



EVIDENCE
BASED SAFETY
CHANGE

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OVERVIEW OF PRESENTATION

- Background
- Research - HSW + Employee Engagement Strategy Framework
- Case Study - Recent application in a manufacturing environment
- Where to get further information

BACKGROUND

- A senior practitioner and graduate of the Doctor of Professional Studies in Safety Science, Wellbeing, and Organisational Behaviour at the University of Southern Queensland
- Over 25 years' experience delivering strategic safety, hygiene, wellbeing, and enterprise risk programs for multinational businesses covering the USA, Netherlands, China, Chile, Mongolia, South Africa, and Australia.
- Recognised thought leader in corporate-level strategy and employee engagement, ongoing research collaborations furthering strategic wellbeing and safety thinking, human dimensions of risk, human performance, design and systems thinking.

THE RESEARCH

HSW Strategy and Employee Engagement Framework

Organisational context

- Work as done by employees
- Legislative and compliance requirements
- Organisations Vision and values
- Organisational strategy

Organisational processes

- Role clarity, alignment and contribution
- Leader feedback and mentoring
- Work group support
- Work environment risk controls
- Behaviour change facilitation

HSW Strategy

HSW Employee Engagement

HSW Strategy Efficacy

Dimensions

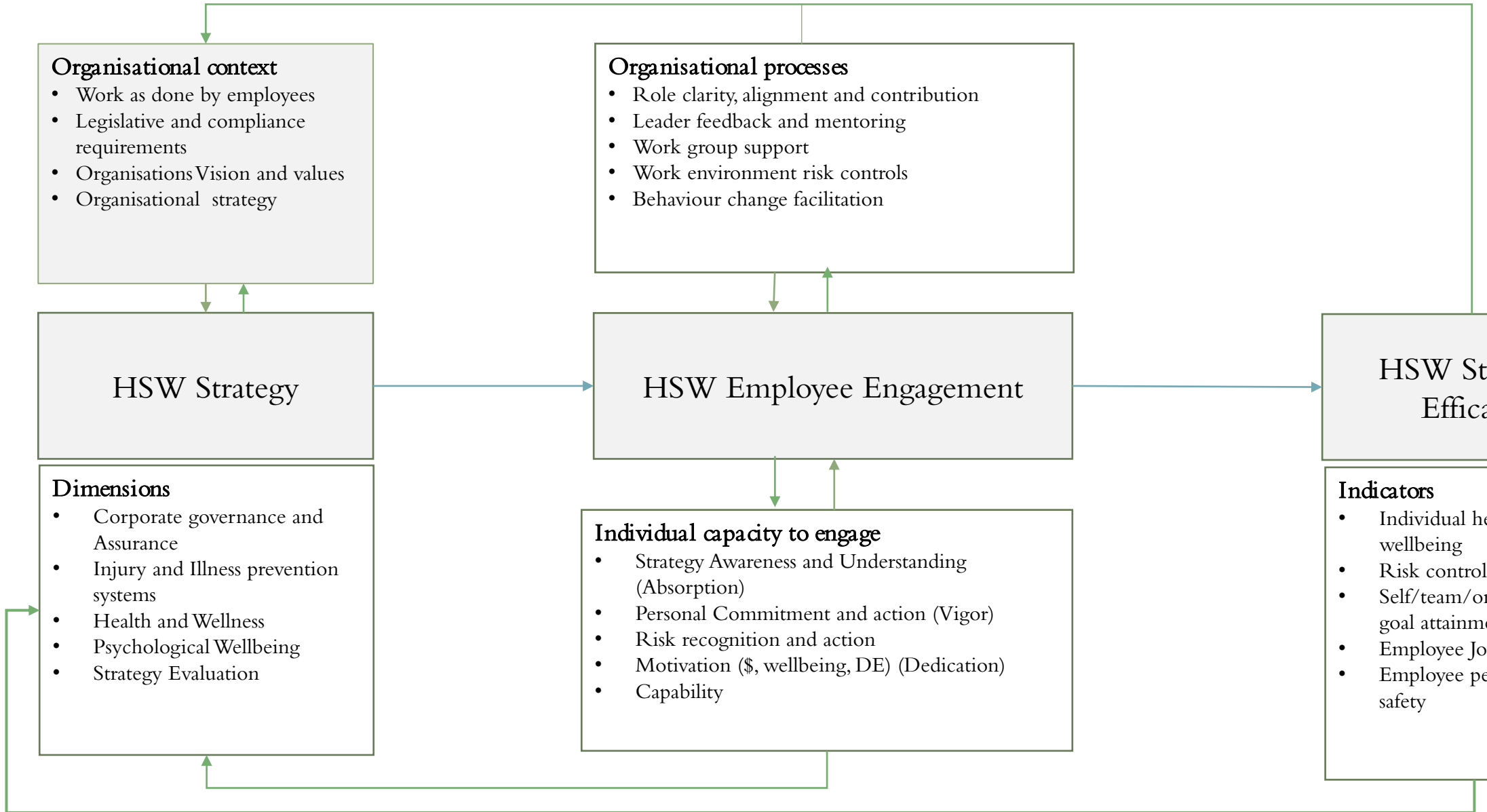
- Corporate governance and Assurance
- Injury and Illness prevention systems
- Health and Wellness
- Psychological Wellbeing
- Strategy Evaluation

