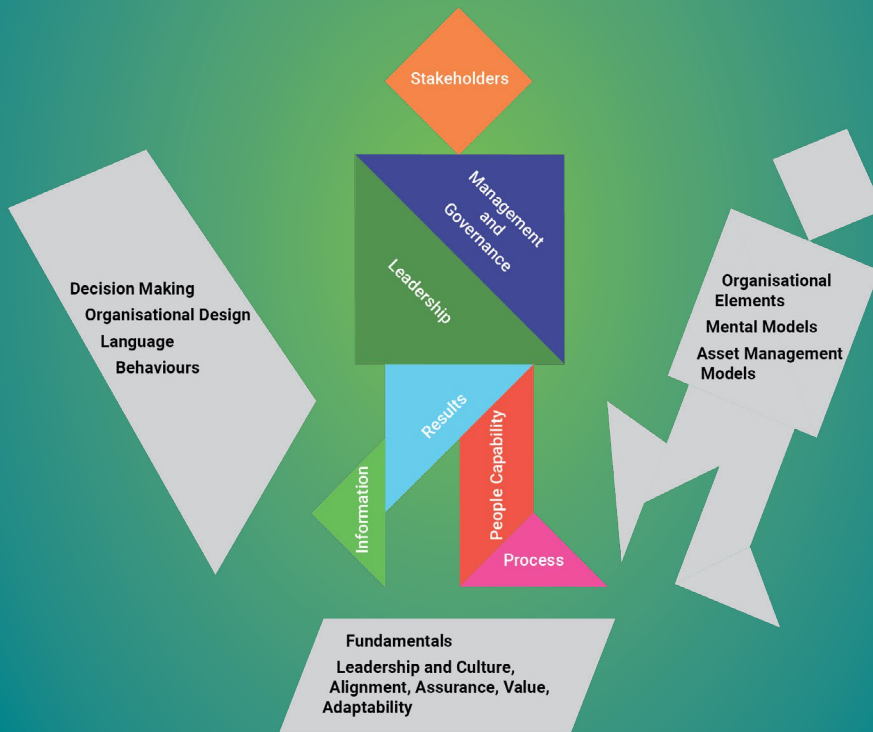




**LIVING ASSET
MANAGEMENT**

LIVING ASSET MANAGEMENT MATURITY



Written by John Hardwick, Martin Kerr,
Michael Killeen, Peter Kohler,
João Lafraia and Sally Nugent

Editors: Deryk Anderson and Sally Nugent

LIVING ASSET MANAGEMENT MATURITY

Related Publications

Hardwick, J. and Lafraia, J., *Living Asset Management*
Engineers Australia, Sydney Australia, 2013

Copyright

© John Hardwick, Martin Kerr, Michael Killeen, Peter Kohler, João Lafraia
and Sally Nugent and Living Asset Management Think Tank, 2020

This publication is copyright and apart from any fair dealing for the
purposes of private study, research, criticism or review no part may
be reproduced by any process without written permission from the
copyright owner and publisher of this book.

ISBN: 978-0-6481816-0-6

Published by Living Asset Management Inc
www.livingassetmanagement.com

John Hardwick, Martin Kerr, Michael Killeen,
Peter Kohler, João Lafraia and Sally Nugent

Editors:

Deryk Anderson and Sally Nugent



LIVING ASSET
MANAGEMENT

livingassetmanagement.com

Foreword

I was delighted to be given the opportunity to edit Living Asset Management Maturity. In doing so I was able to study closely the ideas and concepts that it presented. Like its predecessor, Living Asset Management, this book tackles the subject of Asset Management with a focus on subject matter that is insufficiently covered in mainstream literature.

In this publication six authors have come together with different perspectives of, and backgrounds in Asset Management to create a cohesive treatise on asset management maturity. Unified by a single notion that organizations would eventually outgrow a prescriptive approach to Asset Management, the authors have defined a framework for understanding and growing asset management capability.

The notion of asset management 'adaptability' presented in this book creates a compelling fifth Asset Management fundamental. A practical approach is evident throughout the book with constant attention to the business value of Asset Management and a pragmatic approach to understanding and improving asset management practices. Relevant content and case studies presented throughout the book demonstrate the applicability of the ideas and concepts to organizations. As with Living Asset Management, this book emphasises the role that leadership and organisational culture play in the success of improvement initiatives.

I must admit that not all the ideas and metaphors presented in the book were easy for me to consume. I found myself rereading concepts and ideas to consolidate my thinking as well as appreciating the difference in the views expressed in the book and my own views on Asset management. In challenging me as a reader, the authors have made learning a much more valuable experience than had I just read the familiar and mundane.

