

Process Safety
Our Story

Contact®



1,000

Employees



553K

Customers



68K

Shareholders

Power Stations



5

Geothermal



4

Thermal



2

Geothermal



9TWh

Generation

7.9TWh

Contracted Electricity
Sales



\$2.9b*

Contracted Electricity
Sales



82%

Renewable

22

Franchises

02

Dist. Networks

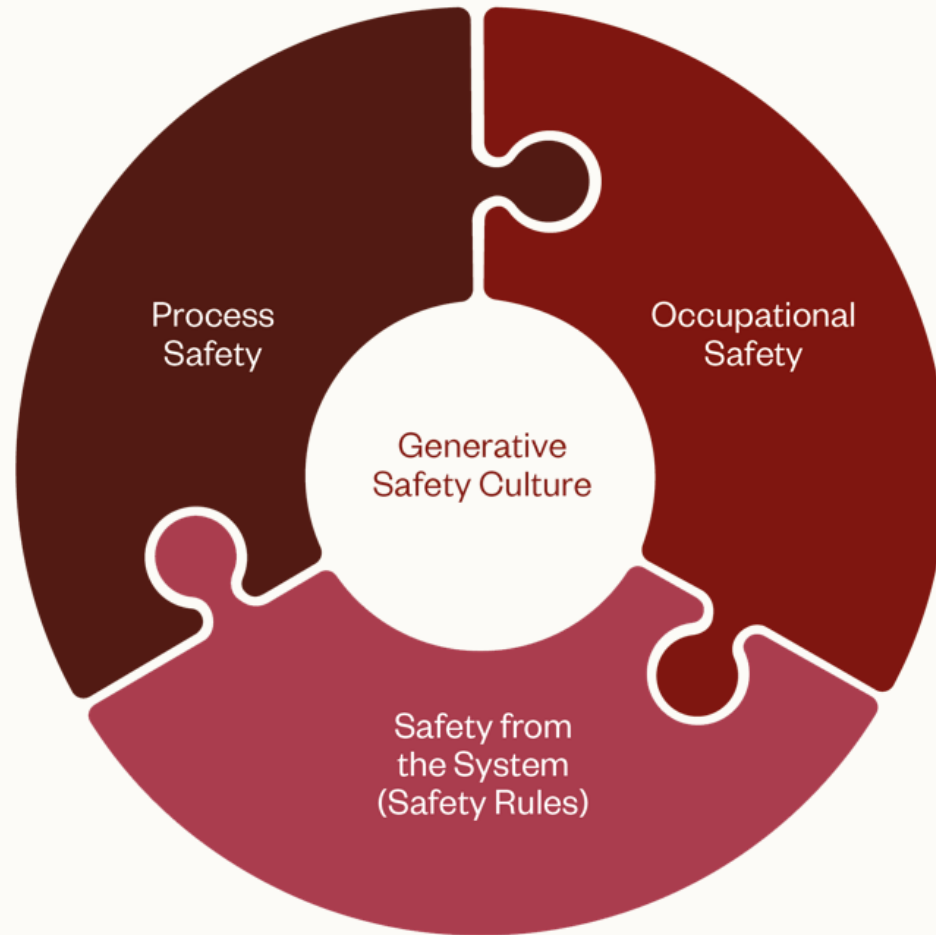


70Kt

Sales

* As at 30 June 2016

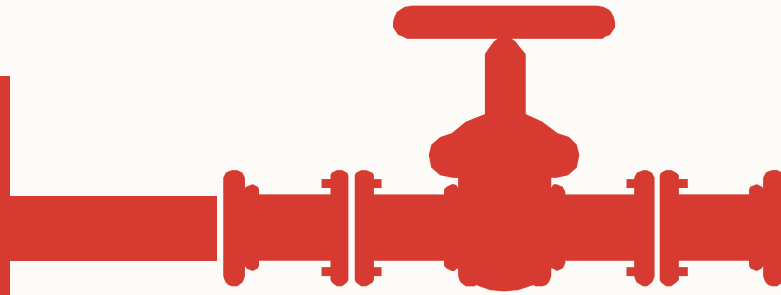
Safety involves 3 key elements



An integrated HSE Management system

What we mean by Process Safety

Keeping the hazards inside the equipment, so we do no harm



electricity in the wires

steam or gas in the pipes

water behind the dam

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Our journey started back in 2012

Are we
doing
enough?

