Safety Case

Keys to Success

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Prosafe 2018

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Your Speaker

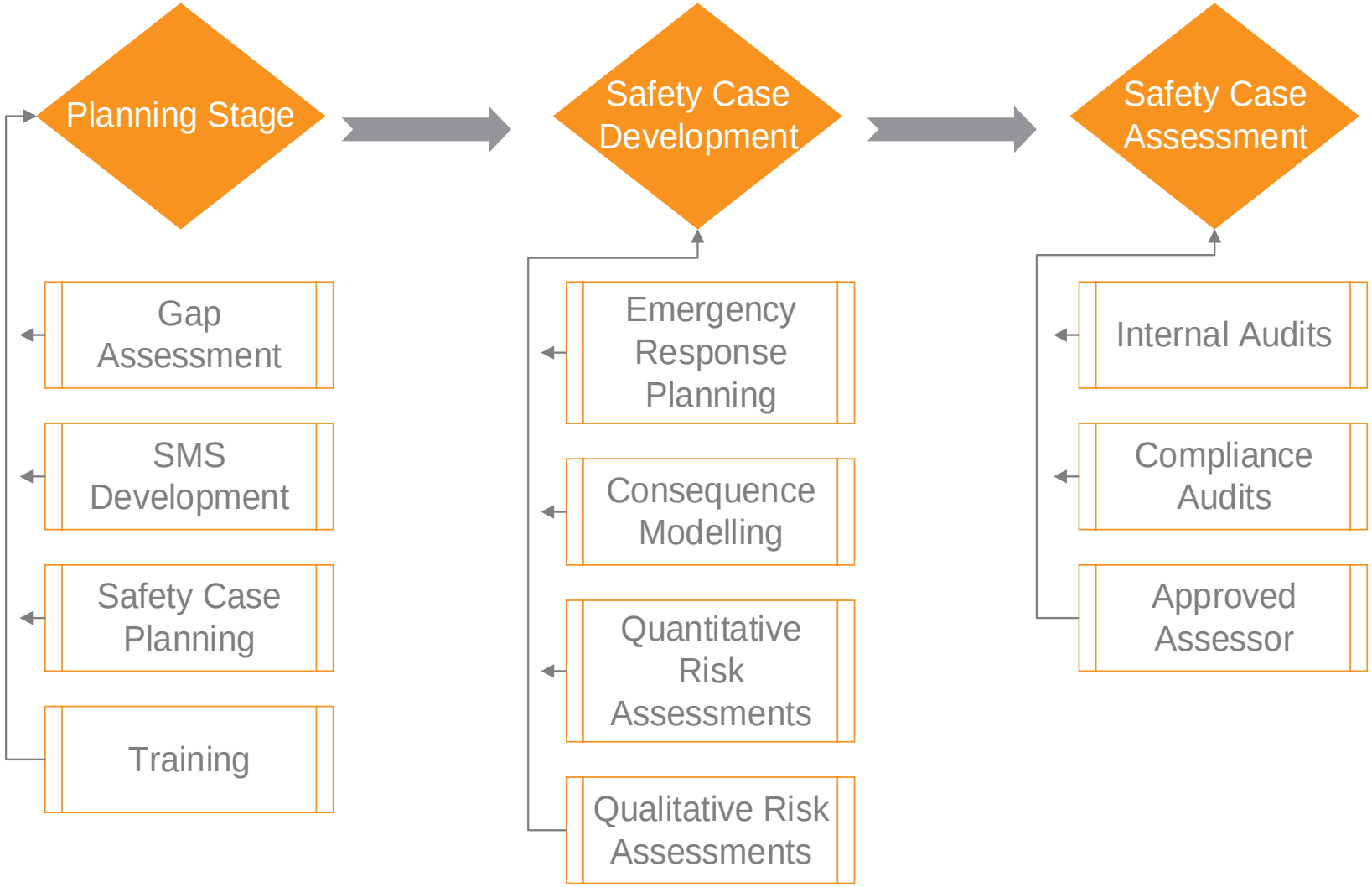
- Brian Cooper (Director & Principal Risk Consultant with R4Risk)
- Chemical Engineer, FIChemE, CPEng, RPEQ
- Over 28 years' experience
  - Process safety / risk management consulting
  - Chemical plant operations, project management, technology improvement (Dow Chemical)
- Comcare - Specialist Technical Advisor and Approved Assessor for MHF Safety Cases
- Safety case experience spanning:
  - Plant Management of an MHF
  - Development of client safety cases as a consultant
  - Development of regulatory guidance materials and conducting safety case training
  - Auditing of safety cases on behalf of the regulator

