Case Study of Successful ISO 55001 Implementations
(a Dutch perspective)

Robert van Grunsven Sr. Consultant

ISO 55001 Management System Structure

4 Context of the Organization
4.1 Understanding the context
4.2 Needs and expectations of stakeholders
4.3 Scope of the AMS
4.4 Asset management system

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10.1 Nonconformity and corrective action
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Webinar 1: Generic AM Implementation and ISO 55001 Certification Approach

Steps to Getting ISO 55001 Certified

1. Make a decision about your approach to ISO 55000
2. Do an initial assessment (full Asset Management, not just ISO 55k)
3. Develop an AM policy, strategy, objectives, performance measures and plans
4. Design and implement the rest of the asset management system
5. Implement AM best practices and collect records (“in use”)
6. Do pre-assessment based on ISO 55001 criteria and address shortcomings
7. Get external ISO 55001 certification

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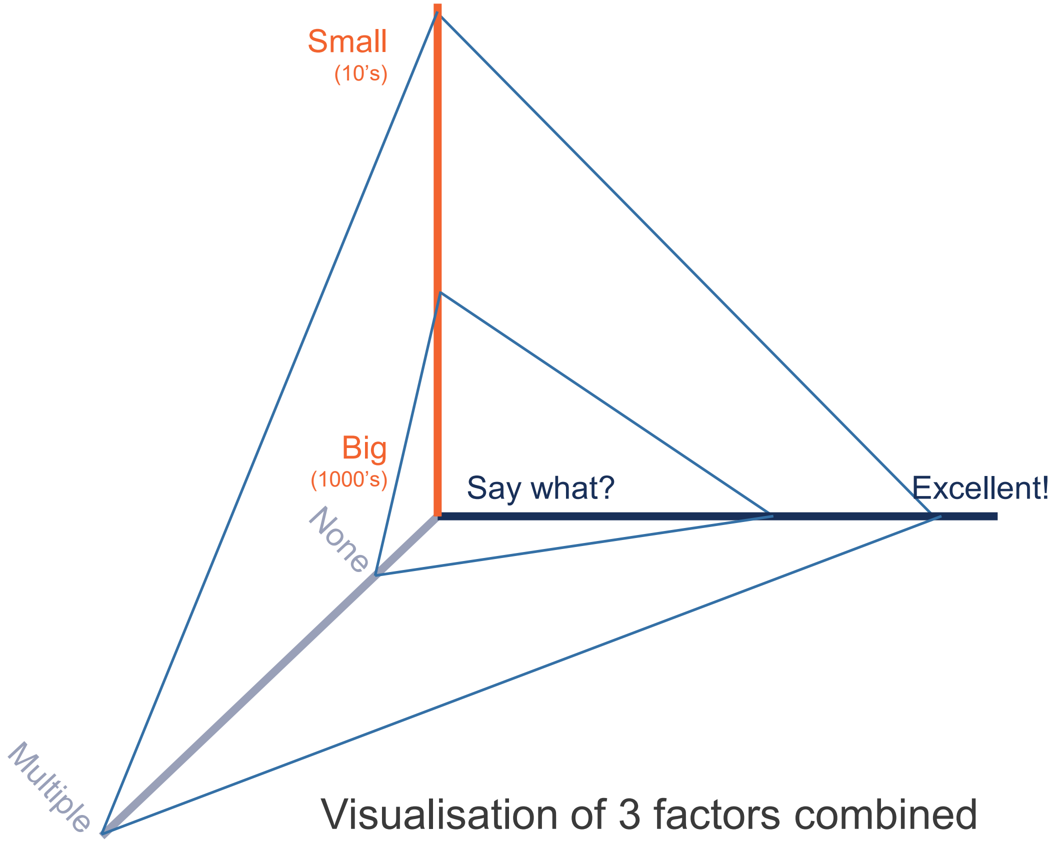
3 Determining Factors in how 'Easy' it is to Certify Against ISO 55001

