DEKRA Organisational Process Safety

Are you lucky or good?

DEKRA Service Division Consulting

Defining the next frontier of safety

DEKRA Consulting combines evidence-based science, cutting-edge technology, and internationally renowned expertise to create innovative safety solutions for today and tomorrow.

We aim to lead safety transformation at the workplace and business practices, within operations and processes as well as in the dynamic and rapidly changing digital era.

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Consulting Business Lines

Process Safety Solutions

Mitigating or eliminating hazards and potential damages arising from industrial processes is our goal. Clients rely on us to prevent fire, explosion and loss of containment events. We help our clients to understand their risks through laboratory testing & analysis, and develop pragmatic solutions and recommendations for risk reduction. Education is another pillar for technical & cultural transformation of our clients Organisation.

Health, Safety & Environment and Organisational Safety & Reliability

Close collaboration with clients is the central feature of our services, which aim to help Organisations optimize workplace health, protect the environment and foster a culture of care. With assessments, workshops and consulting services we change the behaviors and decision-making processes that have the biggest impact on major accident prevention.

Business Consulting

Competition among manufacturers, leasing companies and dealerships in the automobile industry is fierce. Founded on rock solid experience and a passion for the business, our expertise steers car dealer teams toward peak performances in the sales arena and at the same time ensures peak experiences for their customers.

Cyber Security & Information Technology

Safety and security are two key challenges for today's technology users. From network security to penetration testing and risk assessment, our 360° services are based on a comprehensive analysis of your IT processes. We can also help design and implement security systems or provide an information security officer.

Process Safety

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Process Safety Testing

Assessing the flammability, combustibility, as well as thermal and reactivity properties of materials in state-of-the-art laboratories by process safety experts and in accordance with local and international standards.

Process Safety Consulting

Providing a comprehensive understanding of hazards and risks in the process industry we consult & support our clients to implement and operate an effective process safety management system.

Regulatory Compliance Consulting Services

Solutions and consulting to ensure conformity to regulations & standards related to process safety, hazardous substances and materials, major accidents and chemical legislation - worldwide.

Process Safety Competence Development

Providing training & educational programs in all areas of process safety, applying state of the art learning methods, designed to ensure that internal competence is developed measurable and sustainable.

Process Safety Instruments

Designing and manufacturing of superior instruments complements our own consulting and training services but also supports our clients to equip their laboratories.

A typical situation in DEKRA

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A client calls to ask for DEKRA's support on:

- HAZOP

- Management of change

- Cultural assessment

- Quantitative risk assessment.

- Training.

- Testing.

- ….

Sometimes they do know what they need and why… but sometimes they do not. They just want to minimize their process risk, and have chosen what they believe to be the weakest link.

How confident are you that your choice is the best?

- Why do you want to HAZOP all your processes?

- Why do you think you need to improve your management of change?

- Why do you seek a cultural transformation?

Often, the root cause is "we want to improve our process safety performance".

! DEKRA has developed Organisational Process Safety to support our clients in answering those questions!

Why Organisational Process Safety?

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"When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts advanced to the State of science, whatever the matter may be."

(William Thomson, 1st Baron Kelvin, Lecture to the Institution of Civil Engineers, 3 May 1883)

"Regular measurement and monitoring of process safety performance allows an Organisation to evaluate the effectiveness of steps taken to control and reduce process risk."

(Management of Hazards Associated with Location of Process Plant Buildings, RP 752, American Petroleum Institute, Washington DC, November 2003. Quoted on the Baker Panel Final Report, 2007)

Or, in other words:

- **How do you know how far you are from your target if you don't measure?**
- **How do you know if you are moving in the right direction if you don't measure?**

Traditional Auditing does not adequately evaluate an Organisation's Capability or Culture

- Organisational capability includes the knowledge, experience, data, skills and tools needed to support a Process Safety program

- Organisational culture refers to the underlying, unstated, shared practices, beliefs and values that exist within an Organisation.