This book is a must read for people who are curious about the next stages of Asset Management growth, and those who just want to enrich their knowledge of Asset Management subjects.

Deryk Anderson

Brisbane, Australia, 2020

Foreword

Having thought about and applied the discipline of asset management for a number of decades, I was very happy to get to know the authors of this book while I was a board member of the Asset Management Council (Australia), representing SAP and its Asset Management line of business.

The publishing of ISO 55000 in 2014 represented a fundamental change in thinking about asset management, including its application to not only physical (tangible) assets but also intangible assets. The concepts laid out by the ISO standard did not, however, elaborate on how people, their attitudes and hence leadership as well as a supporting workplace culture can and do influence the asset management system and specifically, how the maturity of an asset management system can be rated and improved, to provide even further value to stakeholders.

While "Managing Assets" is not "Asset Management", "Management" does not equal "Leadership". Developing asset management leaders within an organization who aim to create followers for its set of principles and establish behaviours that promote the four Fundamentals of Asset Management, is a significant focus of this book. With the addition of "Adaptability", the authors establish a fifth Fundamental, describing maturity in asset management as the ability to change, in the light of changes in the ecosystem that surround any business.

This book is a logical and consequential advancement to the first book published by the authors of "Living Asset Management", enhancing the human perspective of asset management to include the journey of a living organization as a metaphor. It elaborates on concepts for assessing the maturity of asset management including quite a few practical examples and case studies.

From my point of view, the authors provide the missing link between a technical understanding of asset management and leadership theory, to now include the behavioral sciences.

I would recommend this book to anyone who is trying to identify how to further enhance the value that asset management provides.

Dr.-Ing. Achim Krüger
President EMEA
Rizing Enterprise Asset Management

Frankfurt, Germany, 2020

Preface

The authors propose a fifth Asset Management fundamental, called adaptability, to support the notion of Asset Management Maturity. The benefits of Asset Management Maturity are explored, and the states of Asset Management Maturity defined by way of an adaptative maturity model.

The Living Asset Management Think Tank Inc. was formed in 2015 with the purpose to think, read, discuss and write about Asset Management as a vital tool for global wellbeing and wealth.

Asset Management is the coordinated activity of an organisation to realise value from assets. (ISO 55000, 2014) It is essential to understand that Asset Management Maturity is primarily a leadership and business function for sustainably improving business performance through extracting value from assets. The technical and process components of Asset Management support this function. In other words, Asset Management Maturity is about both an organisation's management system and its people's behaviour. People need to understand the criticality of the human component for Asset Management Maturity. The focus on the human component of Asset Management Maturity is most critical to achieve organisational health. Leadership, behaviours and culture are the focus of Living Asset Management and remain the least understood and adopted. (LiAM, 2013) The typical difference between a high performing organisation and one that is not as high performing are its people.

Since 2015, the authors of and contributors to *Living Asset Management* have discussed and debated Asset Management Maturity. Between them, the authors have more than 200 years' experience in Asset Management and in business management across a range of industries including manufacturing, energy, transportation and mining. Discussions were based on the work published in *Living Asset Management* and had the objective of assisting organisations to be successful. For this objective, two goals were pursued:

1. To more thoroughly understand and determine the fundamentals and concepts underpinning Asset Management Maturity; and
2. To publish our collective expertise, so that it could be shared and more broadly debated. As one of our team members said, "Publications are how you share ideas".

The authors hope that in reading this book, the reader will have several takeaways. The authors have certainly gained enormously during the years of discussion and debate. In most cases, they have reached consensus on the material presented in this publication. The authors have certainly greatly enjoyed the collaboration and sharing and are looking forward to the comments and feedback on our work that readers will undoubtedly have.

This book builds on the foundation of *Living Asset Management* to explore concepts in asset management maturity. Asset Management Maturity is defined, and the question posed:

are the four fundamentals of asset management, described in ISO55000, sufficient to form the basis for understanding of, and assessing Asset Management Maturity"

The authors propose a fifth Asset Management fundamental, called adaptability, to support the notion of Asset Management Maturity. The benefits of Asset Management Maturity are explored, and the states of Asset Management Maturity defined by way of an adaptative maturity model. A method for Assessing Asset Management Maturity is described in detail and stepwise advancement through maturity stages proposed. As is the case in *Living Asset Management*, the impact of Leadership and Workplace Culture on Asset Management Maturity is significant. Language and communication styles are explored from Strategic, Tactical and Operational Perspectives.

The strong practical basis of this book reflects the business and organisational experiences of the authors and case studies from around the world are used to illustrate the concepts within.