Are we focused on
the right things?

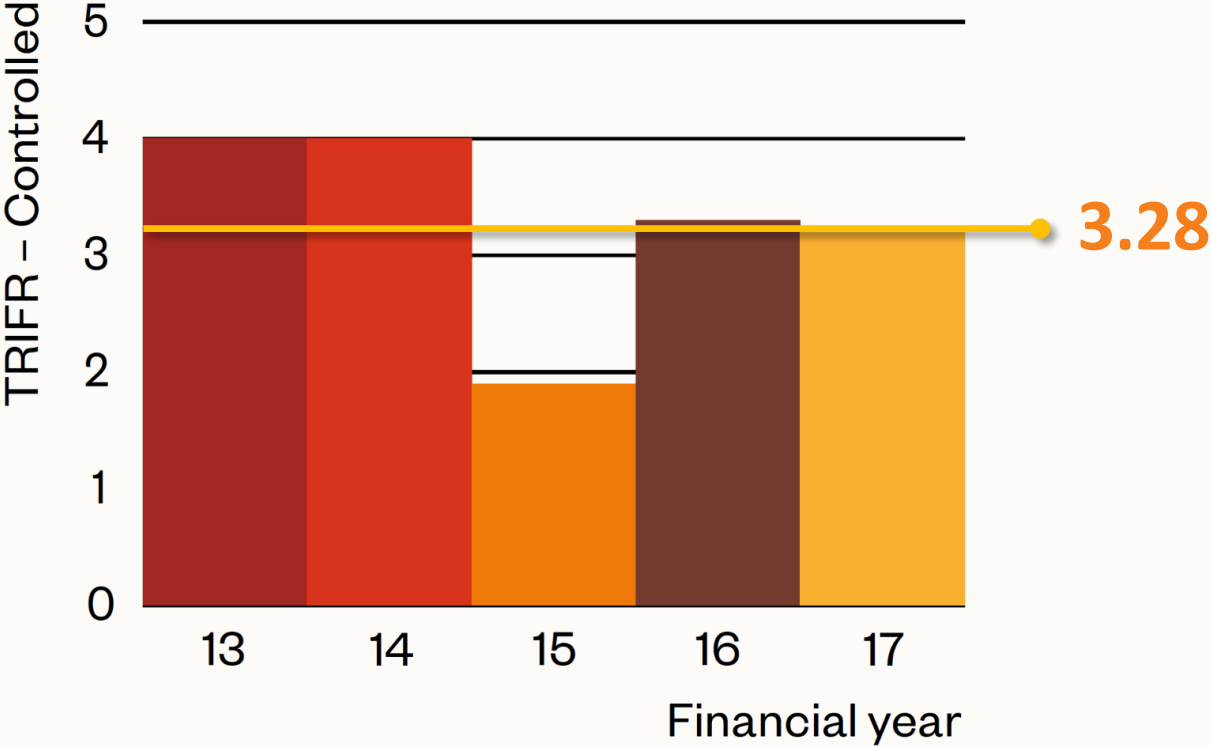
Are we too focused on
occupational safety at the
expense of
process safety?

Do we have
the right
culture?

How's our
process safety
incident
record?

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Our Occupational safety incident record



What about process safety - could we be sure?



What we did

Set Safety Objectives

Plant

- Enhanced plant reliability.
- Safe operations.
- Well maintained risks.

Process

- Improved process transparency.
- Common processes and practices.
- Easy to find/use processes & systems.
- Sustainable processes & systems.

People

- Senior management visibility.
- Increased confidence and assurance.
- Embedded knowledge, skills & competency.
- Embedded process safety culture.

