



ORGANISATIONAL INTEGRITY

ORGANISATIONAL INTEGRITY EMBEDDED IN ASSET MANAGEMENT –
A KEY SUCCESS FACTOR FOR INDUSTRIAL COMPANIES

STORK

A Fluor Company

INTRODUCTION

ABSTRACT

Realising organisational integrity is a requirement to enable industrial companies to put their business values into practice. Organisational integrity must be integrated in the way companies operate and how they manage their facilities and assets. The challenge is to install an 'organisational integrity' culture in which integrity is embedded in the systems and embodied in the people.

INTRODUCTION

Industrial companies are committed to deliver excellent safety, health and environmental performance, while at the same time operating profitably. But despite this commitment, there are many examples in which hazards have turned into major incidents. How can this be prevented? A key success factor in a company's ability to operate safely and efficiently is to ensure that each individual with a stake in asset integrity truly understands the core concepts of effective integrity management, and how their actions and decisions can have a decisive impact.

ORGANISATIONAL INTEGRITY

Integrity [1] is 'the quality or state of being':

- Complete, unbroken condition, wholeness,

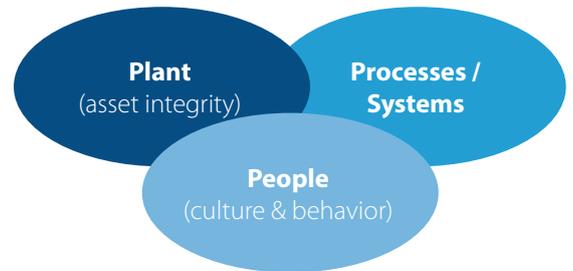


Figure 2: 3 P's

entirety: integrity looks at the whole picture, not just a single part of it. Completeness also includes 'assuring consistency over all the integrity elements'.

- Unimpaired, perfect condition, soundness: for example asset integrity – the perfect condition of an asset to perform and meet the defined requirements.
- Sound moral principle, uprightness, honesty, sincerity: This meaning refers to human integrity – act according to a personal set of values, beliefs and principles.

In the industrial context, the broad definition of organisational integrity is used: Integrated, consistent approaches and behaviour leading to 'knowing what are the right things to do and doing the right things'.

Organisational integrity is intrinsically linked to company culture, human factors and processes, systems and practices (see figure 2)

	NARROW	BROAD
HUMAN INTEGRITY	<ul style="list-style-type: none"> • Acting according to a personal set of values, beliefs and principals 	<ul style="list-style-type: none"> • The alignment between what "one does and one says"
ORGANISATIONAL INTEGRITY	<ul style="list-style-type: none"> • No corruption • Code of conduct • Compliance management 	<ul style="list-style-type: none"> • Integrated, consistent approaches and behaviours leading to "knowing what are the right things to do and doing the right things"