1. Size and diversity of the organisation/ service area/ asset portfolio

2. Knowledge (of already in place) asset management principles, approach, methods: <u>AM Maturity</u>

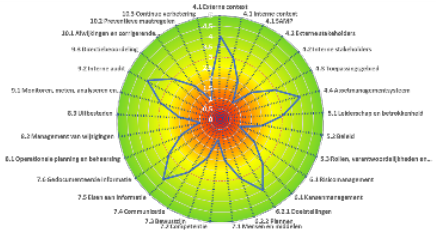
3. Knowledge of and other (ISO) management systems in place

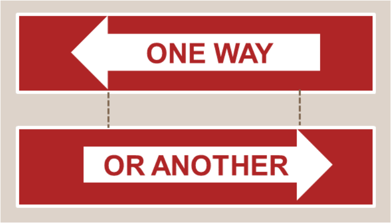


Visualisation of 3 factors combined

The 'cubic content' gives an indication about the 'ease to implement

Approaches to Organise ISO 55001 Implementation and Certification



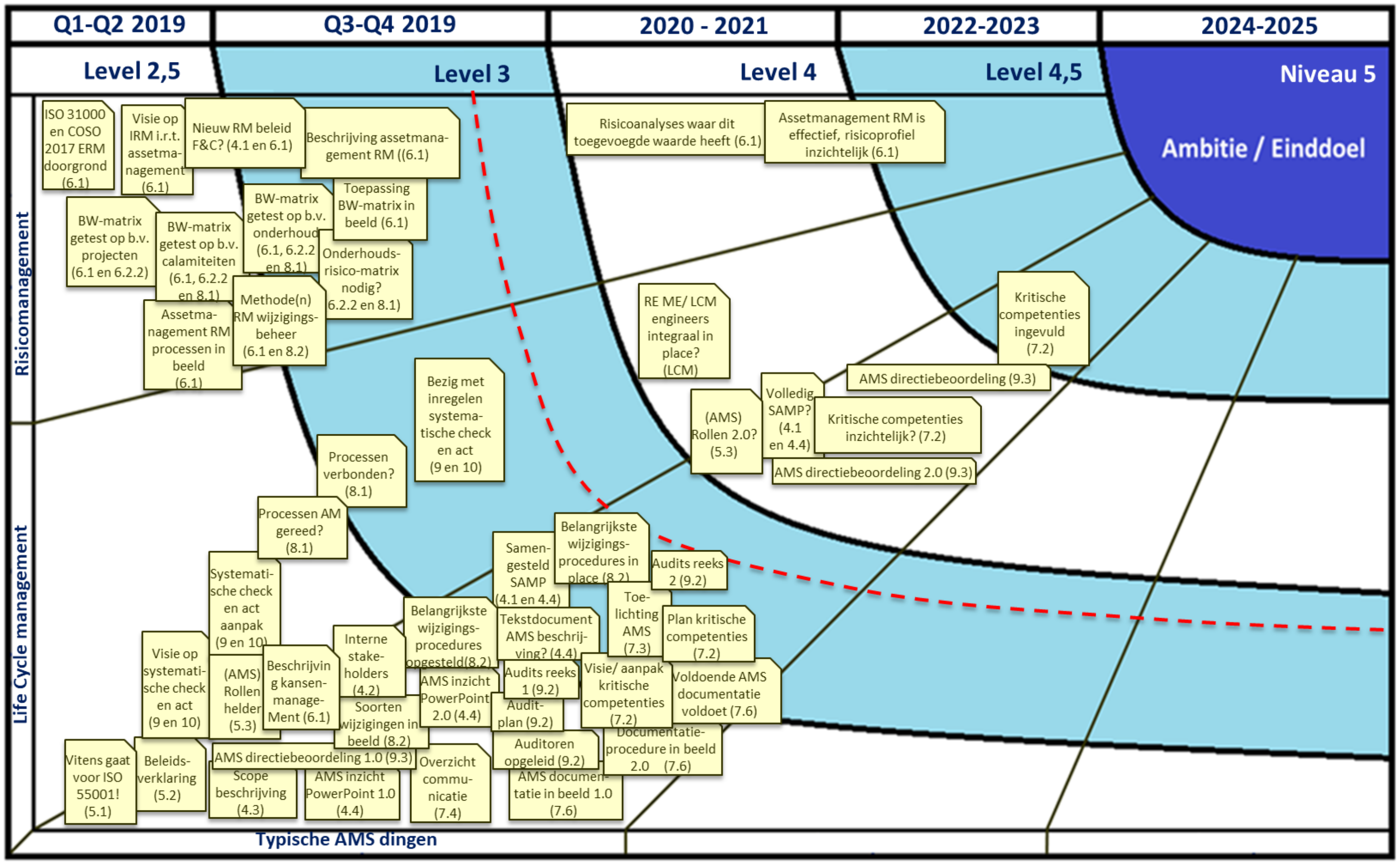


Interwoven in routine	As a project	As a program
Just do it!	Design it	Develop it
Realizing, finishing and connecting new and existing products (Structured <> Organic) Combined with/ integrated in day to day activities	Systematic approach/ delivery of products to realize benefits Project focus: Objectives, specifications, milestones and resources	Total/ Integrated approach focussing on benefits/ outcome Multiple challenges Regional>National>Continental > Global
A lot in place already, low hanging fruit High 'continuous improvement' attitude. No change: Perfect fit!	Some things in place but a lot needs to be done No/ limited need for organiza-tional change	Some things in place but a lot needs to be done Need for organizational change
Action list for small group	Project plan for bigger group	Program plan: Total organization (with multiple project plans)

ISO 55001 Implementation and Certification of 7 NL Organisations

NL Organization	General/ Size	Certified/ approach	AM maturity (at the time)	(ISO (MS) in Place (at the time)	Challenges and gained insights
Port of Rotterdam	Europe's biggest port. 1300+ employees	2013 (PAS 55) in 9 months **Program**	Medium/ High	ISO 9001 for 1 of the 14 asset types (road network)	• I: The port is 1 big asset (system): Transhipment chain • C: Interdependencies of asset types in chain • C: Bringing 14 asset types into 1 AMS • I: ISO 55001 is a strong integration mechanism