Purpose of this Talk

How to achieve the positive outcomes from a safety case process and avoid the many pitfalls?

- What have we seen that supports success?
- What to avoid!

R4Risk's Involvement in Safety Cases



Inputs to this Presentation

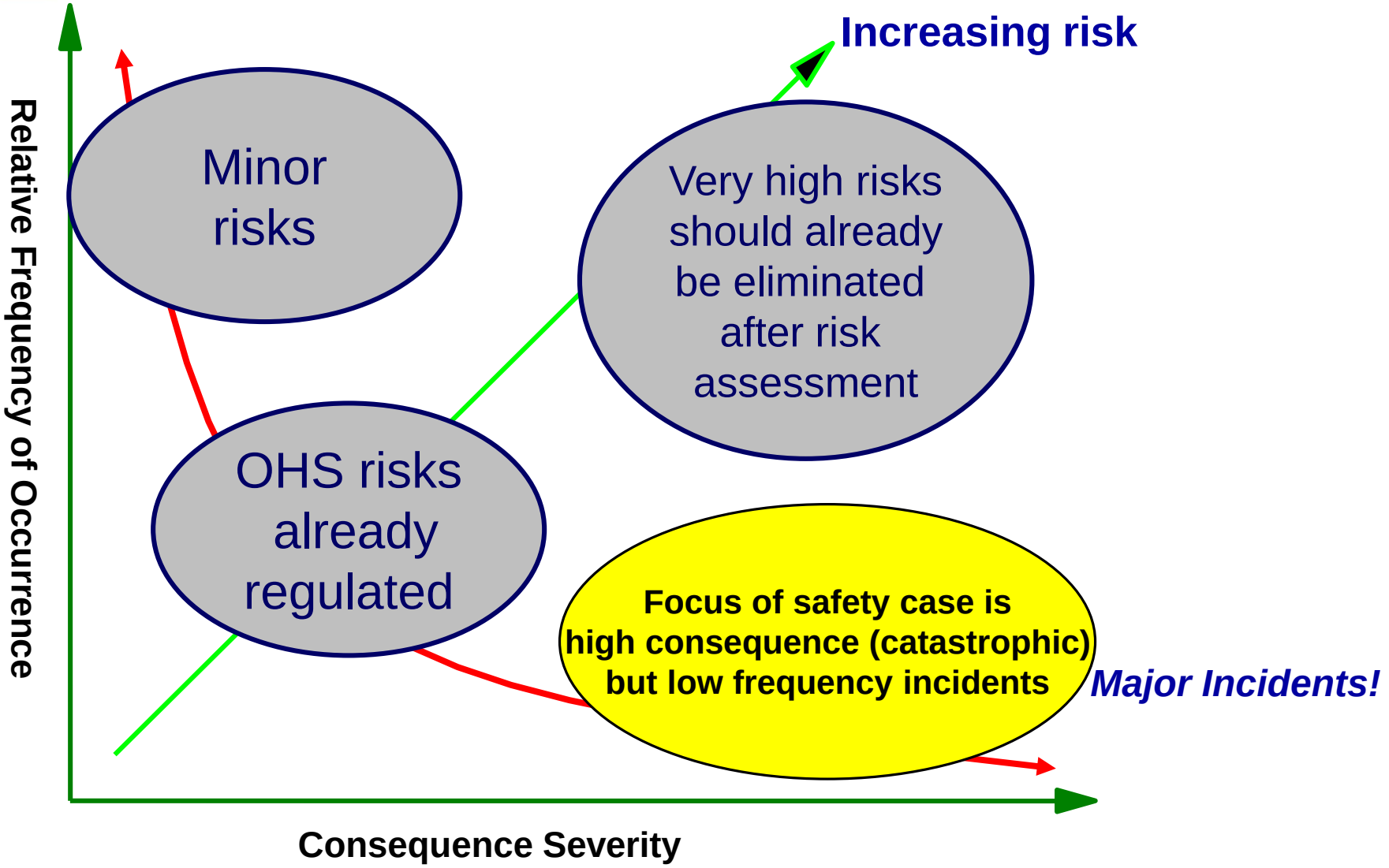
Sources include:

- R4Risk's experience
  - Conducted over 350 projects across 40 client companies specifically relating to safety case development and related services
- Auditing safety cases
  - More than 40 audits of MHF safety cases completed for client companies and on behalf of the Regulators
- Direct input to this presentation provided from a number of MHF operators that I have worked with

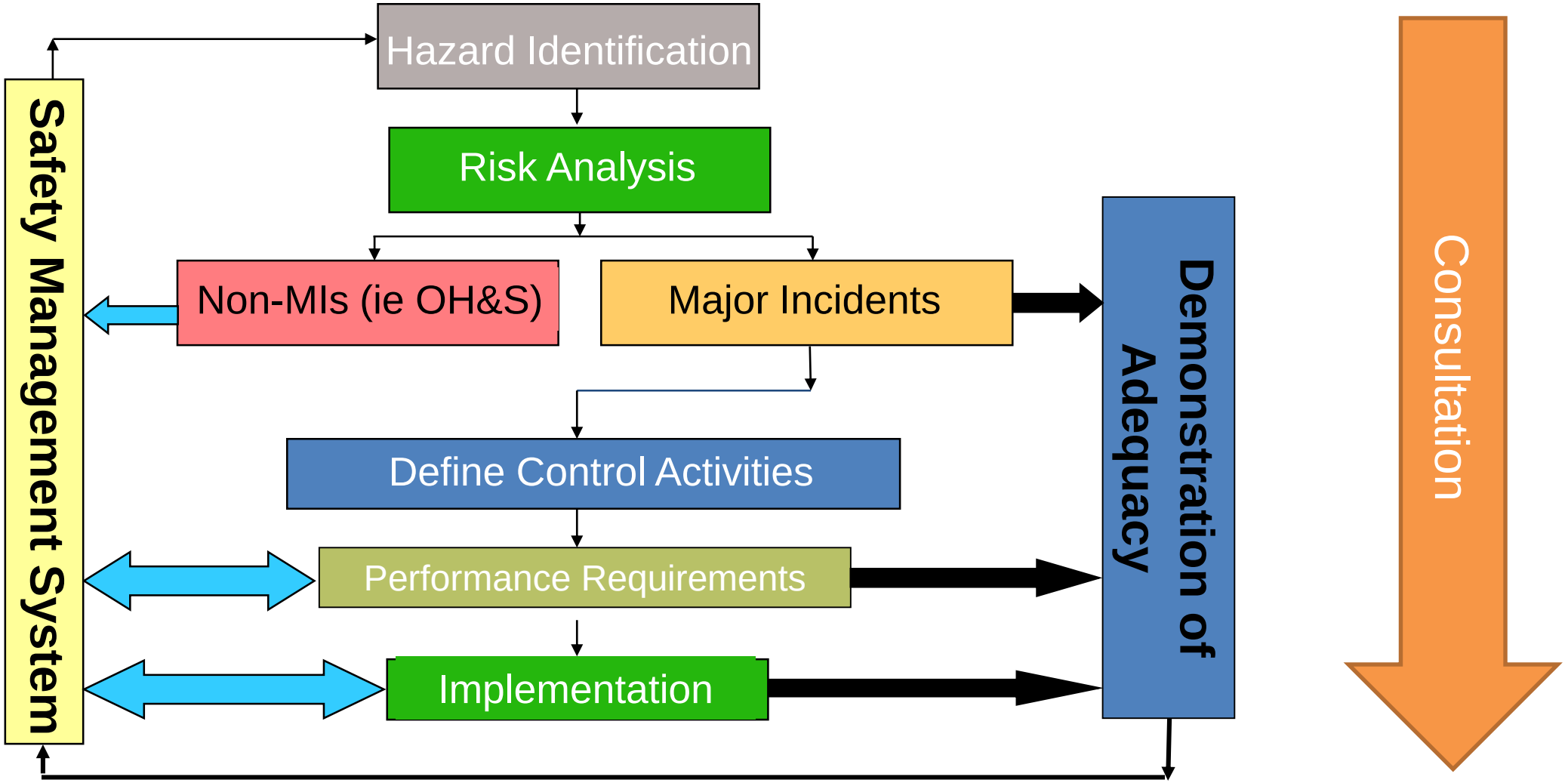
Safety Case Basics

- Performance-based regime with the general duty that risks must be reduced ‘so far as is reasonably practicable’
- Operator of the facility defines the appropriate controls for safe operation, evaluates their adequacy and decides how best to implement and maintain the controls
- All of these matters are described in the *safety case*.
- The Regulator will only provide a ‘licence to operate’ if satisfied that the safety case adequately demonstrates that the facility can be operated safely

Focus of the Safety Case



Safety Case Activities



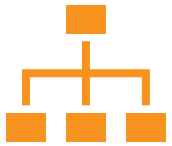
What are the Benefits of a Well-Executed Safety Case Process?

- Improved *Control Measures*
  - Systematic assessment of effectiveness
  - Performance monitoring
- Improved *Workforce Knowledge*
  - Understanding of major hazards and critical controls
  - Involvement of employees
  - Improvement of the SMS
- Assurance
  - ALL *Major Hazards* and causes have been identified
  - All hazards are appropriately managed

What if it Doesn't Go So Well?

- Excessive resource demands
- Rework due to incorrect / inappropriate methodologies
- Failure to capture and implement improvements
- Failure to instil learning for the workforce
- Loss of workforce support / involvement
- Incorrect / inappropriate controls – unnecessary maintenance cost
- Additional demands on the Regulator
- Impacts to operations

Critical Elements for Safety Case Success



Leadership and Culture

- Safety Management Philosophy
- Commitment
- Management Expectations and Support
- Consultation
- Relationship with the Regulator

Planning and Practice

- Planning and Resourcing
- Organisational Readiness
- Fit for Purpose Safety Assessment
- Keep it Simple
- Consistent and Disciplined
- Continuous Improvement Mentality
- Sustainable