> **!** The interrelationship between Organisational capability and culture is the glue that holds an effective risk management program together. And it is often overlooked.
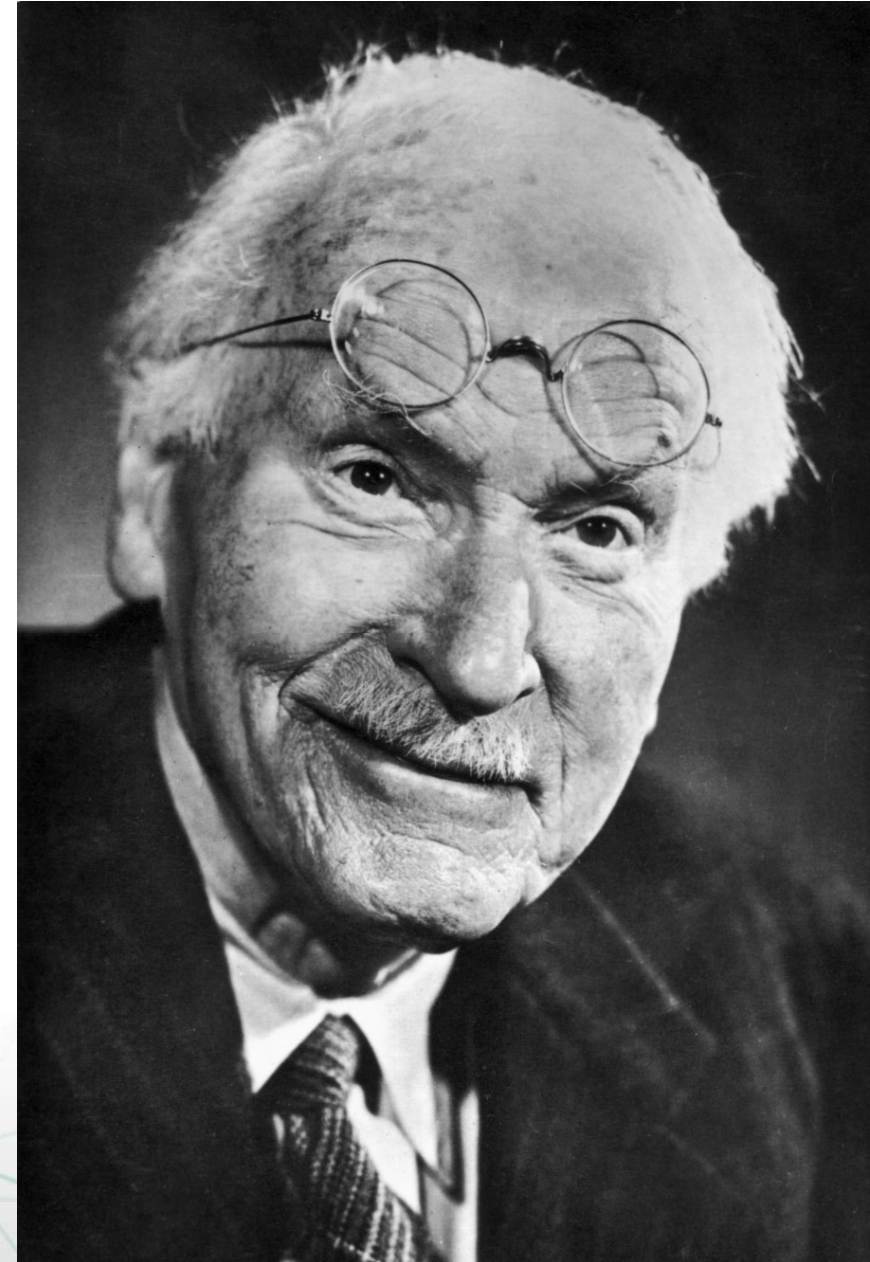
Boots on the ground are a must!
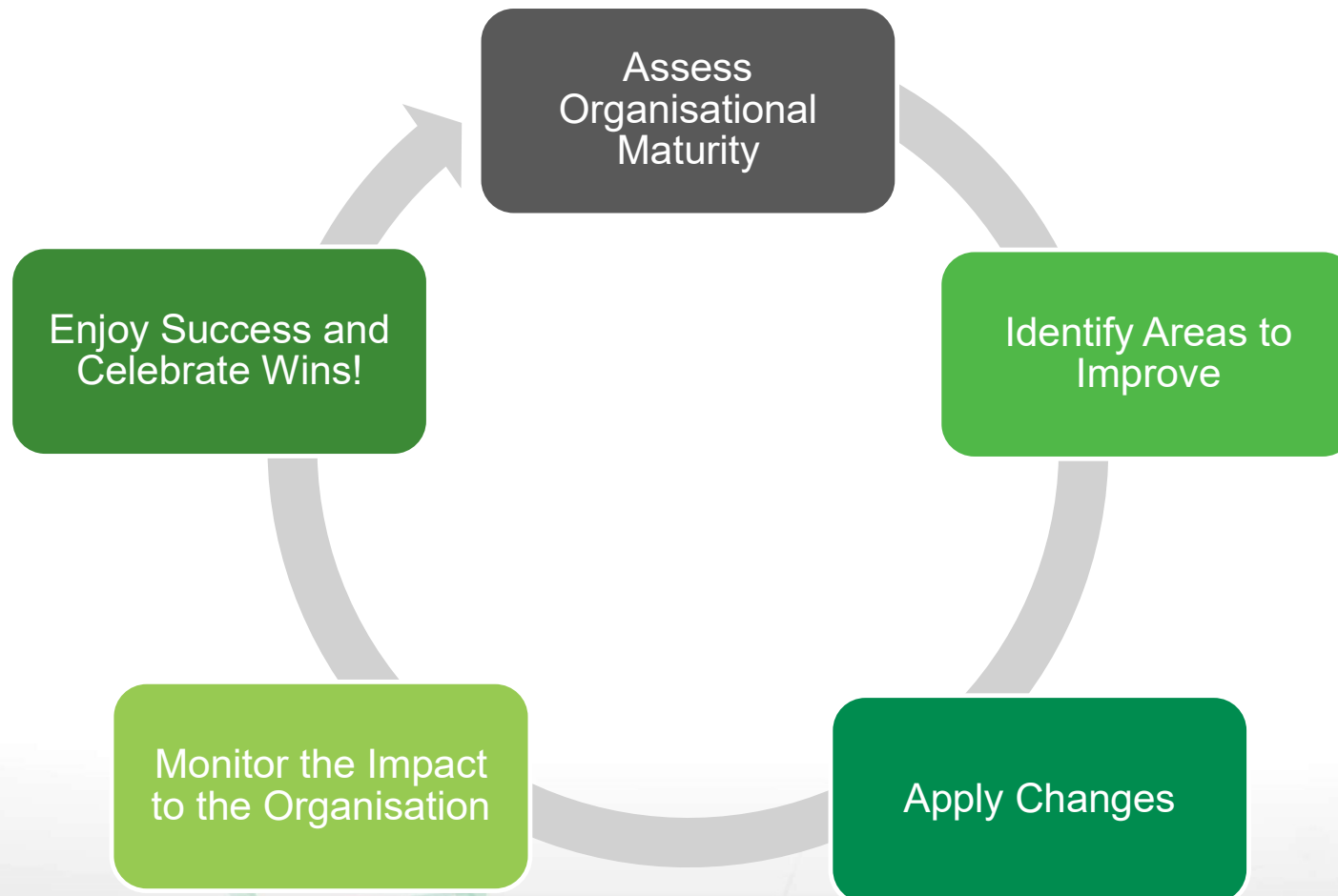
"You are what you do, not what you say you'll do."