gasunie crossing borders in energy	NL high pressure gas 'National Grid'. 11.000 km distribution network. 1500+ employees	2015 (NTA 8120) in 6 months **Project**	High	Multiple, also asset specific (safety/ environmental)	• C: A lot in place yet, but some needed to be actualized, formalized and connected in the AMS • I: NTA8120/ ISO 55001 is a strong integration mechanism (SAMP, audits, management reviews etc.)
Provincie Noord-Holland	Local authority, also responsible for traffic (roads, waterways) 1200+ employees	2015 in 18 months **Program**	Medium (Small group High)	None in 2015. in 2019 ISO 9001 certification combined with ISO 55001 re-certification	• C: Moving from task based outsourcing to performance based outsourcing: Keeping grip on assets • I: ISO 55001 improves outsourced 'Line of Sight'
van gelder	Civil construction and maintenance managing agent. national and local authorities. 800+ empl.	2017 in 3 months **Routine**	Medium (Small group High)	Multiple (also required by their clients)	• I: ISO 55001 is a necessity to exist and survive • I: Moved from certified projects to certified organization • C: AM maturity from small to larger group
provincie ZUID HOLLAND	Local authority, also responsible for traffic (roads, waterways) 1600+ employees	2017 in 18 months **Program**	Medium (Small group High)	None	• C: Moving from task based outsourcing to performance based outsourcing: Keeping grip on assets • I: ISO 55001 improves Line of Sight
Gemini	2 NL biggest wind energy parks 23 employees	2018 in 6 months **Routine**	High	None certified. But focus on ISO 55001 and ISO 45001 from beginning	• I: Small asset base and small group: short lines/ focus • I: ISO 55001 certification 2018 supported ISO 45001 certification in 2019
Vitens	NL Biggest drinking water supplier 1500+ employees	2020 in 18 months **Routine**	High	Multiple	• I: ISO 55001 strong integration mechanism for , connecting and formalizing the PDCA for results of AM program (2016-2018) • C: Covid-19 for the last six month to certification

Example of Implementation Road Map (partly in Dutch)



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Top-Down or Bottom-Up approach?