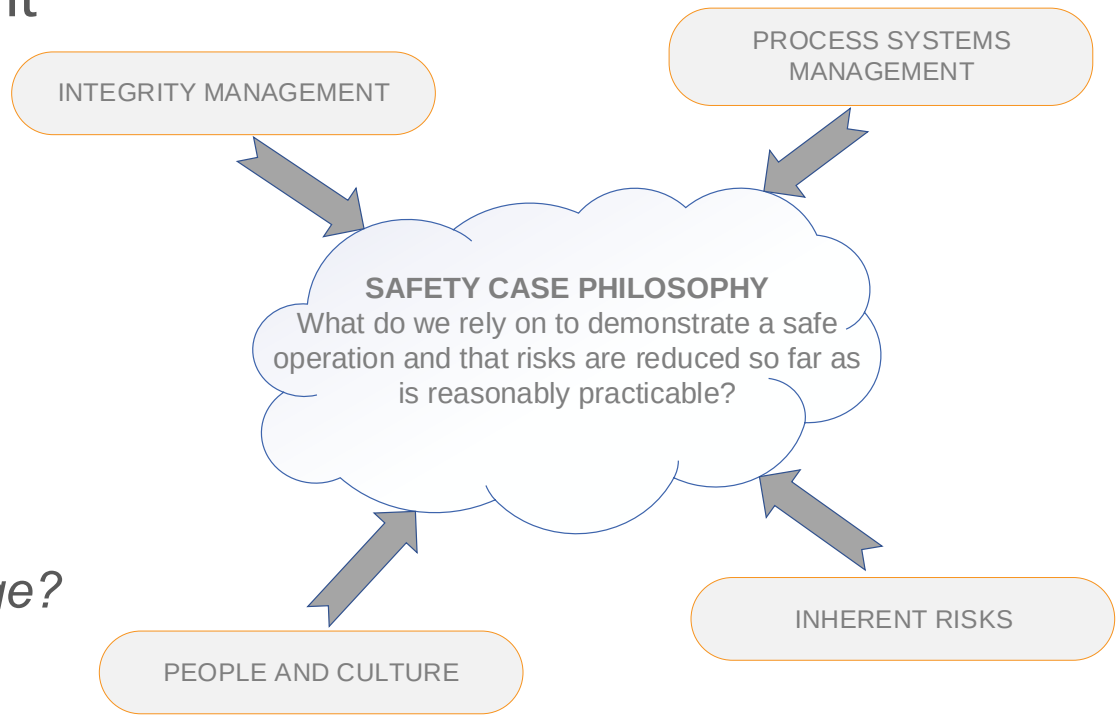
Leadership and Safety Culture

Safety Management Philosophy

Is the safety case aligned with the corporate safety culture?

- What is the current safety management philosophy?
- Is the management commitment demonstrated in the safety policy?
- The safety case approach must be consistent with the existing safety management philosophy

  ….or does the safety philosophy need to change?



Leadership and Safety Culture

Management Commitment

Strong management commitment and support is essential to achieve a positive safety case experience

- Focus on improving safety for everyone – not just a “compliance activity”
- Belief in the positive outcomes that will flow
- True line management “ownership” and involvement

Leadership and Safety Culture

Management Expectations

- Desired outcomes clearly defined and widely communicated
- Shared Goal: *This is a priority for everyone to achieve a safer workplace*
- Be prepared to challenge the status quo
- May involve some cultural change

Leadership and Safety Culture

Management Support

- Visible support e.g. participation/observation of workshops, meeting with Regulator
- Adequate resources / budget
  - Safety case project
  - Improvements that will arise
- Dedicated personnel with suitable depth and range of experience
- Align to core job responsibilities – not an “add-on” to current role

Leadership and Safety Culture

Consultation

Consult early and often to avoid surprises and engage stakeholders

- Consider
  - Employees / HSRs
  - Other Stakeholders – internal and external
  - Regulator
- Ongoing involvement of knowledgeable employees is essential – key hazards and controls may be missed
- Transparency *“we have no secrets here”*
- Feedback results and outcomes

Leadership and Safety Culture

Regulator Relationship

Build a clear understanding of what compliance looks like

- Attend information sessions
- Educate Regulator early on the company, hazards and safety philosophy
  - Familiarisation visits
  - Involve in workshops
- Ask questions – experienced Regulators understand that educating the Operator will make their job easier
- Stay very close during the assessment phase

Planning and Practice

Planning and Resourcing

Treat the safety case as a 'project' and resource it appropriately

- Dedicated Project Manager, team members with clear responsibilities
- Involve the right people
  - Suitable qualifications and depth of experience
  - Operations staff with practical experience
- Don't underestimate the volume of work required
  - Allocation of resources, spread involvement across the organisation
  - It should not be an "add on" to normal day-to-day work
- As with any project, planning is critical
  - Safety Case Outline (SCO)
- Consider using a pilot study
- Manage internal and external stakeholders

Planning and Practice

Organisational Readiness

Critically assess the organisation's readiness to undertake the safety assessment component

- Key SMS elements must be in place and functional
  - Integrity management, Training, Change management
- Critical operational controls e.g. control of work
- Emergency response
- Process safety information e.g. P&IDs etc.
- Process safety awareness and knowledge – educate!