Individual capacity to engage

- Strategy Awareness and Understanding (Absorption)
- Personal Commitment and action (Vigor)
- Risk recognition and action
- Motivation (\$, wellbeing, DE) (Dedication)
- Capability

Indicators

- Individual health and wellbeing
- Risk control effectiveness
- Self/team/organisation goal attainment
- Employee Job satisfaction
- Employee perception of safety



CASE STUDY

Timber Manufacturing

Safely

SAFETY IS NOT THE ABSENCE OF EVENTS...

It is the presence of DEFENCES and CAPACITY



THE STRATEGY

1. Fatal Risk
2. Leadership
3. Empowering team members
4. Health and wellbeing
5. HSE management system

Integration as GOOD NORMAL WORK

Underpinned by focus on capacity defined as:

“the collective ability of our people, management systems, and leadership to proactively recognise safety risk and errors and respond without adverse outcomes”.

Positioning the business strategically
(organisational system of safety,
performance-based, Governance + Roles,
Roadmap, decentralised)

People-centric
approach

Capability building at Awareness,
Skilled and Mastery levels.
Microlearning packages. 5-year
roadmap.

Red and Green flags (fixed vs
growth, leadership behaviours,
learning and outcomes)

Organisational Safety Change

Risk normalisation an
organisational issue
(Leadership focus)

Incident investigation to
Event Learning + Good
Work Outcomes. How did
the system set the team up
to fail!

Risk as dynamic not fixed
(Conversation Cards and
Storytelling)

From event silos to
organisational learning
(including packs)

OUTCOMES TO DATE

- A slow burn....change is occurring.
Leaders have embraced most of the strategy, especially the people part.
Good normal work critical discussion and integration.
Event learning and response improved. People are a solution.
Human dimensions of risk are better understood.
Improved connection with other influencing functions (OSS).
Employee engagement improving (FITs).
Health outcomes for key exposures improving.
- Weaknesses
*What does Good Safety Look Like” + symbols of safety
Golden Rules to Golden Controls > Linked to FR*
- Traditional indicators stagnate. Alternates improving.
- A threshold shift in timber manufacturing.

EVENT LEARNING

GOOD WORK OUTCOME

HYND-TIMBER
XLam

Quad Saw Centre Alignment

SITE: Tumbarumba WORK AREA: Green Mill Quad Saw

KEY POINTS

- During planning for band mill grinding activities scheduled for 2021 it was identified that previous controls implemented for the task were not in line with company procedures for Confined Space Entry and work on live equipment.
- Work was put on hold and the team began investigating alternative ways in which the task could be completed.
- Following successfully finding safer alternative procedure/equipment to conduct band mill grinding activities, it was recognised by the team that the level of risk previously accepted during alignment also required challenging.
- Early 2022, the team began planning for quad saw centre alignment and the task was reviewed with the same lens. As a result, the team engaged HSE, Engineering, the site's leadership team and various SME to further assess the risk.