Carl Gustav Jung

The quest for excellence
is a never-ending journey
… and a thrilling one!

How is Process Safety Program Improved?

DEKRA

- Assess Organisational Maturity
- Identify Areas to Improve
- Apply Changes
- Monitor the Impact to the Organisation
- Enjoy Success and Celebrate Wins!

The elements for the journey

A roadmap or, even better, a GPS navigator

A vehicle: the system

Simplifying the Model (20 elements to 7 workstreams)
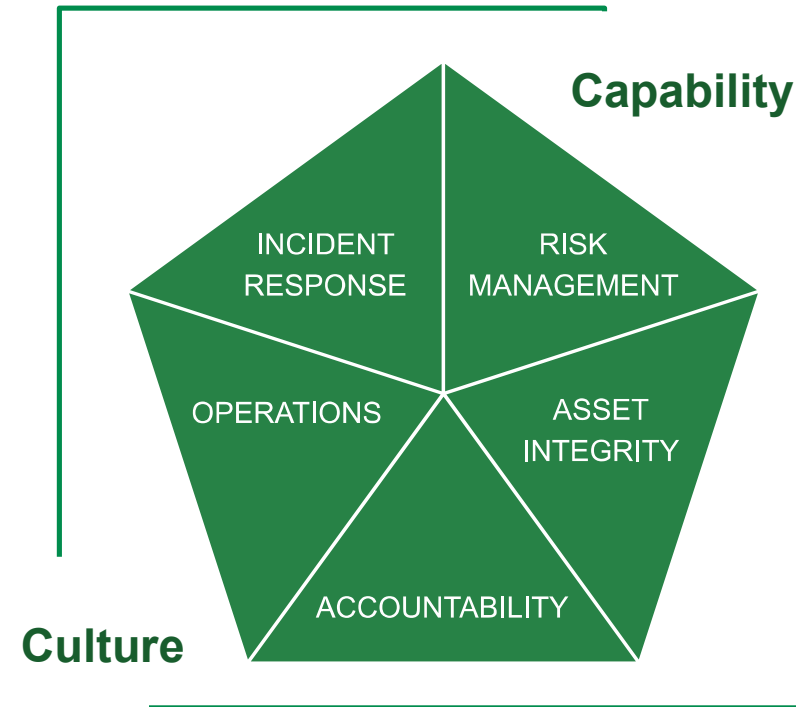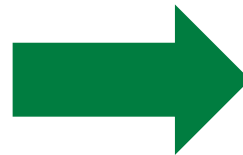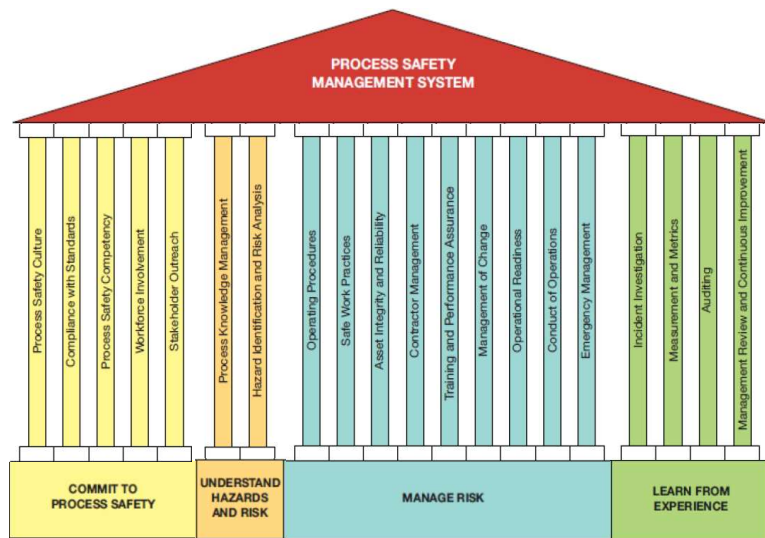
Introduction to Organisational Process Safety

Capability

Culture

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Risk Management

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How do we Identify and Manage Risk?

Hazard Identification and Risk Assessment (HIRA)