→ Conduct a gap assessment early-on

Planning and Practice

Fit for Purpose Safety Assessment

"One size" does not fit all

- Methodology/approach must be consistent with current safety management philosophy/culture, e.g.
  - Only use highly technical approaches if that what you usually do
- Often a mix of quantitative and qualitative methods are needed
- Level of detail needed
  - Too little: Difficult to demonstrate requirements have been met
  - Too much: Risk of losing the focus on the highest risk incidents and critical controls

Planning and Practice

Keep it Simple

Everyone understands the safety assessment process and the desired outcomes

- Focus on the key hazards and risks
- Aids the understanding of personnel across the organisation of
  - The major hazards
  - The risk from these hazards
  - Critical control measures
  - How these are related

Planning and Practice

Consistent and Disciplined

A methodical, systematic approach and attention to detail are fundamental to success

- Develop comprehensive procedures for the safety assessment methods – **before you start!**
  - Consistent and repeatable
  - Comprehensive – fully covers scope of safety case and regulatory requirements
  - Fully covers methodology, pre-work requirements, workforce involvement, documentation, basis for decisions
- Discipline needed to stay the course!

Planning and Practice

Continuous Improvement Mentality

Have belief that all the work will be worth it in the end

- Attitude should be to drive for improvement in all aspects of the Safety Case and the supporting systems
- Challenge the status quo – be prepared to accept changes

Planning and Practice

Sustainable

Safety case processes become "The way we do things around here"

- At all times, keep focus on the organisations ability to sustain:
  - The safety assessment processes
  - The outcomes (management of risk controls)
- Should not overly depend on external specialists
- Embed into the SMS, define roles/responsibilities
- Manage changes via an MOC system
- How are the control measures maintained, how can this be demonstrated?
  - ➔ Adequate and meaningful performance monitoring system is needed

Common Pitfalls

- Core systems not sufficiently established
  - SMS not properly implemented
- Not getting started early enough
  - Iteration is usually needed
  - Allow time for the unexpected
  - Insufficient time allowed for management review
- Management buy-in can be harder to achieve than employee engagement
  - Failure to commit to, or follow through on, improvements raised through a safety case process can produce a strong negative impact in safety culture

Common Pitfalls

- Inadequate resourcing
  - Inadequate technical resources
  - No consideration as to how recommendations will be managed and funded

- Selection of inappropriate safety assessment methodologies
  - Not ‘fit for purpose’
  - Conflicts with the legislative requirements
  - Not addressing the “Demonstration of Adequacy” for control measures

