Safety Moment - How Our Values Correlate With SMS

- The safety of our personnel and the public is paramount. Pipeline safety directly influences and impacts employee and public safety.

- Our customers trust us to deliver natural gas to their homes and businesses safely and reliably. Our employees trust that the Company has provided them with the resources to perform each job safely – and the Company trusts its employees to carry out each job safely.

- PSMS and SMS programs drive performance and improvement on a continual basis. Playing offense is part of Southern Style, and PSMS supports that mindset.

- We are absolutely committed to the safety of our employees, our assets, and the affected public safe. This is an unwavering commitment from our leadership and each employee. Pipeline safety and safety excellence is a culture that we are committed to.

Our Values

Safety First
We believe the safety of our employees and customers is paramount. We will perform and maintain every job, every day, safely.

Unquestionable Trust
Honesty, respect, fairness and integrity drive our behavior. We keep our promises, and ethical behavior is our standard.
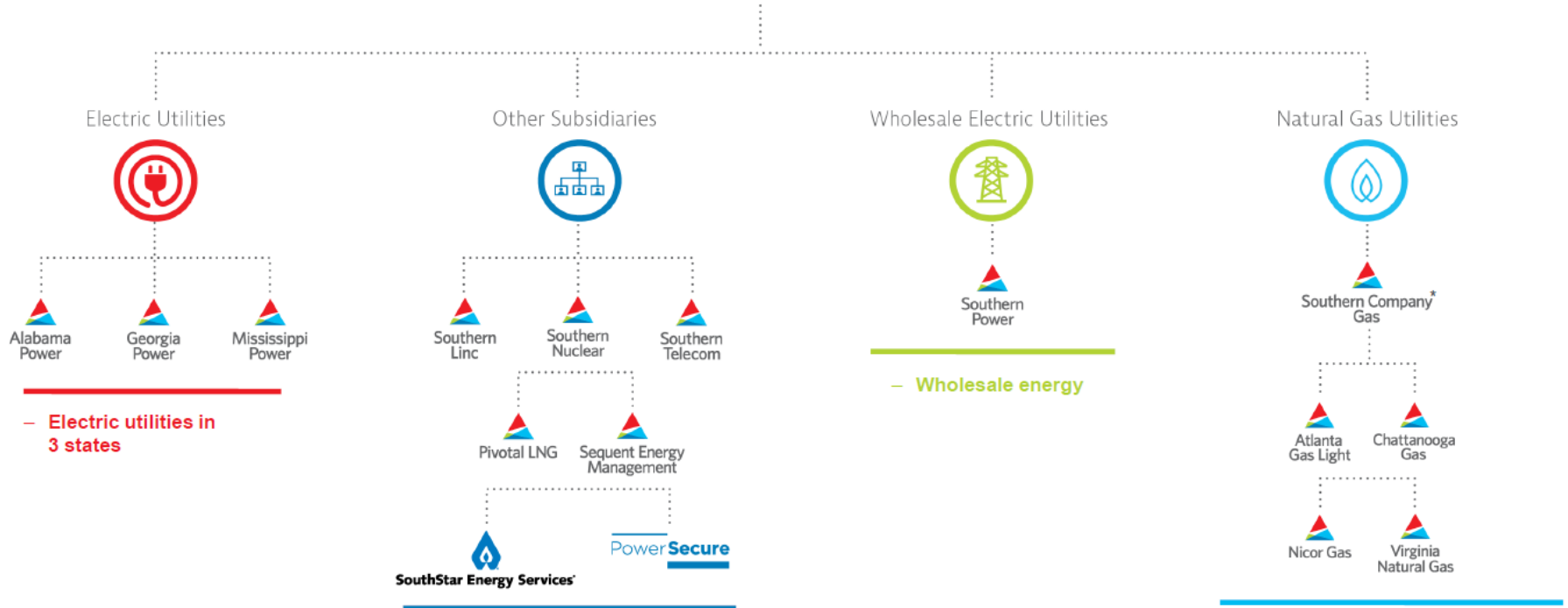
Superior Performance
We are dedicated to superior performance throughout our business. We will continue our strong focus on innovative solutions, improving how we run our business and our commitment to environmental stewardship.
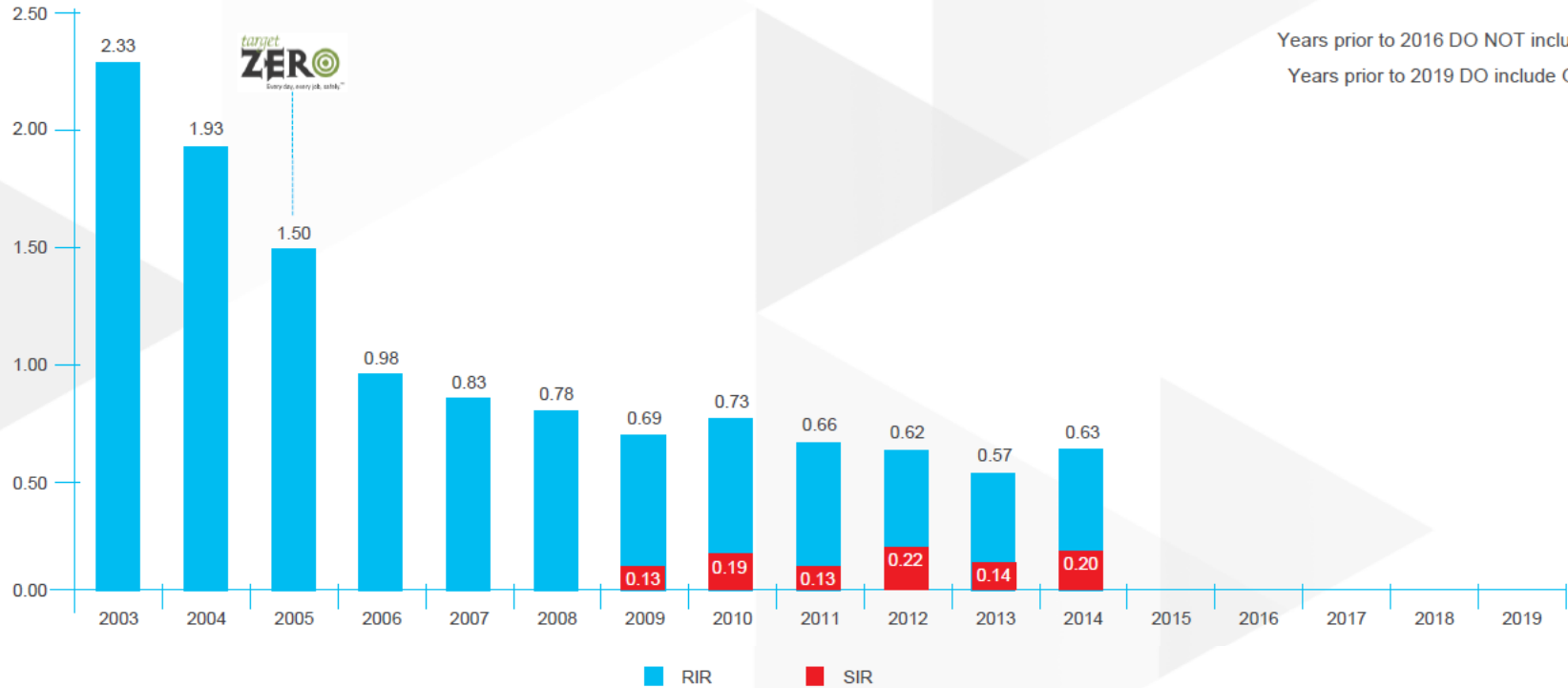
Total Commitment
We are committed to the success of our employees, our customers, our shareholders and our communities. We fully embrace, respect, and value our differences and diversity.

