



Safety Culture: A Case Study in the Electric Utility Industry

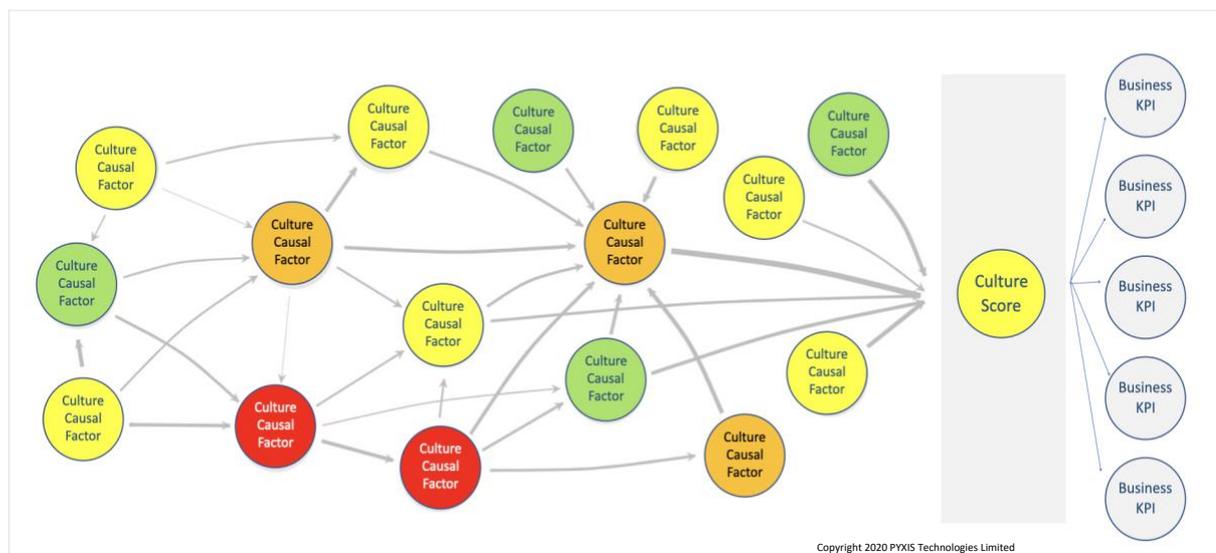
Would you schedule yourself for elective surgery with a 70% chance of failure?

It is now firmly understood that safety in many industries, from automotive and airplane manufacturing to offshore oil rigs and NASA Space Flights, is highly dependent on the internal company culture. But culture is not easy to quantify and manage, and the statistics on effective culture improvement are poor. For the past 30 years, repeated studies have shown that nearly 70% of all culture change programs fail to deliver sustainable improvements in business performance.

At PYXIS we have been pioneering a systems approach to understanding, measuring and changing culture to improve business performance. We call this Culture-as-a-Business-System. Using systems analytics and proprietary algorithms along with internal company data, we have been able to identify and map the factors inside the organization that have a significant impact on employee attitudes and behaviors, and thus business performance.

While some of these factors may be well understood, such as incentives, training and management practices, others are invisible to traditional culture assessments. Internal factors, such as peer pressure, onboarding, hiring profiles, recognition systems, and internal policies and processes have a significant impact on employee safety. Up till now, many of these influential culture drivers have been invisible and therefore not taken into account when trying to improve employee safety.

A US electric utility company developed a safety culture map to identify factors that drive their specific safety culture. Below is an example of a culture map, showing the network of drivers, the overall effectiveness of the safety culture, as well as the impact that culture has on key safety business metrics.



Each factor (culture driver) in the safety culture system has its own effectiveness score (from 0-100%) and color coding showing some as enablers and others as risks to overall safety. The scores are calculated using a combination of internal company data, as well as expert reviews, assessments against best practices, and survey data.

Our algorithm is able to use both structured and unstructured data and can also calculate the relative impact that one factor has on another. Obviously, some drivers will have more impact on the overall effectiveness of the safety culture than others.

As a result of mapping the safety culture, identifying hidden risks and implementing Best Practices, this utility achieved significant improvements in its safety culture. As this chart shows, improvement in safety performance continuously improved over 7 Quarters.