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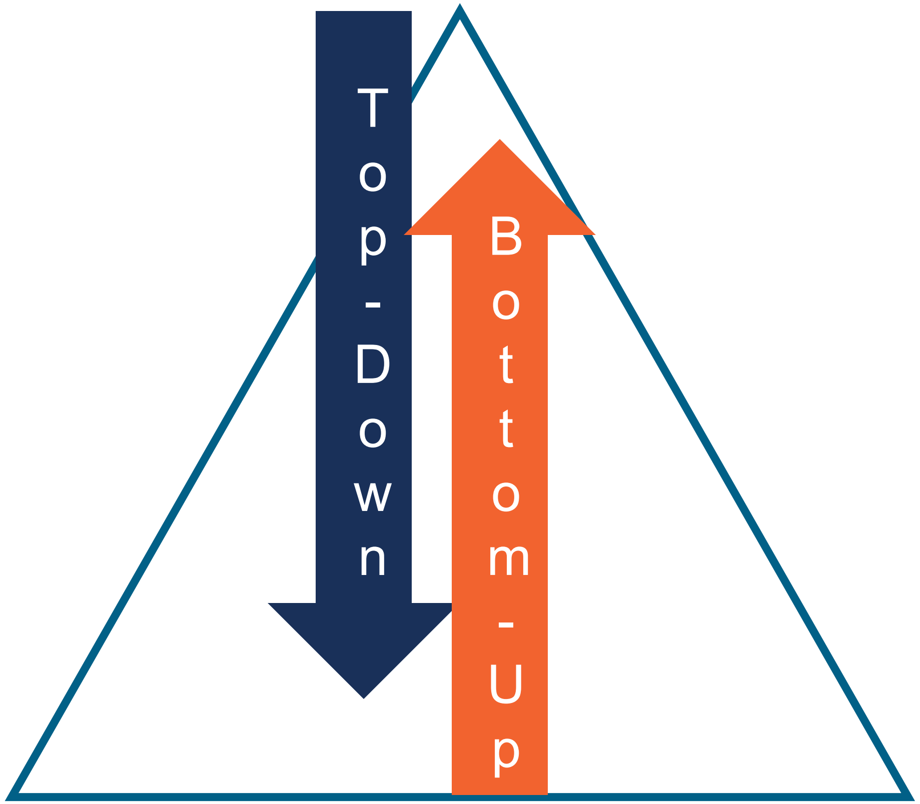