The capability to implement Asset Management and achieve Asset Management Maturity will grow with personal or individual wisdom. Each of the authors has experienced several 'aha' moments during our discussions, and our personal wisdom has grown with our understanding of Asset Management Maturity concepts, just as our understanding of Asset Management Maturity has grown with our own personal growth.

This highlights another key takeaway. Asset Management Maturity is a journey and like every journey, to arrive at a destination, in this case a desired Asset Management Maturity, each step needs to be walked. There are no shortcuts to Asset Management Maturity. Leaders must realise that people notice how leaders walk, not how they talk. The key difference between a high performing organisation and one that is not as high performing is the mindset of its people.

As part of succeeding on this journey, it is important to realise that there is different thinking and language and needs related to Asset Management and Asset Management Maturity depending on an individual's position within the organisation, and the state of maturity already obtained. The Asset Management Maturity journey will require a challenge to the status quo and a change of Asset Management paradigms. The ISO 55000 series of Asset Management Standards may even become restrictive over time.

And finally, for the best understanding, *Living Asset Management* and *Living Asset Management Maturity* should be viewed as companion publications.

Using Asset Management Maturity for Success

Asset Management is primarily a tool to leverage value from an organisation's assets. Asset Management Maturity boosts and sustains value created by Asset Management.

Companies that wish to adopt Asset Management need to stop working on the asset and let it work for them. This is only possible with a deliberate preventive and proactive action which promptly maintains the reliable operation of its assets. Failures often happens without warning, with no sign that something is wrong. When companies do not adopt innovative methodologies to detect their failures, they are embedded in a reactive process.

The downward spiral guided by a 'break-fix-break-fix' cycle ends up in the exacerbated consumption of resources and talents. In such cases, companies begin to realise that everyone in the organisation is directing efforts on the wrong path, that consumes only, and does not generate value. Therefore, having proactive and predictable knowledge is the best approach, because it generates reliability, revenues and proper control of expenses. Additionally, in many cases, failures are the causes of organisational accidents that may bring great losses to companies. Therefore, applying Asset Management has been a major challenge for organisations with respect to the integrity, reliability, and safety aspects of both assets and people. By adopting Asset Management, companies make it possible to effectively coordinate the results of assets. The positive impact of this is the prevention of failures and unwanted effects.

For a mature Asset Management implementation in organisations, this publication visualises three stages of application.. The first stage is the implementation of hardware factors, equipment, protection barriers and technologies built to prevent accidents and improve reliability. The second stage is the application of management systems, practices and procedures that act on human factors, such as; training, qualification and software development. The third stage is the understanding of the impact that culture has on people's attitudes and behaviour, and the role that leadership plays in this. This third stage is considered to be essential; disregarding this stage in Asset Management can lead to high costs due to the massive application costs of the other two stages.

Furthermore, as far as Asset Management Maturity is concerned, the relationship between culture, leadership, and behaviour is critical. Understanding the culture of a country, or of a company is fundamental when applying Asset Management. The authors believe that two myths must be broken so that this process is fulfilled with maturity and excellence. The first myth is that a management methodology developed in one country or company will automatically work in another. It doesn't work this way. Culture heavily influences the understanding of Asset Management practices. Therefore, it must be adapted to the local culture. The second myth is that organisational culture can be changed quickly by just changing people and management methods. Organisational

culture is stable. It resists change because what creates it is the interaction between people. After a long period of time, these relationships become a culture and spread in all areas of the company and in all hierarchy levels. Organisational culture is not a guided process, it is built together amongst people.

This publication can also assist in determining the competencies for senior level executives working in asset intensive organisations. Unlike the more intangible asset organisations, such as financial or branded ones, the tangible asset managers need to develop competencies on the technical and managerial skills required during asset life cycles. These competencies have direct impact on the way that assets are designed, built or acquired, operated, maintained and discarded or renewed. A mine or refinery, for example, which can last 50 to 100 years at the same location, needs to have leaders with a bank of competencies to manage all of the processes listed above.

The difference in the organisation's asset portfolio must influence the competencies and capabilities needed at all hierarchy levels, from the Chief Executive Officer, to the shop floor personnel. The way that these assets are managed needs to be aligned with the organisation's culture and consider the communication speed and quality of interactions necessary to keep up with the asset's nature and response. Therefore, competencies and capabilities should be dealt with according to the dynamics of each organisation's asset portfolio.