RISK MANAGEMENT

INCIDENT RESPONSE

OPERATIONS

ASSET INTEGRITY
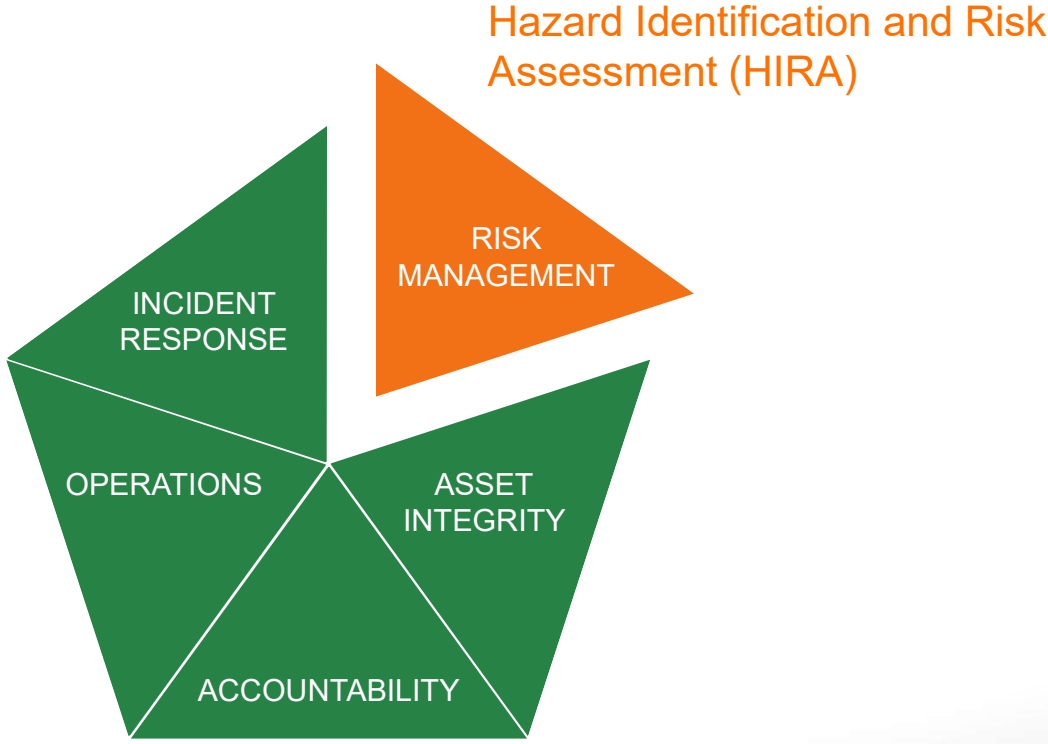
ACCOUNTABILITY

Asset Integrity

How do we maintain our equipment, instrumentation, and piping?

How do we manage changes to how we operate?

Asset Integrity and Reliability Management of Change

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Accountability

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How do we know our management systems are working as intended?

Measurement and Metrics
Auditing
Management Review &
Continuous Improvement

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Operations

How do we operate our facility?

Operating Procedures
Safe Work Practices
Operational Readiness
Contractor Management
Conduct of Operations

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Incident Response

How do we investigate incidents and stop them from re-occurring?

How do we prepare for incidents to ensure safety?

Stakeholder Outreach
Emergency Management
Incident Investigation

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Five Management System Components (14 elements)

Stakeholder Outreach
Emergency Management
Incident Investigation

Hazard Identification and Risk Assessment (HIRA)

INCIDENT RESPONSE

RISK MANAGEMENT

Operating Procedures
Safe Work Practices
Operational Readiness
Contractor Management
Conduct of Operations

OPERATIONS

ASSET INTEGRITY

Asset Integrity and Reliability
Management of Change

ACCOUNTABILITY

Measurement and Metrics
Auditing
Management Review &
Continuous Improvement

The Glue that Holds the Model Together

Capability

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Compliance with Standards

Process Knowledge Management

Process Safety Competency

Training and Performance Assurance

Process Safety Culture
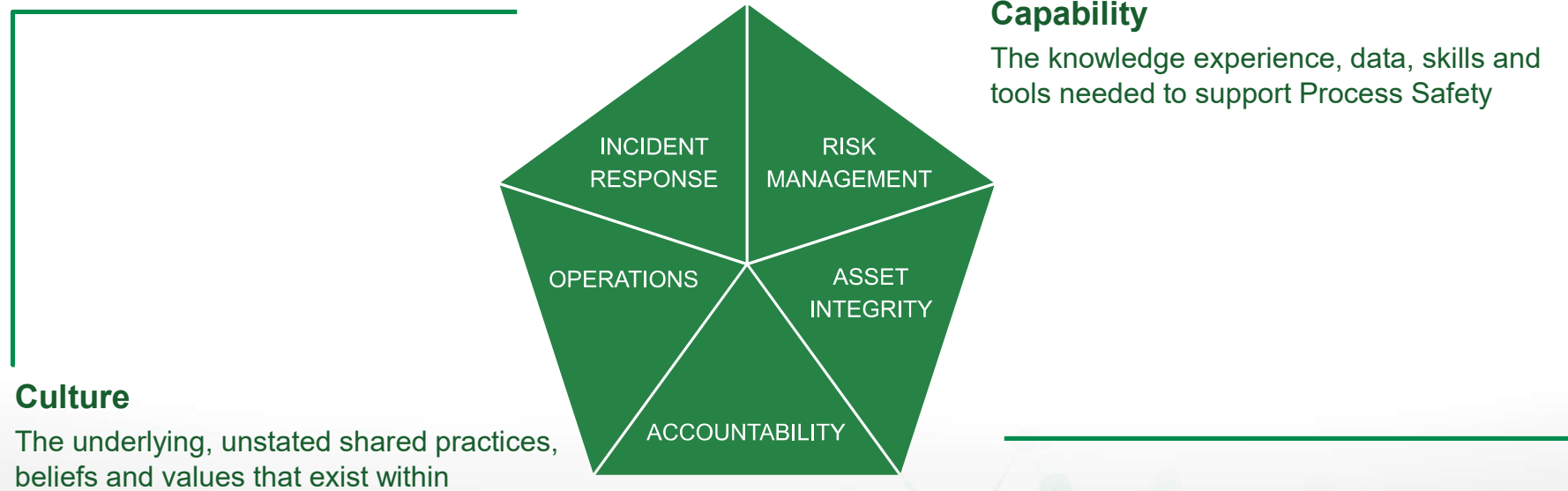
Workforce Involvement

Culture

Culture and Capability

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The Interrelationship between Organisational Capability and Culture is the glue that holds an effective risk management program together.