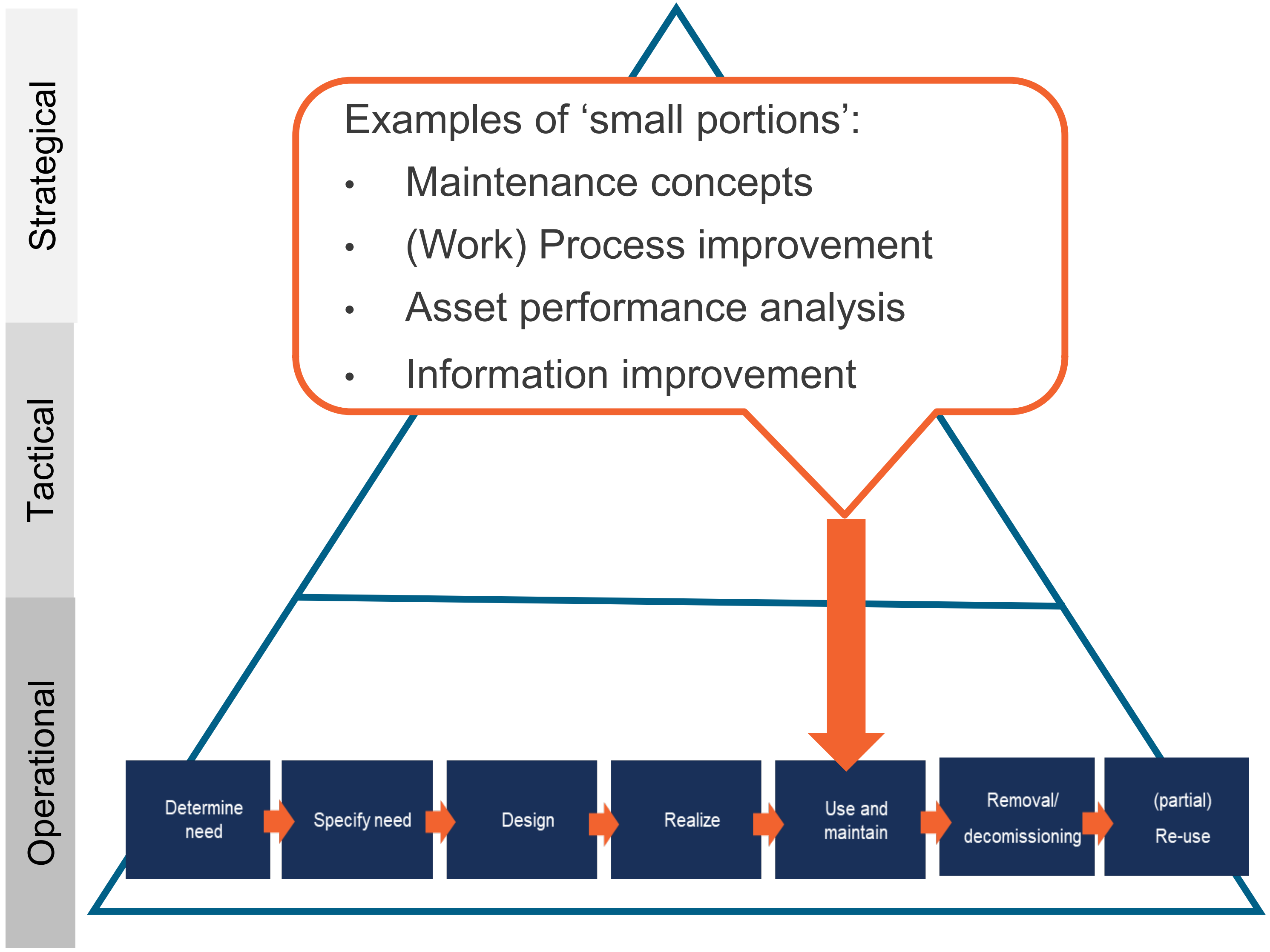
ISO 55001 Implementation requires a 'TOP-BOTTOM' approach. However, AM can be implemented by combining the best of both approaches. See next slide!

The ‘inside out’ Approach for Implementation of Asset Management
(Many NL organizations implement AM in ‘small portions’)

Are you/ is top management not convinced yet? Then start with:

5 Implement AM best practices

- **Demonstrate the benefits of AM:** Implement in ‘small portions’
- **Small portion =** Can be overseen and done in fair amount of time (resources) :1 subject, or 1 asset (type), or 1/ a few processes
- **Need driven:** Which improvement challenges/ questions to be answered are there?
- **How:** Routine or Project
- **Scale up** (or let it grow) and gradually move to total AM(S) implementation



ISO 55001 and Other/ Multiple Management Systems

ISO 9001: Delivering quality products and services to customers

Value chain

Customer need identified → Market-identification → Design and development of products and services → Production and service provision) | Release of products and services | Customer need satisfied

Determine need → Specify need → Design → Realize → Use and maintain → Removal/ decomissioning → (partial) Re-use