Figure 1: Human and organisational integrity

ORGANISATIONAL INTEGRITY

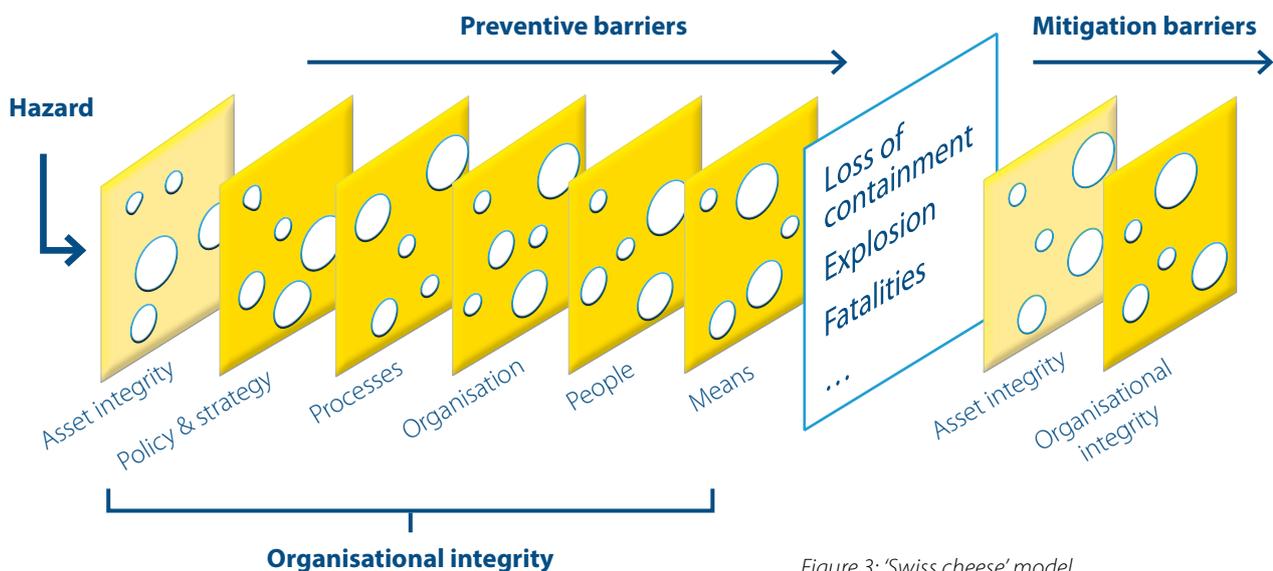


Figure 3: 'Swiss cheese' model

INTEGRITY IN INDUSTRIAL COMPANIES

Industrial companies need to manage a complex portfolio of risks, including financial, commercial and other risks. Many of these risks are associated with the operation and management of their facilities and assets. These risks can lead to minor or major incidents potentially impacting several company's business values (Safety, Security, Health & Environment, profitability, customer delivery, asset lifetime, image...).

The root causes of these incidents, as well as those related to the assets themselves, also include organisation-related factors (organisation not ready, a lack of means, undesired behaviour tolerated by management, inadequate procedures...).

To prevent these potential causes from actually leading to incidents, companies have to install preventive barriers. These barriers can be both asset-related and organisation-related.

If despite the barriers a hazard still turns into an incident, mitigation barriers at asset and organisational level are needed to minimise the impact of the incident.

These barriers are presented in the 'Swiss cheese' model.

ORGANISATIONAL INTEGRITY AND ASSET MANAGEMENT

The overall Asset Management goals contribute to the company's business values. Safety, Security, Health, Environment and Quality are fundamental requirements for the assets and Asset Management are crucial for business continuity. Vital factors are a company's image and its 'licence to operate'.

The quantity of products (or other asset delivery) needs to be assured, and the associated cost level will contribute to the company's profitability. Operational excellence requires measures to avoid losses (e.g. energy) and to optimise the conversion process (from input to output). Industrial companies need to make sure that the way they operate takes into account the long term implications. This requires attention for sustainability – of the company's operations, but also for the environment and for society at large. It is also essential to face the future and prepare for it. For example, how to deal with new technologies and energy resources?

This demands an innovative approach to Asset Management. From a holistic point of view the Stork Asset Management Model distinguishes 5 main capabilities necessarily to achieve the Asset Management (AM) goals:

ASSET MANAGEMENT

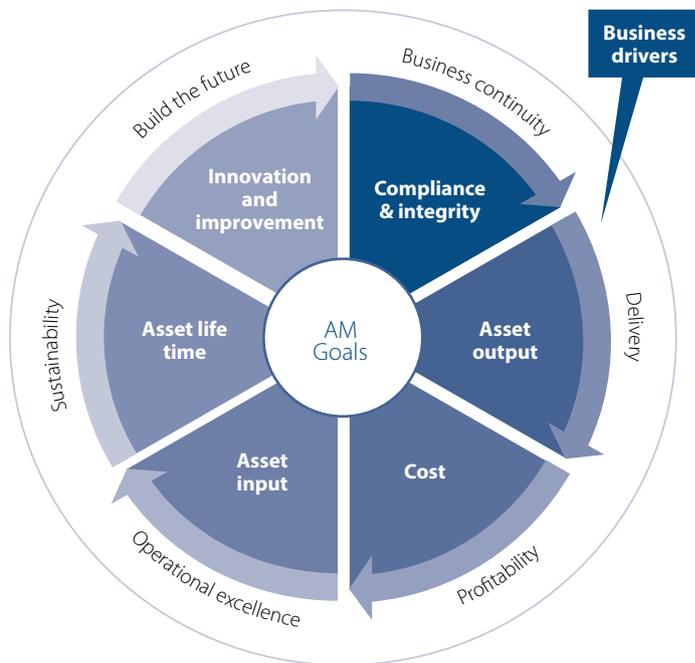


Figure 4: AM goals contributing to business values

- AM policy and strategy: the direction of AM, why do we need AM, how will we direct AM, what principles we will apply, what is our long-term vision and strategy?
- AM Processes: Implement management, control and support, AM core and improvement processes and execution activities.
- AM organisation: Establish an organisation with clear responsibilities and authorities which is able to execute the defined processes and activities.
- People: Staffing the organisation with people with the required competences, behaviour and leadership capabilities.
- Means or infrastructure: the appropriate tools (including hardware and software) and infrastructural needs.

Comparison of the AM goals and AM capabilities with the definition of integrity and the broad definition of organisational integrity shows:

- Wholeness: the AM approach is holistic and systemic
- Soundness: Assets and AM need to be in perfect condition to contribute to the business values
- Honesty, uprightness: the behaviour and culture are crucial for the realisation of AM
- The broad definition: Integrated, consistent

approaches and behaviour leading to 'knowing what are the right things to do and doing the right things'. This is a fundamental requirement of Asset Management.

Conclusion: The interpretation of 'integrity' is very broad. However the connotation and the focus (related to the operation and management of assets) are oriented to 'safety, security, health and the environment'. This focus is also crucial in Asset Management; otherwise there will be no Asset Management and no business. The Asset Management goals are broader, but if the broad definition of organisational integrity and the broad interpretation of asset integrity (perfect condition) are used, we could say that Integrity Management is very much associated with Asset Management. Integrity is part of AM, and good AM is part of Integrity Management (or vice versa).

IMPLEMENTING AND MAINTAINING ORGANISATIONAL INTEGRITY.

Figure 5 shows a roadmap for the implementation of organisational integrity. What values and derived behaviour does a company need to drive its business? These values form the compass and the reference for the behaviour of people and of the organisation itself. Leadership is crucial in introducing, implementing and maintaining these values. Leaders and managers must set the example, and they must be committed. There is no integrity without excellent leadership, and there is no excellent leadership without integrity.

Managers and leaders must communicate and spread these values through the organisation, and by doing so they must drive the desired behaviour. The whole staff needs to know and understand what 'integrity' means for them, and what is expected from individuals and from the whole organisation. The integrity management system provides the framework for the working of the organisation – it defines the vision but also the desired codes of conduct relating to policy & strategy, processes, organisation, people and resources.

IMPLEMENTATION

The executions of activities and decisions must be in line with the integrity requirements. Supporting and controlling this are the responsibility of management.

The risk management approach supports the whole process, and is the backbone of organisational integrity.

The implementation of this roadmap leads to an organisational integrity culture in which integrity behaviour is embedded in the processes and embodied in the people.

RISK MANAGEMENT SUPPORTS INTEGRITY

Risk management is the identification, assessment and prioritisation of risks, followed by the coordinated and economic application of resources to minimise, monitor and control the probability and/or impact of unfortunate events or to maximise the realisation of opportunities [2]. Risk management supports the implementation

and realisation of organisational integrity by:

- Understanding the complex portfolio of risks (risk identification)
- Determining the measures and actions to prevent incidents (risk assessment)
- Supporting the decision-making process – are we doing the right thing (risk evaluation)?
- And as approach to help evaluate the effectiveness of the organisational integrity (monitor and review)

THE HUMAN FACTOR: VALUES AND BEHAVIOUR

The importance of people in ensuring organisational integrity is embedded in the definition: Integrated, consistent approaches and behaviour leading to 'knowing what are the right things to do and doing the right things'. Human 'integrity' behaviour and knowledge are requirements to ensure the required 'organisational integrity culture'.