Establish Focus Areas



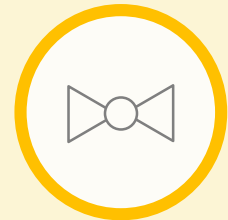
GAP Analysis

Identify Hazards



MAH Analysis

Detailed Analysis



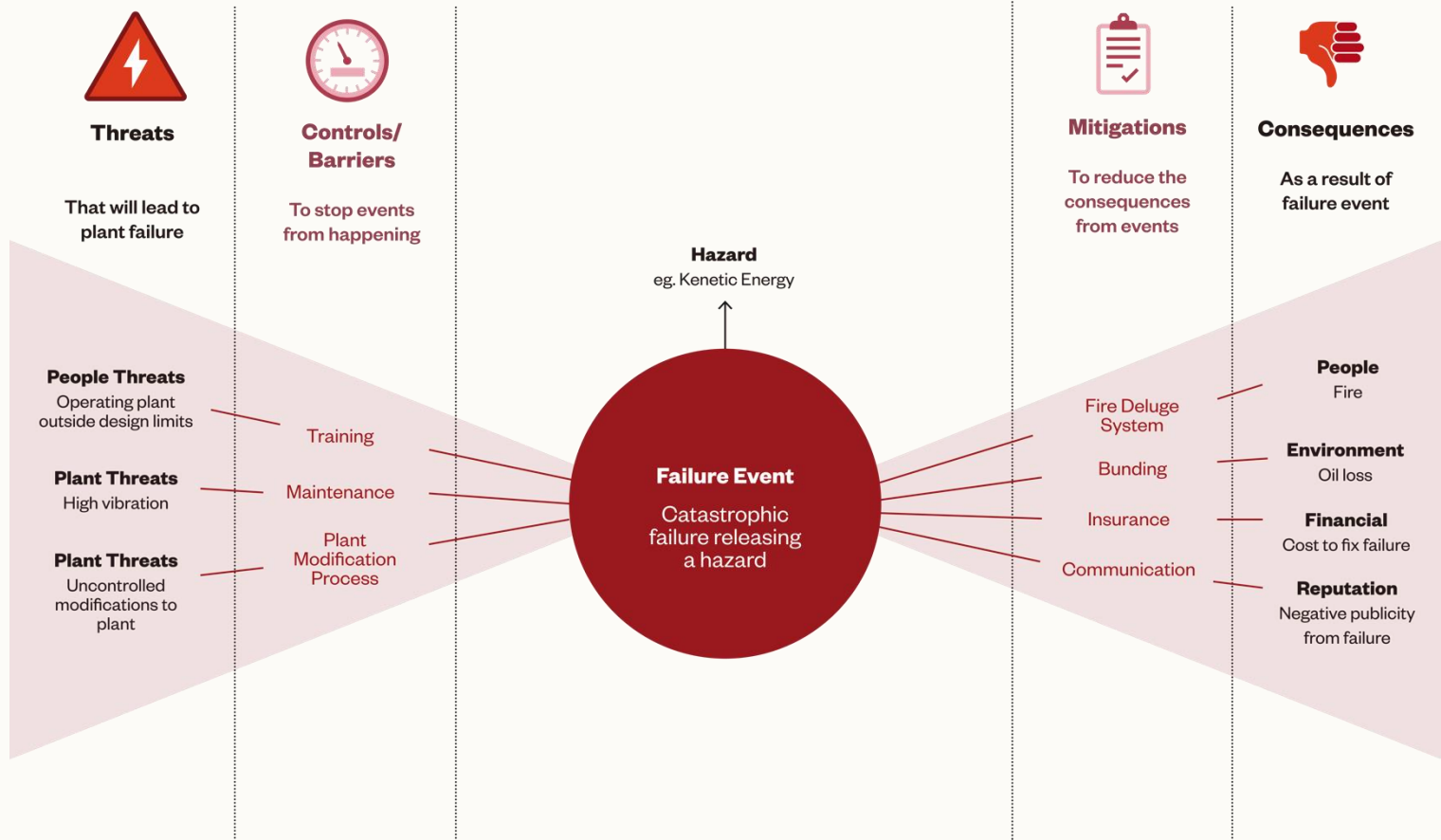
Bowtie Analysis

①

Do we understand what can go wrong?