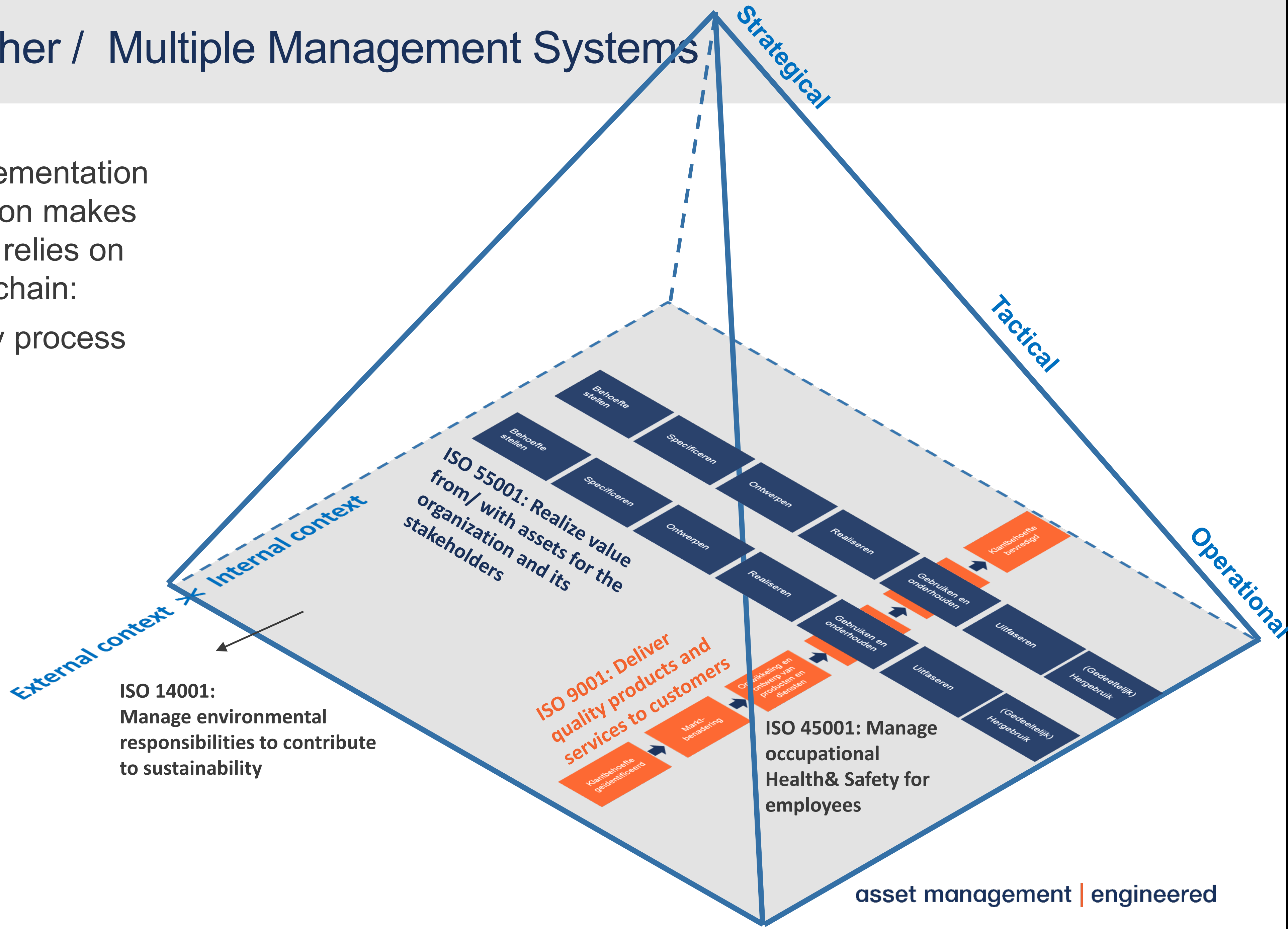
Asset life cycle phases (assetmanagement chain)

ISO 55001: Realising value with physical assets for the organization and its stakeholders

ISO 55001 and Other / Multiple Management Systems

Asset management implementation and ISO 55001 certification makes sense if the organization relies on physical assets in value chain:

- Importance in primary process
- (societal) risks
- complexity
- financial value



Risk management: ISO 55001 Management System Structure

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Asset Management Related Risk Management