CHALLENGES OVERCOME BY THE TEAM

- Mindset change- 'it's always been done this way', 'the old way is safe enough'.
- Inconsistency in site standard i.e., standard not currently met for all activities.
- Limited industry/ supplier information regarding alternative ways

KEY IMPROVEMENTS/

- Introduction of physical block to minimise risk posed by live side of chipper (a suspended load)
– This included creation of testing method and shutting down of the Greenmill to complete repeated testing.
- Additional controls for pinned (safe) side chipper – crack testing of pin, manual isolation of hydraulics and verification of a secondary mechanical stop.
- Band mill relocation to centre (potential fall from heights) and hydraulically isolated (full isolation instead of alignment isolation previously used to remove crush/entanglement potential of working with hydraulically live equipment)
- Use of crane and platform ladders for pinning of Eli press roles to further manage risk of falls.

LEARNING: A SHIFT IN MINDSET

Why it's important?

- Motivation matters – every individual holds mindsets/attitudes towards safety, their workplace, colleagues, task/job, etc. These attitudes direct their focus and drive behaviours that can either help or hinder their goal of remaining safe in the workplace.

What did we identify?

- Challenge from leadership of "its always been done this way", "the old way is safe enough" attitudes of team members and leadership team.

So what?

- Sustainable change takes effort and commitment
- Asking questions and understanding workers motivations can support them to identify reasons for staying safe in the workplace


SAFETY ENGAGEMENT CARDS

- Themes for the cards:
 - General Hazards
 - Fatal and Catastrophic Risk
 - Health and Wellbeing
 - Company Values
 - LEAD Model
 - Lifestyle/Wellness
 - **Chain of Responsibility**
 - **Construction**
- Used in conjunction with monthly posters and storyboards



**PEDESTRIAN AND PLANT/
VEHICLE CONTACTING**

There is a risk of serious injury or death in our operations where we have vehicles and people interacting such as the log merch and warehouses.



SAFETY THEME *Fatal & Catastrophic Risk*

This safety engagement card features a blue header with a white icon of a forklift and a person. The main text describes a risk of serious injury or death in operations involving vehicles and people. An illustration shows a forklift operator colliding with a worker carrying boxes. The bottom of the card has a dark blue bar with the text 'SAFETY THEME Fatal & Catastrophic Risk' in white.



START A CONVERSATION
Question to Ask

1. What does safety mean to you?
2. What makes you feel safe at work?
3. What are your biggest frustrations to complete a task safely within your area?
4. What safe work practices have you incorporated at home?
5. Are there any improvements you would like to see in your area?



This safety engagement card has an orange background. It features a white speech bubble icon and the text 'START A CONVERSATION' in white, with 'Question to Ask' in a cursive font below it. A list of five questions is provided. At the bottom right, there is a white icon of a hard hat.

Fatal and Catastrophic Risk Storyboard

The storyboard is a tool for team members to tell a story about hazards in their work and equipment that could cause one or more fatalities. The story may be from personal experience or sharing what we know. The purpose is to help everyone gain a shared understanding of risk and how we control it.

Use the Safety Engagement cards to highlight the focus risk category



Specific Task or Equipment Involved: e.g. main bypass valve on thermal oil pipes or work at height task

What can kill me/others?

From bowtie causes or the SWMS, permits etc. what can kill me/others?

What stops me/us from dying?

What stops us from dying? What are the controls I am relying on to make sure I/no one dies

Are those controls enough?

How should the control work?

How do we verify the control is working?

When did we last verify it?

Report any Concerns

Record these in Vault

Is the control affected by the 4 D's? What is being done to fix it?

Think about the Four D's of Capacity
Controls are imperfect and fallible and can be.....

- DEGRADED - Operated beyond design limits or life
- DEFEATED- - Overridden or inappropriately adjusted (poor MoC)
- DELETED - Removed (poor MoC)
- DISMISSED - Not fitted (poor design control or action management)

Current Safety Critical Equipment Issue				Active Simulations/Overrides			
Plant Issue	Maintenance informed (Date)	Work order number	Schedule timeframe	Date	Plant Simulation	Reason for Simulation	Repair Date
Note down and discuss any issues with the safety critical equipment that need priority resolution				Note down and discuss any safety critical equipment overrides or simulations that are active so that everyone is aware and can maintain focus on repair.			

- Have conversations about normal work + hazards
- Tell stories about normal work, has it changed over time? Why?
- What's happening today? What will injure me, Are the controls enough?
- Review Risk registers by walk around. Validate controls.

MORE INFORMATION

- Contact details

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- White papers and peer-reviewed publications

- E-book – Upside Safety: Creating positive organisations through HSW