②

Do we know what our systems are to prevent this happening?



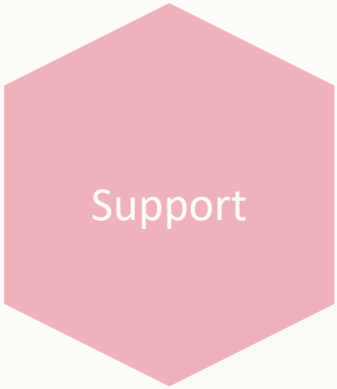
We used Bowties to visualise our major hazards

The glue for our improvement

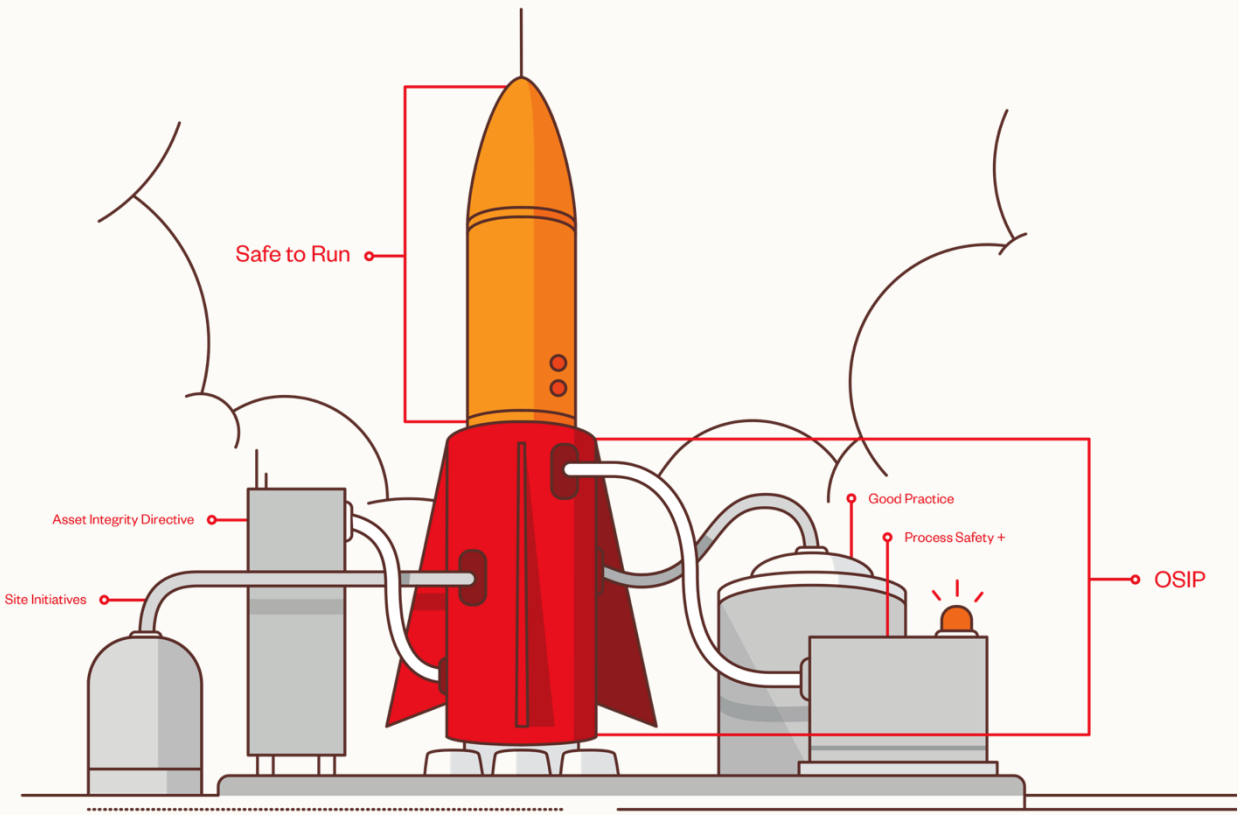


Well-managed change

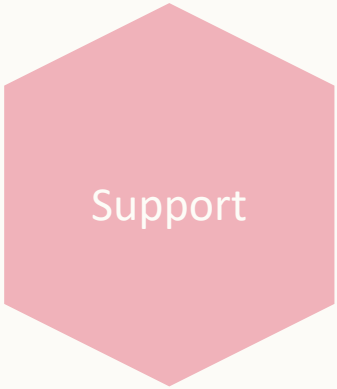
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Single,
integrated
programme



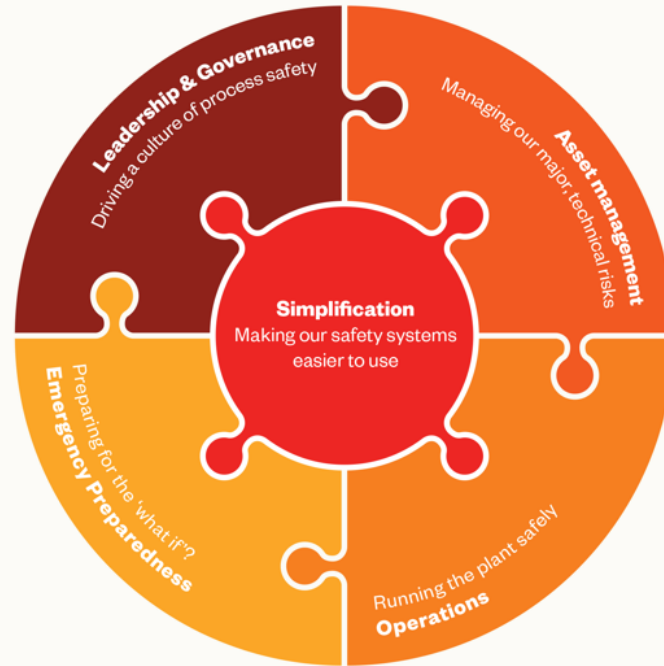
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Designed to
get things
moving faster

OSIP's Focus Areas

Improving our process safety
& smashing complexity



Workstreams

Leadership & Governance

- 1. Process Safety Governance

Asset Management

- 2. Technical Risk Management
- 3. Safety Critical Systems
- 5. Maintenance Management

Operations

- 6. Operations Management
- 7. Staff Competence
- 4. Alarm Instrument Management

Emergency Preparedness

- 8. Emergency Preparedness

Simplification