And it is often overlooked.

Capability
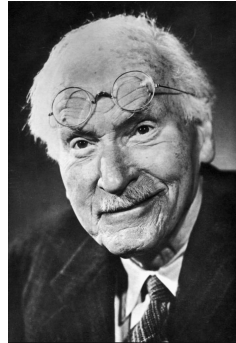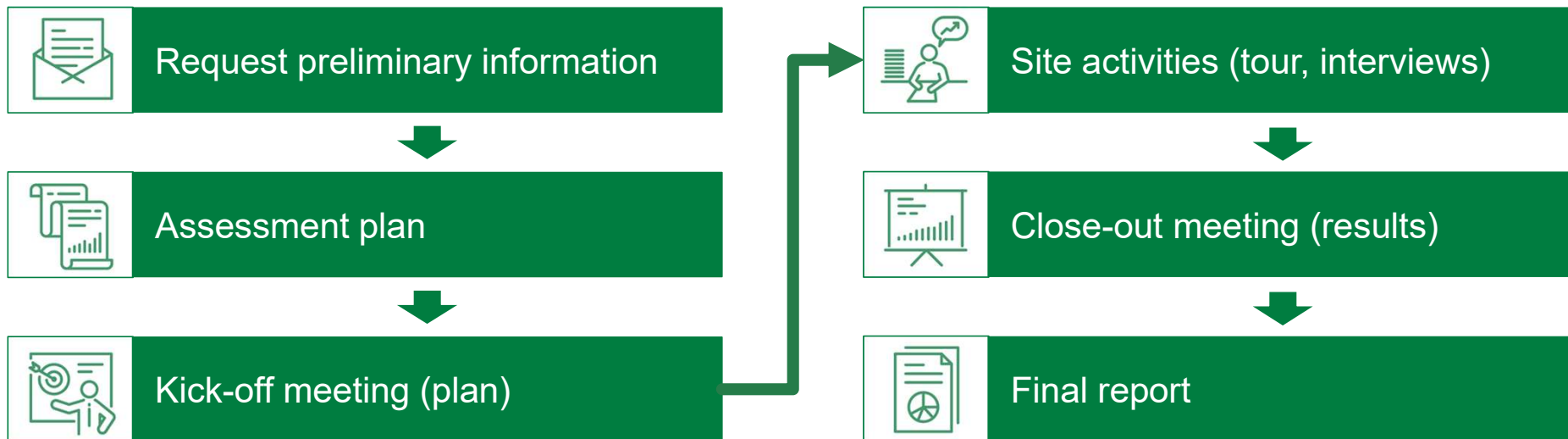The knowledge experience, data, skills and tools needed to support Process Safety

INCIDENT RESPONSE

RISK MANAGEMENT

OPERATIONS

ASSET INTEGRITY

ACCOUNTABILITY

Culture
The underlying, unstated shared practices, beliefs and values that exist within

Are you an Avoidance-Driven, Compliance-Driven or Values-Driven Organisation?

Avoidance		Compliance		Values	
Burden	**Necessity**	**Priority**	**Goal**	**Values**	**World Class**
Safety is viewed as a hindrance where incidents/errors are inevitable.	Safety is externally driven and reactive, focused on avoiding cost.	Safety priority is susceptible to change. Leaders espouse reliability but tolerate poor performance	Leadership is accountable for safety. Workers report abnormal conditions and concerns.	Worker well-being has intrinsic worth. Leadership embraces risk mitigation. Safety is a key aspect to performance.	Process Safety is integral and sensitive to subtle changes, with self-motivated workers, learning-oriented leaders and effective governance.
Organisational focus is on self-preservation with little or no Process Safety system in place.	There are pockets of good practice, but systems lack definition and consistent efficacy.	Process Safety systems exist and are documented, but effectiveness varies.	Auditing systems work and Process Safety procedures are followed.	Through systems exist with efforts that reinforce a strong Organisational culture.	Mature systems exist within a healthy culture, sustained by an Organisation that has the expertise, skills, tools needed to adapt to future change.

How does the OPS Assessment work?