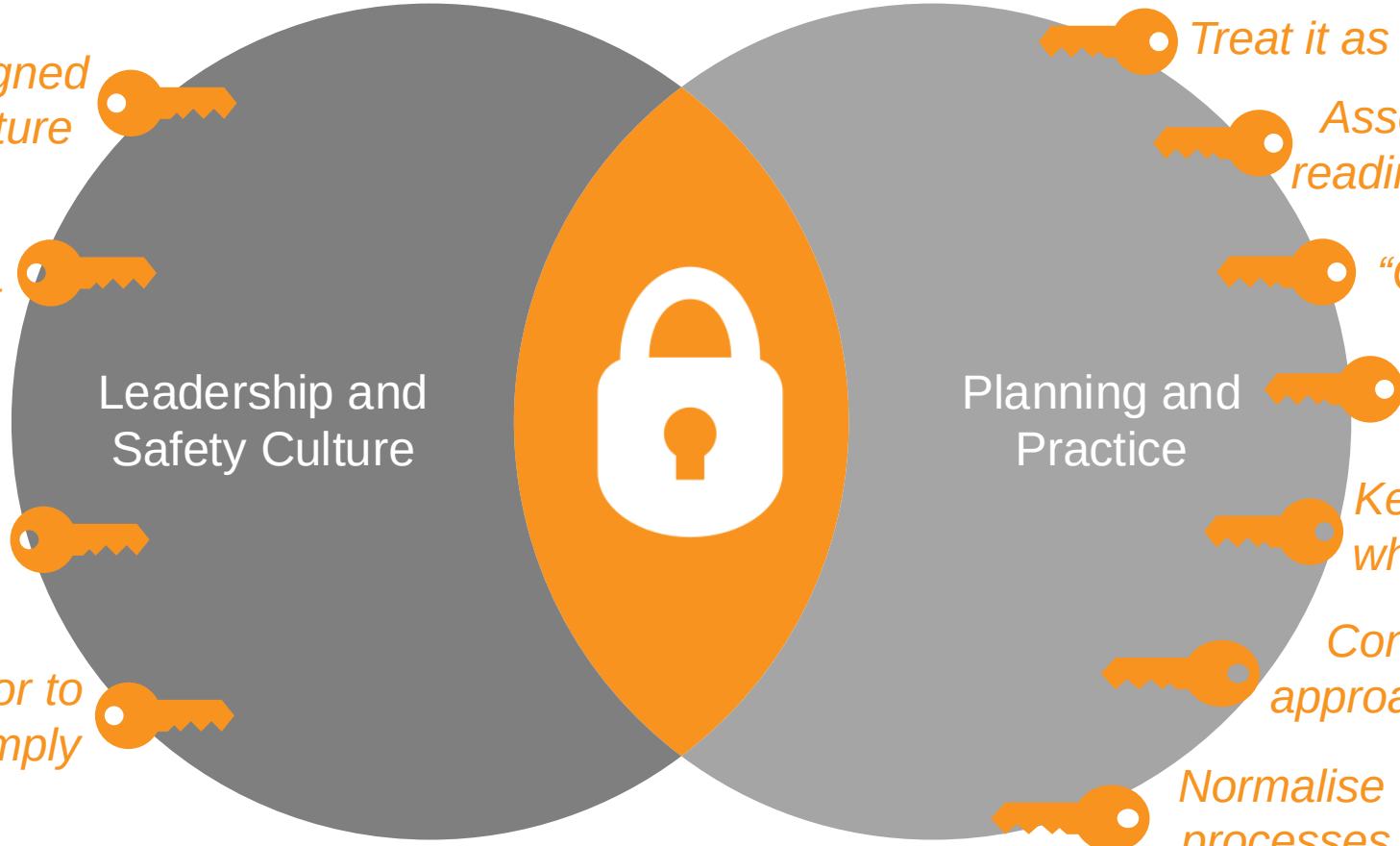
Common Pitfalls

- Multiple sites within one company
  - Non-standard or differing approaches leading to wasted effort, duplication and/or inconsistent outcomes
- Controls performance management
  - Failure to embed controls within the SMS
  - Not understanding the difference between performance monitoring and auditing
  - Not recognising the effort involved, inadequate resourcing
  - Not acting on the results

Review and Revise - Pitfalls to watch out for

- “Been there – done that” (complacency)
- “Tick and flick”
  - Failure to challenge assumptions and findings
  - Not properly considering materials/plant/process changes
  - Failure to learn from incidents
  - Failure to incorporate outcomes of performance monitoring
- No longer treated as a project that deserves proper time, budget, resources
  - Safety case revision becomes a “tack on” to someone’s current role
- Not leaving sufficient time leading to overly compressed timeframes

Keys to a Successful Safety Case



Safety case aligned with safety culture

Strong management commitment and support

Consult early and often

Work with the Regulator to understand how to comply

Treat it as a project

Assess organisational readiness before starting

"One size" does not fit all

Have belief in the outcomes

Keep it simple – understand what you are doing and why

Consistent and systematic approach with attention to detail

Normalise the safety case processes into operations