- 9. Integrated HSE Management System and Documentation Systems



Support

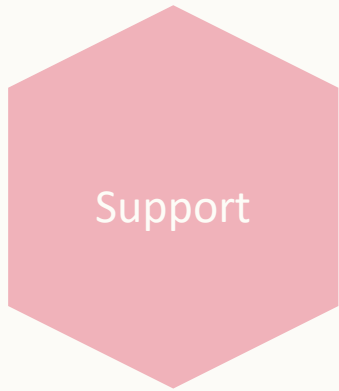
How we
made it
meaningful

We gave it a name that
summed up what we were
aiming for...

'Safe to Run'

It helped us position process
safety as a way of thinking.

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A fundamental
shift in thinking

From...



To...



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We needed a way to engage people in process safety

We asked our people to...

'Leave nothing to chance'

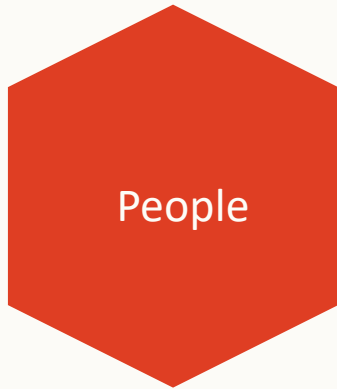
Then brought this to life!

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Support

So, we
personified
chance





It was about
doing it 'with',
not 'to' people

Get
Involved

We enabled as many people as possible to be part of the improvement.

It's yours
to lead

We enlisted 100 Subject Matter Experts from across the business.