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|	
Request preliminary information	Site activities (tour, interviews)
↓	↓
Assessment plan	Close-out meeting (results)
↓	↓
Kick-off meeting (plan)	Final report

What type of results will be obtained?

- Measurement of process safety maturity, element by element and workstream by workstream.

- Strengths, opportunities for improvement and outliers per workstream.

- List of optimal interventions.

- Suggested KPIs.

Maturity level by workstream
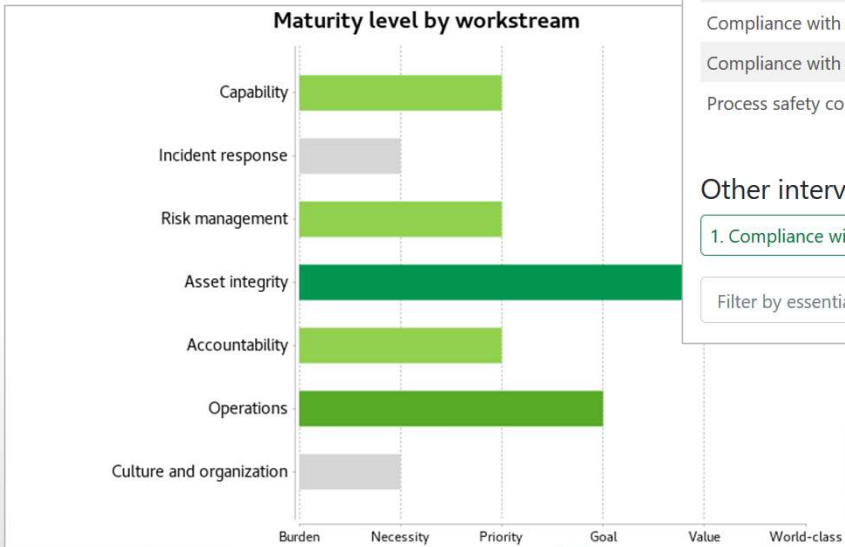
Optimize results

**Selected interventions**

Element	Intervention
Process safety competency	Develop a set of measurable objectives for maintaining and enhancing process safety competency.
Compliance with standards	Modify awareness-level communication and training items to convey changes in process safety obligations to personnel.
Compliance with standards	Submit necessary compliance reports to applicable organizations and government agencies.
Compliance with standards	Establish a standards element owner.
Process safety competency	Based on an agreed set of objectives, identify and fund activities that are likely to support progress toward organizational objectives that promote competency.

Other interventions

1. Compliance with standards 30   2. Process knowledge management 23   3. Process safety competency 22   4. Training and performance assurance 41

Filter by essential feature or intervention

Strengths, opportunities for improvement and outliers

Strong points	
Score	Question
3	What methods are used to demonstrate the effectiveness and ensure sustainability of process safety training?
3	How are trainers selected, trained and assessed to ensure they can deliver the training effectively and at the right level?
3	How is process safety training effectively delivered?

Opportunities for improvement	
Score	Question
1	What program / procedure does the site have for ensuring compliance with standards for process safety?
1	What does the site do to ensure process safety standards are available and being followed?
1	How does the site ensure effective use of process knowledge?

Outliers	
Diff	Question
1.03	What methods are used to demonstrate the effectiveness and ensure sustainability of process safety training?
1.03	How are trainers selected, trained and assessed to ensure they can deliver the training effectively and at the right level?
1.03	How is process safety training effectively delivered?

