle Activities
4.5.2	Tools, facilities and equipment
4.6.1	Performance and condition monitoring
4.6.2	Investigation of asset-related failures, incidents and nonconformities
4.6.3	Evaluation of compliance
4.6.4	Audit
4.6.5.1	Corrective & Preventative action
4.6.5.2	Continual Improvement
4.6.6	Records
4.7	Management review

The RADAR chart shows the average score range per clause



D5 Process



- Identify areas of concern
- Target improvement investment
- Improve asset performance

Executive Report

Diagnosis: Findings and Way Forward

Management Review and Improve

N/A Management reporting, review and improvement processes applied to Asset Management was not subject to this review

Business Planning

N/A 2012 - 2022 Asset Management Plan exists. How it connects to the whole organisation via the KPI tree was not subject to this review

Asset Improvement

12 **FINDING:** Reviews of the maintenance program effectiveness are not carried out — Low

Asset Integrity Measures

11 **FINDING:** Segregation and reporting of safety, compliance or license-to-operate Planned Maintenance tasks (PMs) does not appear to take place — Medium

NEXT STEP: This issue is being addressed internally by applying a SAP designator aligned with its Site Safety Case

Business Processes

1 **FINDING:** Maintenance processes are unclear or incomplete (Planning & Scheduling, WO processing, Contractor control) — Medium

NEXT STEP: Map the current processes, identifying gaps, disconnects or omissions.

2 **FINDING:** Project deliverables for Asset Management and Maintenance Engineering are often omitted or inappropriate — High

NEXT STEP: Identify the current project deliverables in the areas of maintenance and reliability engineering. Review a sample of actual project information supplied. Run a workshop to verify the documented requirement, confirm the current practice, identify shortfalls and establish root cause(s).

Resources

3 **FINDING:** Key maintenance roles are either conflicted or unclear — High

NEXT STEP: Map the current duties of key maintenance positions, identifying the deliverables, accountabilities and interfaces

4 **FINDING:** Contractor mobilisation occurs at various points in the organisation — Medium

5 **FINDING:** Critical spares availability is reported to be worsening, affecting maintenance execution efficiency — High

NEXT STEP: Scope the extent of discrepancies in Critical Spares provision

Asset Performance Measures

8 **FINDING:** Accountabilities and Performance Measures are either conflicted or unclear (Service Level Agreement, Budget responsibility) — High

NEXT STEP: Workshop the required outcomes and behaviors for the Maintenance Function. Translate into Key Performance Indicators

9 **FINDING:** PM completion is unsatisfactory, with the number and management of unplanned maintenance likely a major factor — Medium

NEXT STEP: Complete a structured Root Cause Analysis workshop to determine and rank all the underlying causes of this performance, including SAP usage

10 **FINDING:** Plant condition and equipment failure data is not being captured to SAP — Medium

NEXT STEP: Review SAP data to scope the size of this deficiency and run a Root Cause Analysis Workshop to determine the underlying causes

Data Systems

6 **FINDING:** Equipment data is missing for 70% of assets (Make, model, size) — Medium

7 **FINDING:** Cost reporting is carried out to a high level in the asset structure, limiting analysis — Medium

Summary

- **WorleyParsons NZ**
  - Experienced winery development engineers
- **Asset Management**
  - Ongoing process to improve and optimise
  - Keep looking for a better way
  - Make the most of what you have
  - Integrate with your business
- **D5 process**
  - Discuss and stay focused on business drivers
  - Diagnose
  - Dive
  - Deliver
  - Display
- **Any questions – adrian.stockill@worleyparsons.com**

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