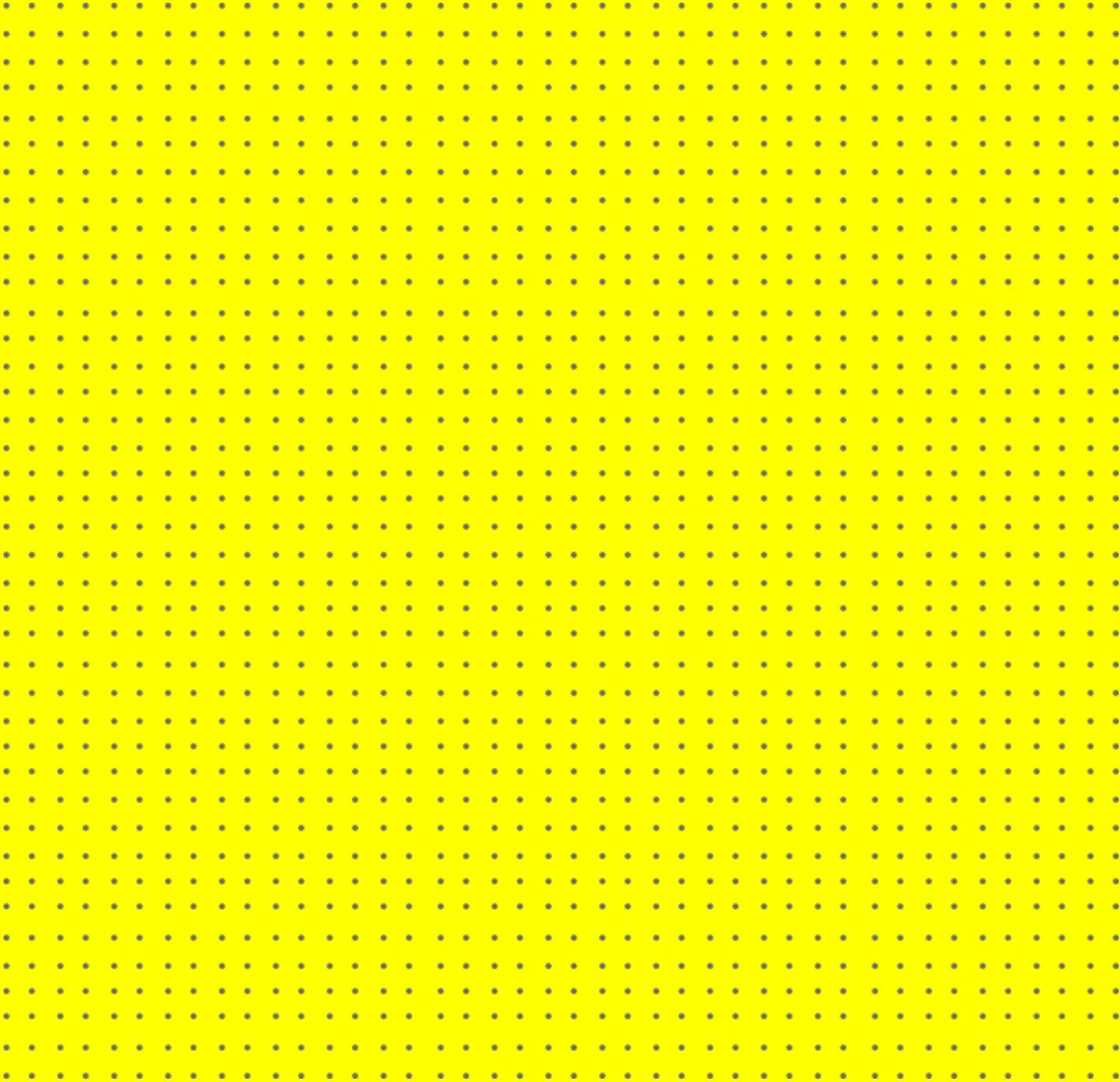
Business Metrics Data Input										
Previous Data			Safety Metric	Safety Culture Data						
Q3 2018	Q4 2018	Q1 2019		Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
3	0	0	Lost Time Injuries	0	3	3	0	0	0	0
1	0	8	Incidents	9	10	12	4	0	1	2
0	0	0	Contact Incidents	0	0	1	0	0	0	0
1	1	1	Repeat Incidents	1	1	2	0	0	0	0
3	0	0	Internal Safety Violations	0	0	0	0	0	0	0
5	6	6	Near Misses	11	2	4	8	0	1	2
204	0	1	Lost/Restricted Days Away	180	14	76	0	0	0	0
22.1	22.1	22.1	Accident Severity Rate	2.21	27.09	114.94	0	0	0	0
ND	ND	ND	Worker Comp Claim	7	6	4	1	0	0	0

It is important to understand that no culture assessment or survey is 100% accurate. Yet a safety culture system map provides greater insight than previous culture change models and helps management understand what really drives culture and where specific changes should be made.

A safety culture system map helps business leaders and safety staff think in different ways about important issues, such as safety and employee engagement. At this particular utility, their safety culture opened up fruitful conversations between the safety team and senior management about how to improve safety and business performance.

“The PYXIS Safety Culture platform and map helps us identify the hidden drivers of our safety culture and make targeted improvements”.

~ COO Electric Utility



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