Strategic risks

Financial risks

External risks

Project risks

Occupational Health & Safety

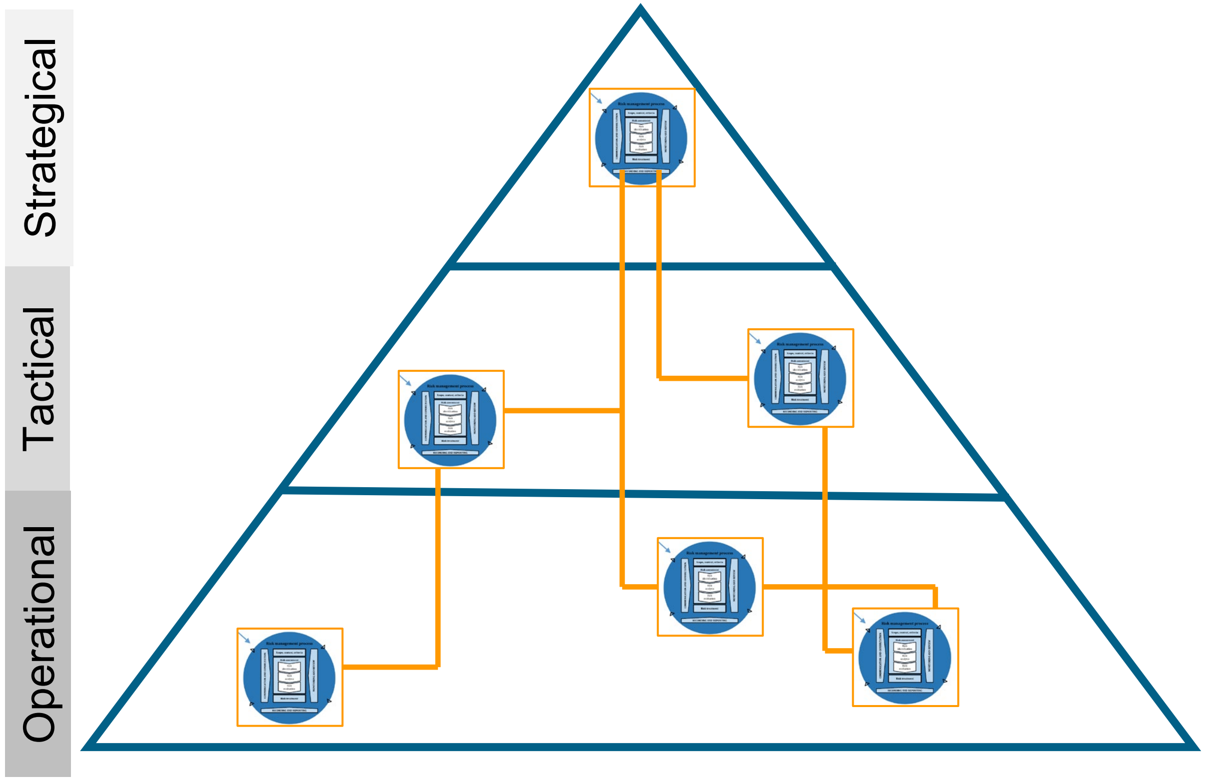
Risk based maintenance

…risks

Asset and asset management risks relate to a ‘risk management landscape’