Culture can be defined as 'The actual behaviour of employees of an organisation, which derives from a

Organisational integrity culture

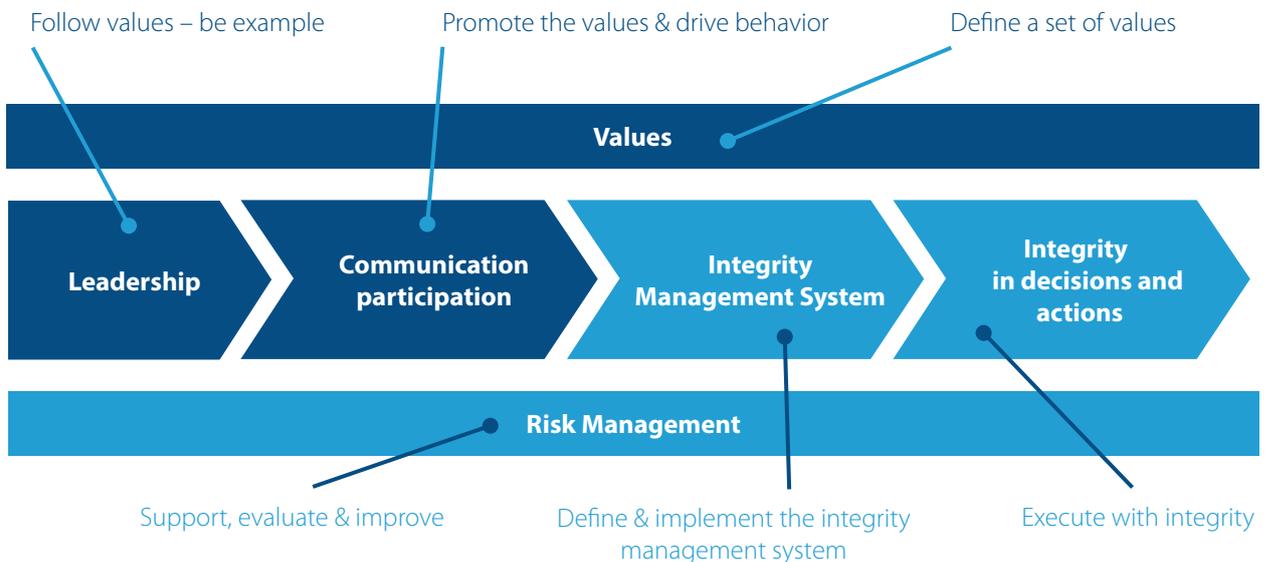


Figure 5: Road map for the implementation organisational integrity

THE HUMAN FACTOR

system of implicit and explicit assumptions, values and norms' [3]. Culture is something that is inherent in a group of people. It is made explicit and will be experienced by collective behaviour. It is realised through communication and co-operation between people. It is and will be learned, so it can be changed.

A company therefore needs first to express what organisational integrity behaviour they want. Many examples show how human integrity has come under pressure from the organisational culture. The group is 'used to' acting in this way (for example deceiving customers, charging them for not delivered services) it has become 'common behaviour'. The person in question can no longer act in line with his own personnel integrity. And as a company we would probably also like to behave differently.

As in the stated definition: (integrity) behaviour has evolved from implicit and explicit assumptions, values and norms. So if we want to clarify the desired culture, we need to start by defining the values appropriate to our company and business.

Values are the fundamentals for the desired culture – they form the ethical compass. Values can be found in different forms, and can be more or less well defined. Some examples are:

THE HUMAN FACTOR: LEADERSHIP

When a company has made clear what values it wants, and if it has made these value even more explicit in codes of conduct, these then need to be introduced and maintained.

The company's managers and leaders have a vital role to play. Leadership is the process in which one person affects another (influence) to reach a certain target; in other words 'getting things done through other people'.

Implementing organisational integrity brings with it a number of leadership requirements:

- Leaders must set the example, otherwise organisational integrity can never be successfully implemented. As Eisenhower stated, 'the supreme quality for leadership is unquestionably integrity'.
- Leaders have to encourage others to follow these values; they need to spread the message and promote the values. Their leverage effect in introducing and maintaining integrity is crucial.
- Leaders need to reward people who act with integrity, but they also need to correct those who don't. If they don't do this we will never end up with an organisational culture.