Better
together

We emphasised the importance of collective intelligence.

You know
best

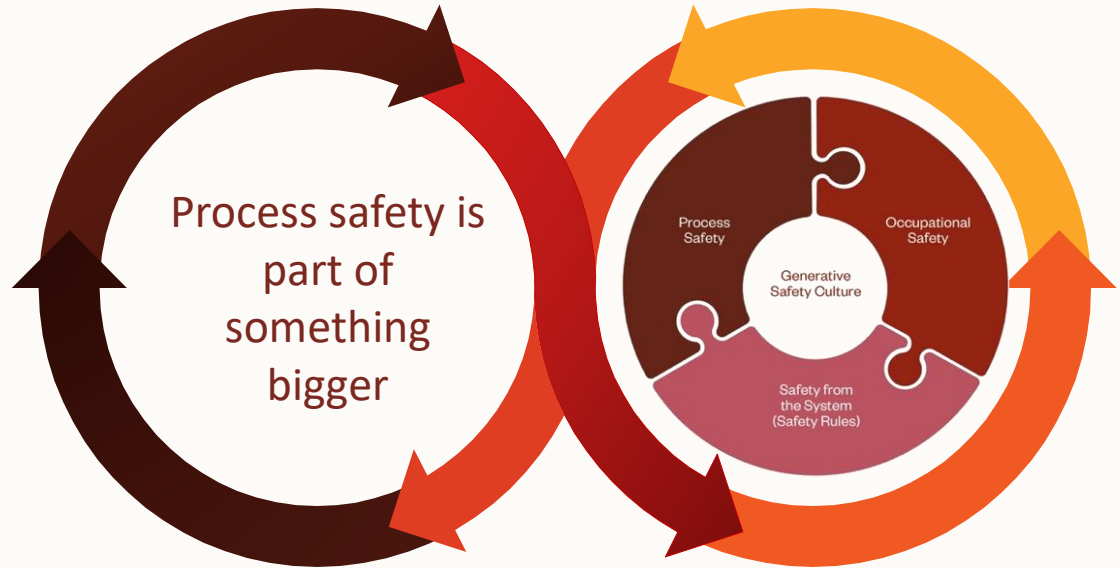
We trusted our people to come up with solutions.

You
make the
difference

We showed people how they could make a real difference.