The case studies presented in this publication demonstrate how value can be created, increased and sustained. The case study examples include increased profitability through improving equipment and organisational reliability, which in turn impacts share price and often financial incentives. Safety outcomes are also usually improved. A collaborative culture enabled by Asset Management Maturity invites innovation, challenge and convergence amongst stakeholders:

- Each activity and task of every plan implemented by the organisation is individually necessary and collectively sufficient to meet the stakeholder' needs.
- Seamless alignment and integration of the management system is required including people, processes and technology.
- Both individuals and organisations actively engage in learning, resulting in increasing levels of awareness about Asset Management issues all leading to new (to the participants) and transformative insights.
- The organisation continually achieves its organisational and Asset Management objectives or outcomes because of, and as a result of, the application of its management system.
- Behaviour is understood as a key determinant of success and is treated as such.

This publication examines how the fundamentals of Asset Management play out in the

different Organisational Elements, and how the interrelationship between the different Organisational Elements impacts the overall outcome, both in the short and in the long-term.

Asset Management Maturity is not just about any one group within an organisation doing the right thing; the entire organisation must be aligned to the fundamentals of Asset Management. Asset Management Maturity must assess not only Asset Management performance but how Asset Management fits into the broader organisational context.

The vision of organisations that achieve Operational Excellence is that excellence is an inextricable part of the business. It is visible from all angles and permeates all processes (products, specifications and even marketing). Operational Excellence in the organisational environment, as the philosophy, as the vision and the mission, exists because it adds value to the organisation. This vision of Operational Excellence is that reliability, safety and Asset Management must be part of design, construction, operation, maintenance and replacement of all assets. In this highly competitive environment, many successful organisations have achieved this stage.

The vision of organisations that achieve Operational Excellence is that excellence is not only inextricably part of the business but that the continued achievement of excellence is dependent upon the ability of the organisation to identify and manage significant and disruptive events.

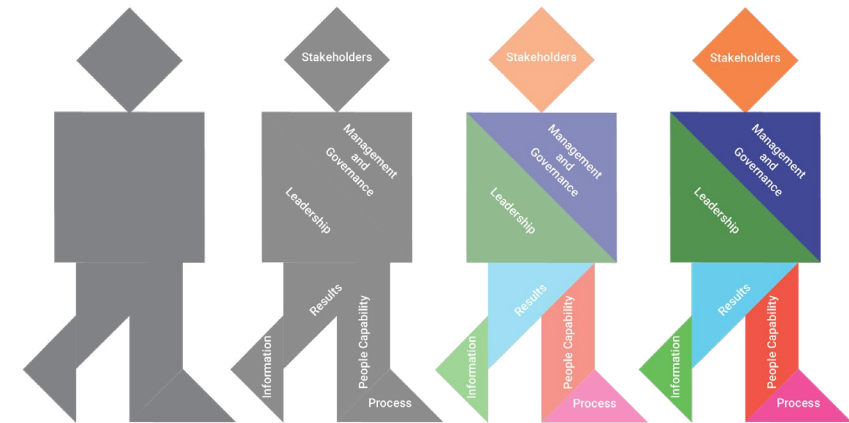
Fulfilling an organisation’s vision is a journey, and every journey is different. As an organisation increases its Asset Management Maturity, moving from Instinct to Interdependence, it delivers more value. This value may range from safety and reliability to increased productivity and delivery of shareholder income.

Characteristics of this journey typically include:

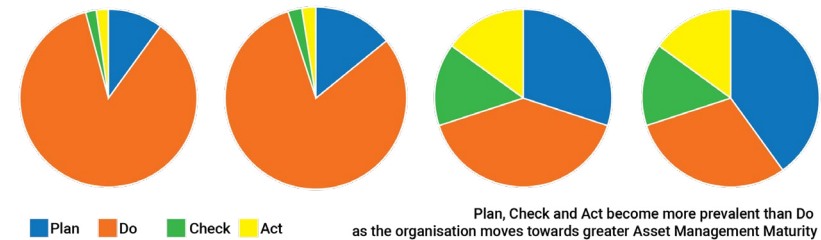
- Increasing clarity and awareness of Asset Management both holistically, and from differing aspects;
- Moving from no collective values and norms to intrinsic ethics;
- Leadership becoming a process, in all layers of the organisation
- Increasing levels of planning, checking and acting, compared with doing;
- Increasing exercise of ‘control’; and
- The need to relearn behaviours and concepts to grow in the journey.

This journey is depicted on the next page.

Characteristics of an Asset Management Journey



Clarity and awareness of Asset Management, values, and roles and team work increase with increasing Asset Management Maturity, and leadership moves from autocracy to being shared across all layers of an organisation.



Plan, Check and Act become more prevalent than Do as the organisation moves towards greater Asset Management Maturity