Leaders needs to follow the values (obviously). They have to set the example in integrity behaviour. Their leadership style needs to encourage people to follow the values and behave with integrity.



Figure 6: Examples of values

Value

Leadership style (mirror)

Put safety always first	Drive commitment and accountability for safety
Get results and sustainable growth	Demand excellence
Learn all the time, improve continuously	Be persistent
...	...

Figure 7: Values and leadership styles

What are the requirements for the leaders next to the values? You could say that the requirements for leaders are the mirror function of the values.

This approach makes it very clear what behaviour and what type of actions are needed from managers. They must follow the values and apply the leadership principles by demonstrating commitment and personal accountability.

Leaders and managers needs to reward those who act with integrity and to correct those who don't. How can they do this? They have to find a leadership style that supports and nurture people in implementing and maintaining their integrity behaviour. And on the other hand they have to correct or direct people who are not willing or able to behave with integrity.

The problem is that there is No one 'Best Leadership Style' [5]. Successful leaders adapt their leadership styles to the needs of the situation. The 'Ken Blanchard Companies' Situational Leadership II Model' distinguish four leadership styles (combinations of level of directive and supportive behaviour): directing, coaching, supporting and delegating. Leaders needs to know when to use each style. The decision is primarily a function of two variables: the degree of difficulty of the task and the development level of the person doing the task.

This model can also be used to introduce and maintain values and organisational culture. If people don't know what the organisational integrity requirements are but they are committed, we can be quite directive in

telling them to follow. If they are less committed, we need to coach them and 'sell' them organisational integrity. As their competence increase we need to support them, and if they have high competence and high commitment we can delegate and observe how they apply integrity in their daily business.

THE HUMAN FACTOR: COMMUNICATION AND PARTICIPATION

The values and expected behaviour must be communicated, and the participation of the whole organisation must be ensured. How can we influence and/or change the values of the people? Studies show that interventions first influence behaviour, and then later on attitude. Introducing 'integrity' behaviour and culture requires interventions, interventions and more interventions. If a company wants to introduce safety behaviour, it needs to undertake interventions and implement actions that promote safety. The important point is that people really feel that the value statement is not only 'expressed', but that the value is really translated into actions. Not only in words or – as in many case – on a 'values' poster at the entrance to the headquarters.

Specific programmes can be set up to support the introduction or maintenance of the values. These can include awareness programmes, training programmes and change management



Figure 8: Interventions and behaviour

programmes, but also ongoing actions. The story has to be told and retold. The results need to be shown – not just when they are positive, but also where improvements are needed. They must be reported so that everyone in the company knows them, and everyone in the company knows that everyone knows them. From senior management to shopfloor; everyone has to be involved. The desired values needs to be introduced and integrated in the company's everyday business. They must be integrated in meetings, for example start every meeting, every presentation, every report, every communication and so on with safety. By making a lot of interventions, supported by the right leadership style, the behaviour will change and the desired values will be introduced. There are four stages of behavioural change:

The first stage is unconscious incompetence: You don't know that you don't know. The person is not aware that he is supposed to know it. He is not aware of specific requirements for the treatment of products and/or assets. So as a company you have to make the people aware of the requirements or of the desired behaviour. The second stage is conscious incompetence: You know that you don't know. The person is becoming aware that he doesn't know the requirements. There is an awareness of

incompetence. So probably the person is interested to become competent. The third stage is increasing competence: I'm aware and I am becoming competent. I have followed training and I am gaining expertise. Finally, then the last stage is when people are no longer (actively) aware that they are competent. The behaviour is so obvious and embedded that it becomes more or less instinctive. For example I always take decisions based on facts and figures – I never present something without a good analysis; safety behaviour is so obvious that I always put safety first. This final stage is what we want to become if we want to introduce values. In this stage, behaviour leads to an attitude, and it becomes an intrinsic value.