Score of individual questions
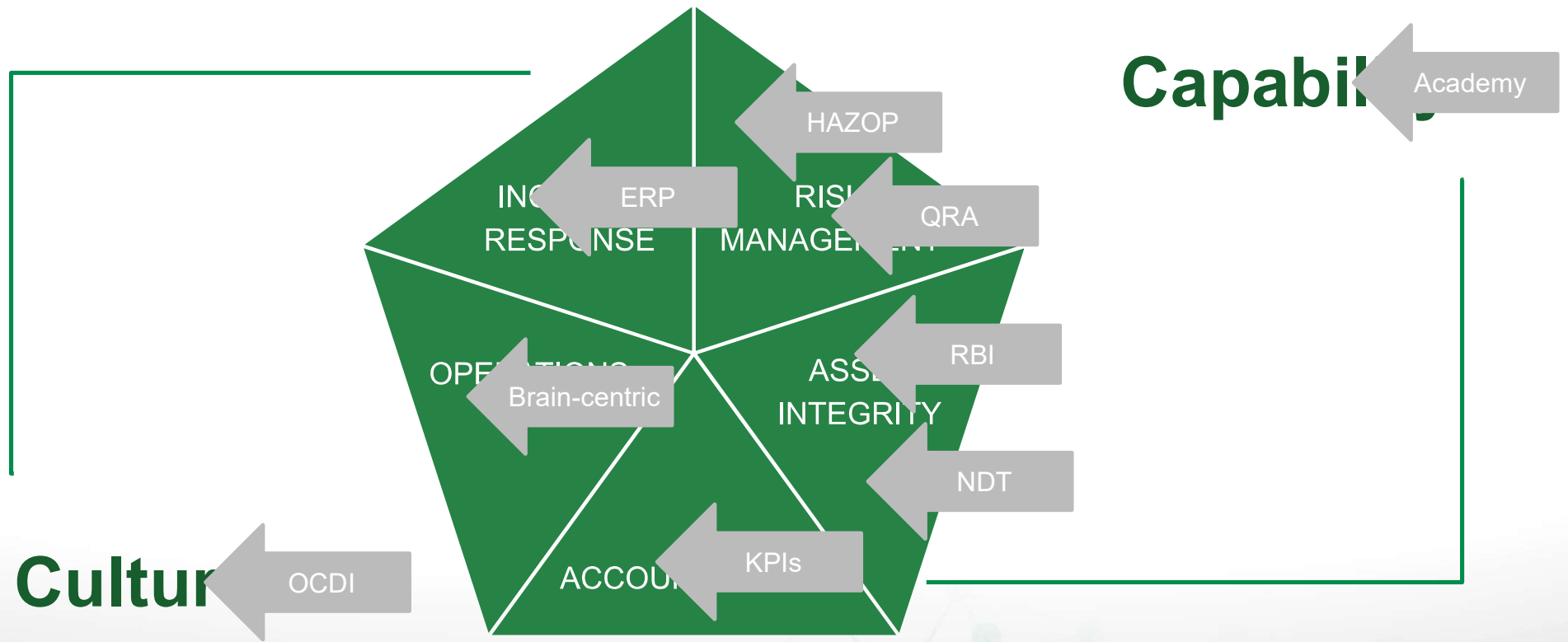
16% 27% 18% 8% 31%
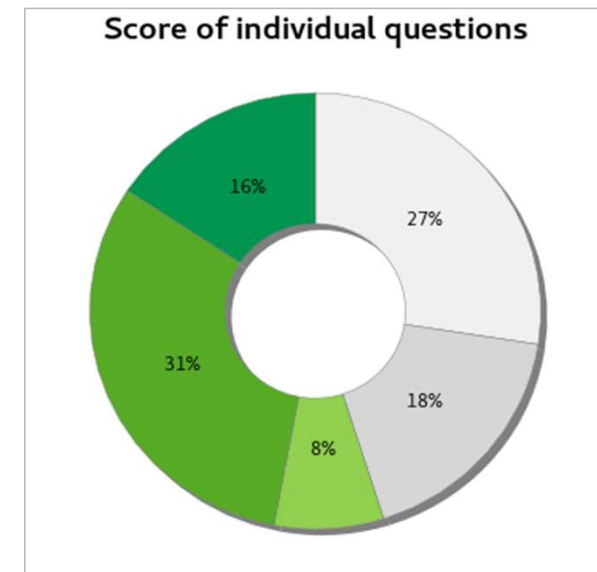
What do we get from an OPS assessment?

- The current maturity level of the Organisation (i.e. **where we are**).

- An optimized list of possible interventions (i.e., **the shortest path to process safety maturity improvement**).

- A set of KPIs to monitor progress until the next assessment (i.e. **your waypoints**).

Building the car

How confident are you that your choice is the best?

- Why do you want to HAZOP all your processes?

- Why do you think you need to improve your management of change?

- Why do you seek a cultural transformation?

Often, the root cause is "we want to improve our process safety performance".

> **!** DEKRA has developed Organisational Process Safety to support our clients in answering those questions!

DEKRA's OPS Methodology offers distinct advantages

DEKRA

✓ Obtain the most accurate picture of Process Safety performance while efficiently engaging with the resources and personnel

✓ Objective, precise, repeatable and reproducible measure of the maturity level of your site or Organisation.

✓ Identifies the optimal interventions to improve Organisational maturity and the benchmarking indicators to monitor progress.

✓ Utilizes a reliable metric, allowing objective benchmarking across sites and geographic areas.

Contact details

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