We integrated process safety into everyday business



Safety is how we do business round here

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Communication

We put a big
focus on
effective
communication



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Commitment

We empowered senior leaders to support, rather than direct, change



Visible leadership

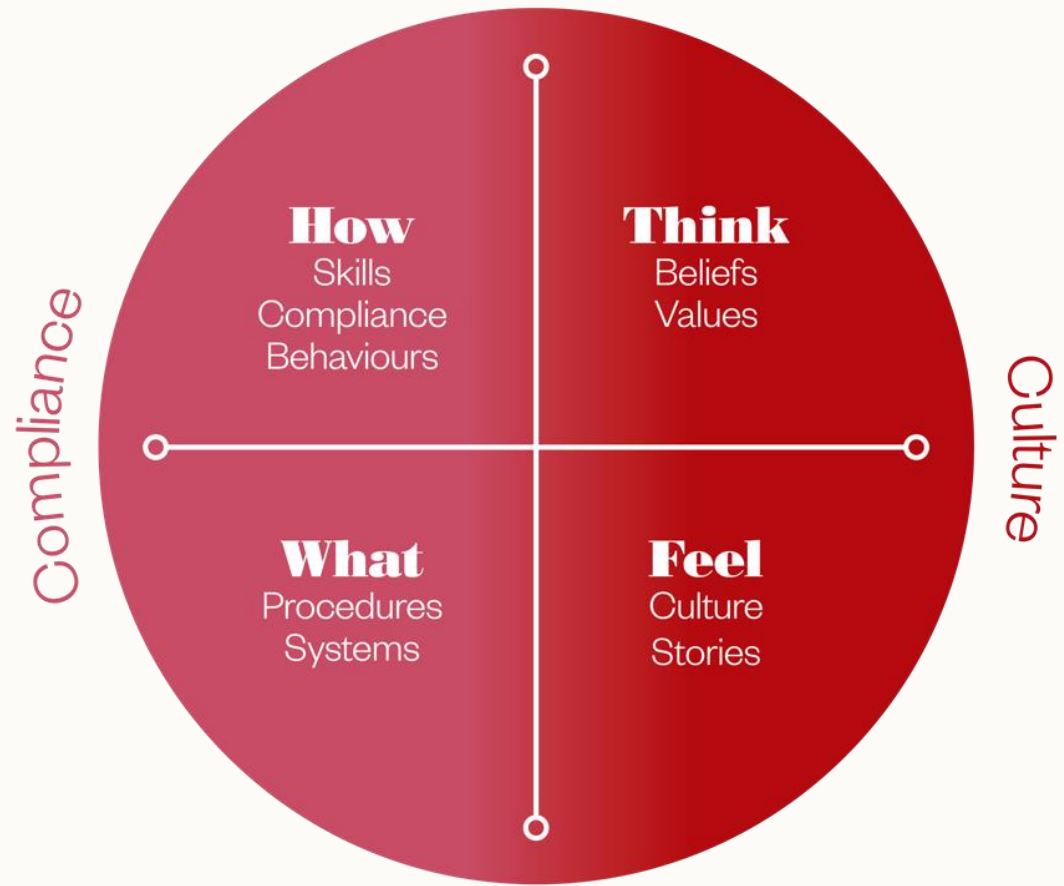
Operations Gathering



Generating success



A culture that supports people to try new things and fail safely



Balancing compliance with culture

Diagram adapted from Ken Wilber, Bob Anderson, Eric Klein, Jim Stuart



Measurement

You can't fix what you can't see

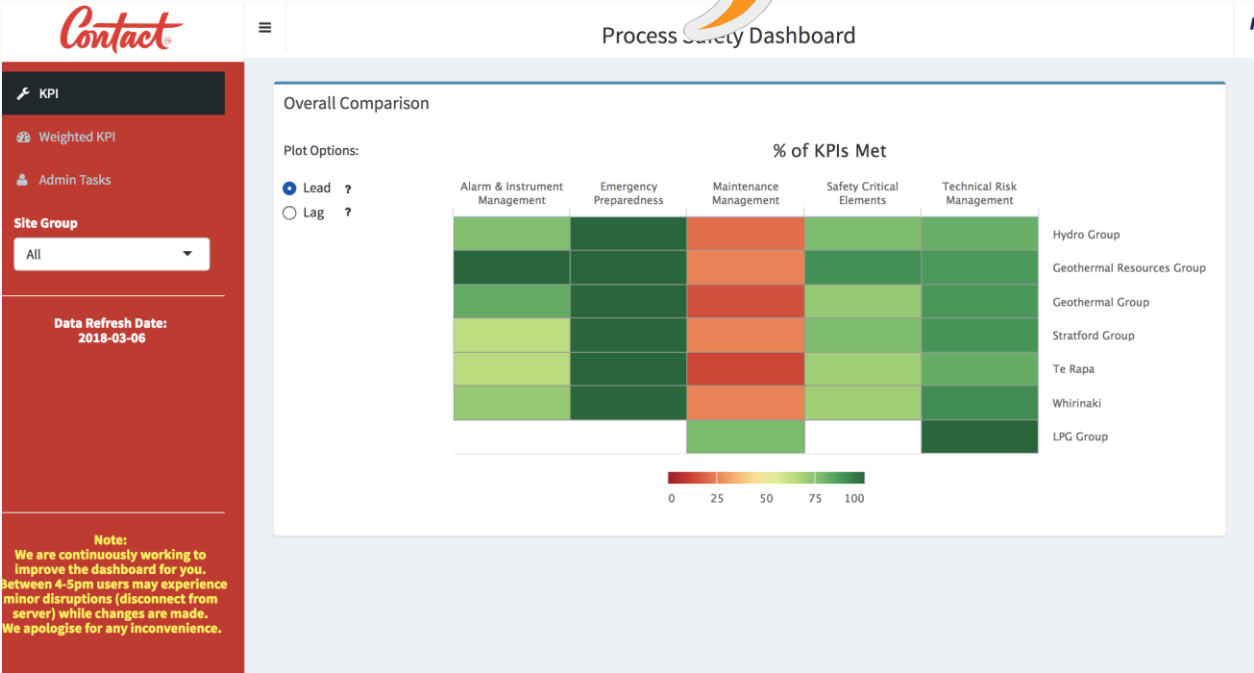


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Measurement

We wanted a clearer view of the performance of all our assets

3 Do we have information to assure us our systems are working effectively?



Red is good, it helps build a picture of where to prioritise resources

Dennis Barnes

Dennis Barnes
Chief Executive Officer



What we learned

It starts
from the top

- Process safety needs to be of corporate importance.
- Executive & Management buy-in/involvement is key.

You need
the right
info

- Benchmark to understand current state.
- You can't fix what you can't see.

It has to be
integrated