When we have achieved the introduction of the desired behaviour and values, people will participate in maintaining and promoting these values. And more or less related to the previous paragraph, in which we stated that the behaviour becomes an instinctive reaction, we also want participation to shift from conformity with (externally imposed) standards to self-governance according to the defined culture and/or standards. So if we go further on this journey of introducing and maintaining values, we hope that we will find out that people instinctively show the desired

Unconscious Incompetence	Conscious Incompetence	Conscious Competence	Unconscious Competence
Don't know that you don't know	Know that you don't know how	Know that you know how	Instinctive – no thought required

Figure 9: Four stages of behavioural change

INTEGRITY MANAGEMENT SYSTEM

behaviour and that they will self-govern in accordance with the desired culture.

THE HUMAN FACTOR: COMPETENCY AND SKILLS

A company needs to be very clear about the responsibilities, authorities and the competence and skill requirements related to the job content, but also the specific behaviour requirements, in addition to the company values. This starts with the role description, and derived from it the target profile. We make an assessment of the actual competence and skill level and describe the gap. Then we need to undertake the required actions to close that gap. We can take actions through training, coaching etc., or if we do not have the required capabilities we can choose to hire them from outside. So competence management is more than defining roles, it is about closing the gap and implementing the appropriate actions. A very important element is casting: 'The job content must fit with the capabilities of the people' and vice versa. People need to have the required competences and skills in all their interactions with the assets and with the management systems used in their working environment. For example knowledge of and competency on

- Products, processes, assets, operational safety and health & environmental risks
- Process control
- Alarm and contingency plans
- Working practices (e.g. standard operating procedures, management of change procedure)
- Work clearance management
- Job content / work scope
- Authorisations and responsibilities
- ...

INTEGRITY MANAGEMENT SYSTEM

The integrity management system describes the integrity policy & strategy, the overall architecture, the processes and the organisational requirements. We will further on also use the terms Asset Management, asset management integrity, asset integrity management and operational integrity

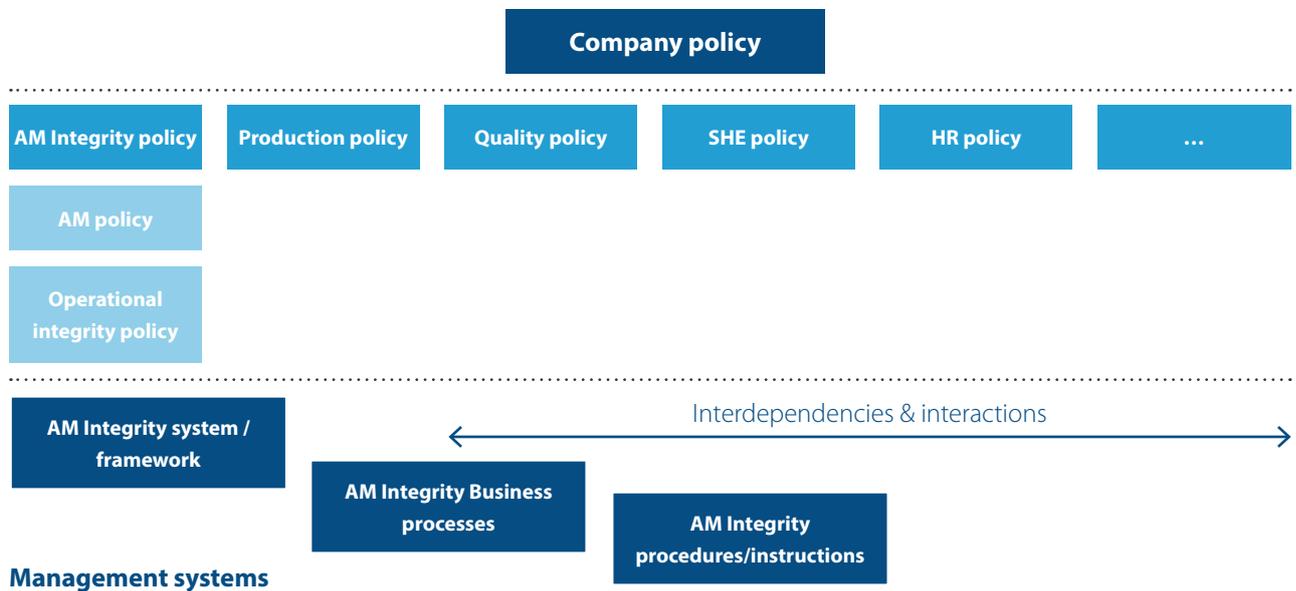
for 'organisational integrity', because these also imply that we know what are the right things to do and that we do the right things. These terms always include the risks related to the operation and management of the facilities and assets. And they also include attention for safety, health and environmental goals, although the scope and focus can also be extended by the other goals. A lot of companies have integrated their organisational integrity requirements in these systems: in an AM system, AM integrity management system or an operational integrity management system. So when we refer to AM this always includes asset integrity and organisational integrity.

