Kaypear Webinar October 6, 2021



# How do Organizational Structures Impact Culture?

#### Gilsa Pacheco Monteiro

D.Sc., 2020 (COPPE/UFRJ) Visiting Researcher, 2018 - ANU (Australian National University)

## **References:**

## **Papers – Safety Science:**

- How do organizational structures impact operational safety? Part 1 Understanding the dangers of decentralization <a href="https://doi.org/10.1016/j.ssci.2019.104568">https://doi.org/10.1016/j.ssci.2019.104568</a>
- How do organizational structures impact operational safety? Part 2 Designing structures that strengthen safety <a href="https://doi.org/10.1016/j.ssci.2019.104534">https://doi.org/10.1016/j.ssci.2019.104534</a>

## Book:

• Organizing for Safety – How structure creates culture







- The America's tallest earthfilled dam.
- The dam is at Oroville, north of San Francisco.

February 12, 2017: Nearly 200,000 residents downstream from the dam were ordered to evacuate their homes.

<<u>https://damsafety.org/sites/default/files/files/Independent%20Forensic%20Team%20Report%20Final%2001-05-18.pdf</u>> (accessed September 28, 2021)





Service spillway in use and extensively damaged section.

<a href="https://www.mercurynews.com/2018/01/09/oroville-dam-emergency-spillway-erosion-warnings-date-to-1948-1961/">https://www.mercurynews.com/2018/01/09/oroville-dam-emergency-spillway-erosion-warnings-date-to-1948-1961/</a> (accessed 19 February 2019)



<https://www.mercurynews.com/2018/01/09/oroville-dam-emergency-spillwayerosion-warnings-date-to-1948-1961/> (accessed 19 February 2019)

Emergency spillway being used.

Dams should be designed and operated to avoid catastrophic failures.

So, how could this dam have come so close to a failure?



The report on the Oroville Dam incident recommended a change in the organizational structure as the means of creating a strong safety culture.



Ref.: Independent Forensic Team Report, Oroville Dam Spillway Incident, January 2018.

- "There should be a particular manager at the executive level with specific responsibility for dam safety and for managing the trade-off between dam safety and production."
- "The Chief Dam Safety Engineer should report directly to the member of the executive identified above. This would elevate the position of CDSE several steps in the organisational hierarchy. The position would also need much better resourcing."

## **Decentralized vs Centralized Decision-Making**



#### **Decentralized Function**

(Decision-making autonomy is dispersed within the company)



Technical

functions

Corporate center

Asset

Asset

## Centralized Technical Function

## **Understanding the Dangers of Decentralization**



#### **Decentralized Function**

(Decision-making autonomy is dispersed within the company)

Advantages : Faster decision-making processes.

#### **Disadvantages:**

- Variations in the operational practices and standards;
- Higher regulatory risks;
- The structure combines, within the same asset division, all the authority and responsibility for production, costs, schedules and waivers or deviations from technical requirements.







- In a period of two months, other similar waivers have been approved.
- In one of these operations, a flammable vapour cloud was formed within the facility area and ignited, leading to a fire that severely injured two operators.
- Without independent checks and balances, the structure allowed the creation of a local culture in which degraded safety margins became accepted.
- This defective safety culture was reinforced after each further waiver and the substandard operation was normalized.

**Normalization of deviance:** *"a gradual erosion of standards of performance as a result of increased tolerance of nonconformance." Ref.:* CCPS. 2018. *Recognizing and Responding to Normalization of Deviance,* Wiley, New York.



## **Case 3 – The 2010 Gulf of Mexico Blowout**



**Disastrous Decisions** The Human and Organisational Causes of the Gulf of Mexico Blowout Andrew Hopkins



## **Case 3 – Organizational Restructure After the Macondo Accident**

#### Independence **Centralized Safety Function** CEO Central safety and operational risk function **Business line** Independent safety and operational risk expertise, Delivery of safe, reliable and Safety Business supporting and auditing business implementation of compliant operations. Leader Unit Leader Expertise and assurance the OMS and its practices. **Operational delivery** Safety Professional **Provision of Technical authority Services** 2 CEO Expertise Competency, Audit Deployed Local S&OR in safety and capability operations operational and safety professionals Safety Business leadership risk Leader Unit Leader Physical decentralization Safety (Safety experts deployed in local business units) Professional

Ref.: British Petroleum (BP). 2011. Sustainability Review 2011. <u>https://www.bp.com/content/dam/bp/business-</u> <u>sites/en/global/corporate/pdfs/sustainability/archive/archived-reports-and-translations/2011/bp\_sustainability\_review\_2011.pdf</u> (accessed 18 August 2019).

## **How Structures Impact Culture**



# How Can Leaders Create or Change the Organizational Culture?

• "... leaders who do want to change culture and improve risk management in their business must implement effective structural change which institutionalizes the culture they strive for."

Dame Judith Hackitt – Former Chair of UK HSE In Hopkins, A. 2019. Organising for Safety – How structure creates culture?, p.V.



Liders need to establish the <u>institutional arrangements</u> which will promote the culture they strive for. Kaypear Webinar October 6, 2021



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