Multiple Risk Management Processes within (asset management of) the Organisation

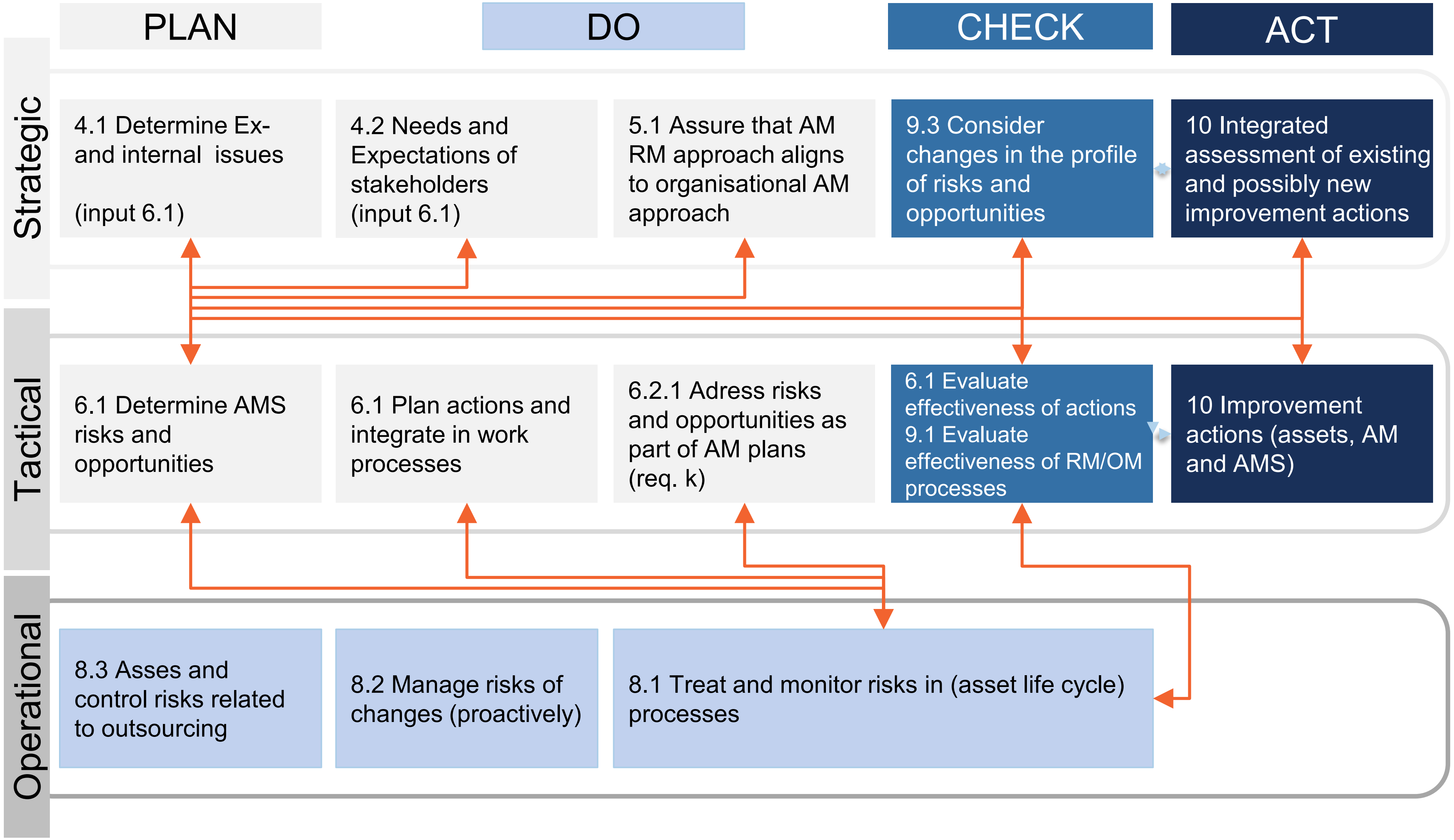
ISO 31000 Generic Risk Management Process



Organisational perspective

(next slide shows how orange 'system' works)

Overview of ISO 55001 Risk and Opportunity Management ‘Line of Sight’



Resume and Recommendations

1. Implementing and certifying ISO 55001 on an organizational level best starts with an initial assessment (see Pragma AMIP on www.pragmaworld.net)

2. Implementing AM can start with an initial assessment or with successes through implementation of small portions (need driven, scale up when ready for it/↑commitment)

3. Depending on situation, what works best for the organization and results of the assessment choose an appropriate approach: Routine, Project or Program

4. When implementing and certifying ISO 55001 make use of what already is in place by other (ISO) management systems: Link, combine, integrate!

5. In the latter, identify your (asset management) risk management landscape: Which risk management processes? How do they relate/ escalate, etc.?

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Thank you

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