INTEGRITY MANAGEMENT SYSTEM: INTEGRITY POLICY AND MANAGEMENT SYSTEM

The importance of a policy is

- The policy and strategy provide a framework, and create the direction for the company or organisation to follow
- In a fast-changing environment, the policy serves as a point of reference (a compass)

A Policy is a 'Statement of Intent' or a 'Commitment'. The policy must provide principles and guidelines for governing the company, and it defines the direction and limits within which decisions are made. There are many ways to express a company's policy. It can be stated explicitly in the mission, vision, overall goals and principles and guidelines. In simple terms: the Mission is the organisation's *raison d'être*, and the Vision is what it wants to be. Other elements to clarify the policy are its Goals: what does the company want to achieve? The Values are what we expect from our people. In many cases the policy is extended by business or strategy principles and statements: what business principles do we need to follow to achieve the defined vision and goals? Derived from the overall company policy, many (internal) policies are defined: for example relating to production, quality, safety, health & environment, HR etc. We also need to integrate the asset and organisational integrity requirements in some kind of system. These can be integrated in an asset management integrity or



Management systems

Figure 10: AM integrity policy and AM integrity management system

asset integrity management policy. They may have other names such as Asset Management policy or operational integrity policy. But as already stated, we need to describe the policy related to 'how' we want to operate and manage our facilities and assets to assure integrity, and more broad reliability. The integrity policy needs to mention at least the principles of integrity and the requirements to assure it. This policy must also be 'in line' with the overall company policy. The interdependencies and interactions with other policies must also be assured – especially with the SHE policy. But also with the Human Resource policy to ensure the necessary minimum level of training so people have the right competencies and skills to meet the integrity requirements.

So how do companies want to operate and manage their assets during all their life-cycle activities? How are they going to work? They need to describe this as clearly as possible. The way in which the facilities and assets are managed and operated has to be described in a management system. What is a management system?

- A management system is a set of interrelated processes, practices, procedures and instructions, and includes organisational structure, roles and responsibilities. [6]
- A management system is the framework or architecture and the set of procedures an organisation needs to follow in order to meet the objectives [7].

Most management systems consist mainly of three

important layers. The framework layer or the architecture is how the company looks at asset integrity management. This framework or architecture needs to be translated into process flows together with the associated responsibilities, and these need to be translated further on into corresponding procedures and instructions. It is also important to carefully describe the scope of the asset integrity management system and its interdependencies and interactions with the other management systems. You need to check that there are no conflicts between all these systems. There are several different Asset Management, integrity and/or asset integrity management systems. The PAS55 – publicly available specification of the British Standards Institution (BSI) describes the specification and the requirements for an Asset Management system. These specifications and requirements are also used for the ISO 55000 norm for Asset Management. Like every management system it includes the PLAN DO CHECK ACT circle, with its continuous improvement cycle. At Stork we have developed together with our customers a 'field proven' Asset Management system. This system is in line with the requirements of PAS55 and ISO55001, and is applied in different industries. The importance of the system is that they provide guidance to employees and managers in ensuring that they know which rules and requirements they have to follow. Your Asset Management integrity management system can for example be linked to the ISO 14001 environmental norm. It is probably