- Integrate process safety with other safety disciplines.
- Make safety 'how we do things round here'.

It's about
people

- Enable people to be part of the improvement.
- Enable leaders to support, rather than direct, change.
- Show people where they make the real difference.

What we learned

Engage all the way

- There's more to it than processes and procedures.
- Engage everyone in the change.

Make it simple

- Simple to use and easy to find processes & procedures.
- Keep the language simple.

Don't wait 'til it's perfect

- Aim for perfection, but be practical about it.
- 80/20.

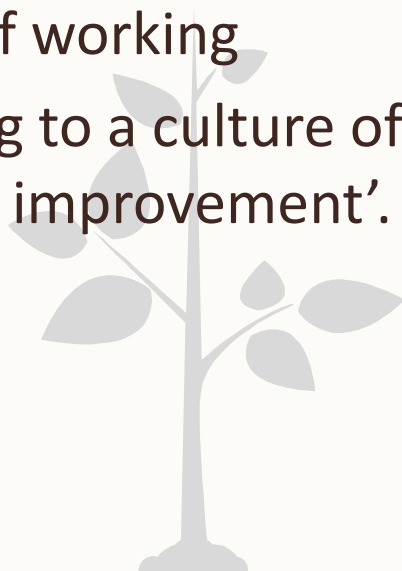
Bring it to life for people

- Use imagery and catchy metaphors.
- Personify it.

Where it's led us

Process Safety has been a catalyst for broader improvements across Contact:

- culture
- leadership
- breaking down siloes
- business process efficiencies
- new ways of working
- transitioning to a culture of 'continuous improvement'.

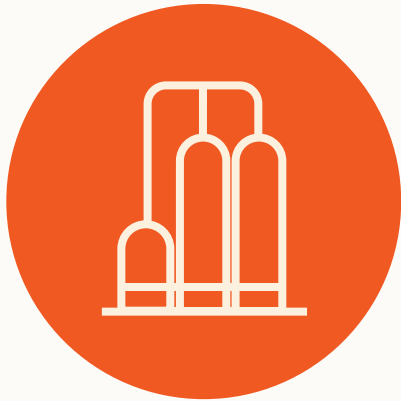


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Thank you

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3



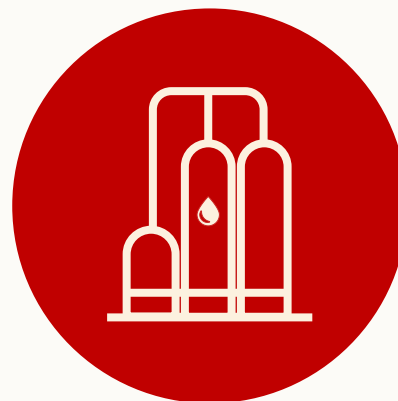
**Upper Tier
Major Hazard
Facilities**

5



**Lower Tier
Major Hazard
Facilities**

1



**Upper Tier
Petroleum Production
Facility**

3



**Hydro Dams with
a 'High' Potential
Impact Classification**