CONCLUSION

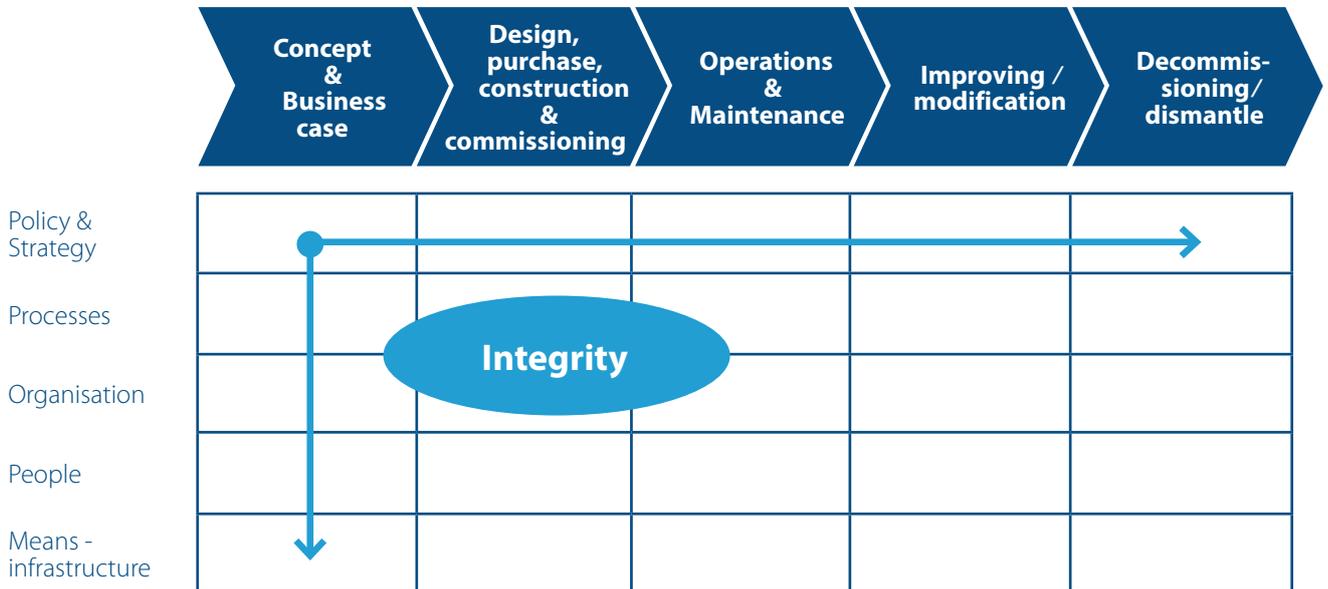


Figure 11: Integrity during the asset life cycle

also linked to OHSAS 18000 – the international occupational health and safety management system specification. It can be linked to the ISO 9001 norm, and it can refer to the requirements of the ISO 31000 risk management norm. In the future your Asset Management integrity system may meet the requirements of the ISO 55000 norm on Asset Management.

INTEGRITY DURING THE ASSET LIFE-CYCLE

Integrity requirements needs to be embedded in all the asset life-cycle activities in relation to the five main capabilities of Asset Management: In the different asset life-cycle activities other processes, other organisational structures, other competencies and skills and other means will be applied. But they all need to integrate barriers in order to prevent incidents and/or mitigate the impact of potential incidents.

CONCLUSION

Today companies must meet new challenges every day. The world is evolving rapidly. Our assets need to create value in order to meet the company's objectives. A high Return On Capital Employed is necessary to realise added value for the shareholders. Excellent safety and environmental performances are a essential to gain and maintain the License to Operate. Assuring asset and

organisational integrity are both a prerequisite for industrial company's sustainable and profitable future. In most companies many different processes, tasks and roles required in the context of Integrity and/or Asset Management are already present. To really integrate the different functions and make them work together towards the same goal, there must be a clearly defined (Asset) Management system covering all aspects. The integrity culture has to be embedded in this Asset Management system and has to be embodied by the people working in the company. This all requires the implementation and deployment of excellent Asset Management capabilities. Professional Asset Management is essential for a company that wants to consistently achieve world-class performance standards.

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