Southern Company System Overview

Where We Started and "Target Zero"

Years prior to 2016 DO NOT include SoGas

Years prior to 2019 DO include Gulf Power

Year	RIR	SIR
2003	2.33	
2004	1.93	
2005	1.50	
2006	0.98	
2007	0.83	
2008	0.78	
2009	0.69	0.13
2010	0.73	0.19
2011	0.66	0.13
2012	0.62	0.22
2013	0.57	0.14
2014	0.63	0.20

■ RIR   ■ SIR

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Safety Evolution Timeline at Southern Company

2005	2016	2017	2018	2019

PSMS Program Launch

PSMS Process Mapping

PSMS Analyses & Roadmap

Target Zero

Conducted Safety Culture Survey

New Measures Removed RIR

SHMS Framework

CRM Implementation

Safety Behavior and Metrics Focused on Heinrich's Triangle

Heinrich Triangle Reexamined
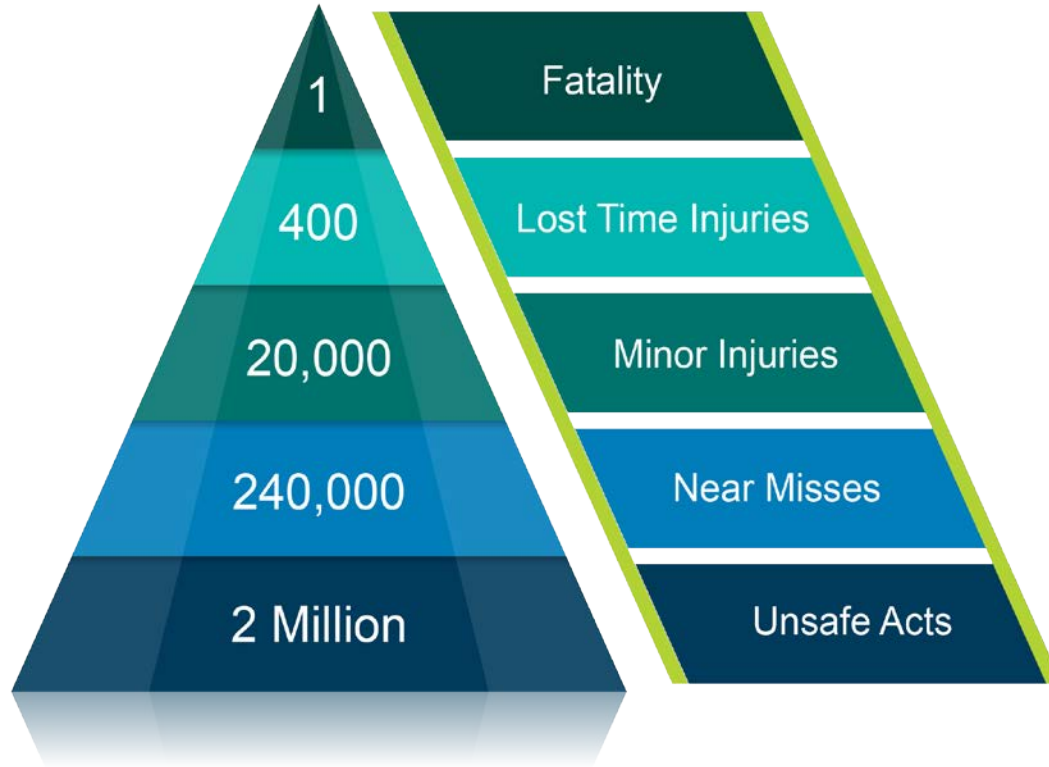
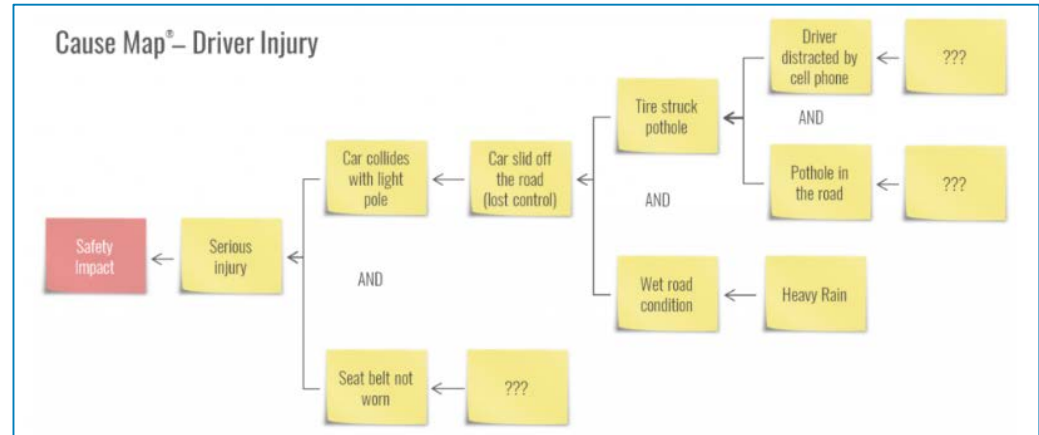*"There has been much confusion about the original ratio in industrial accident prevention. It does not mean, as we have too often interpreted it to mean, that the causes of frequency are the same as the causes of severe injury. ==National figures show that different things cause severe injuries than the things that cause minor injuries.== Statistics show that we have been only partially successful in reducing severity by attacking frequency."*

- H. W. Heinrich

Heinrich, Herbert William, Daniel Petersen, and Nestor Roos. 1980. *Industrial accident prevention: A safety management approach.* 5th edition. New York. Mcgraw Hill.

Shifting the Mindset to Understanding the "Why"

- A utility operates in a complex environment that requires high reliability.
- While barriers add value, understanding behavior and culture is essential to driving excellence and eliminating larger safety events.
- Safety is not static – therefore problems must be anticipated and identified early through organizational learning and sharing.
- Formalized frameworks and management systems allow for consistency, tracking and continual improvement.

Swiss Cheese Model v Cause Map. *Holes in the Swiss Cheese Model?*
Thinkreliability.com

Safety Approach at Southern Company Gas
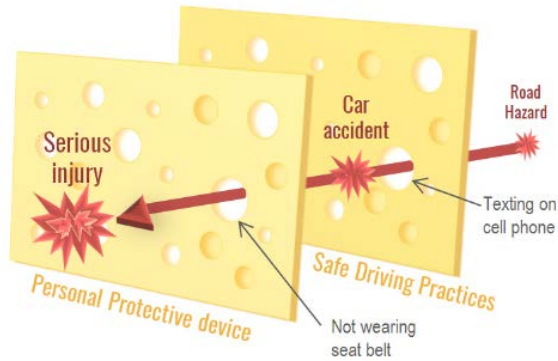
Manage Critical Risks and Controls

Improve Risk Competence

Event Learning, Culture & Human Performance

Become a Learning Organization

Safety Management Systems
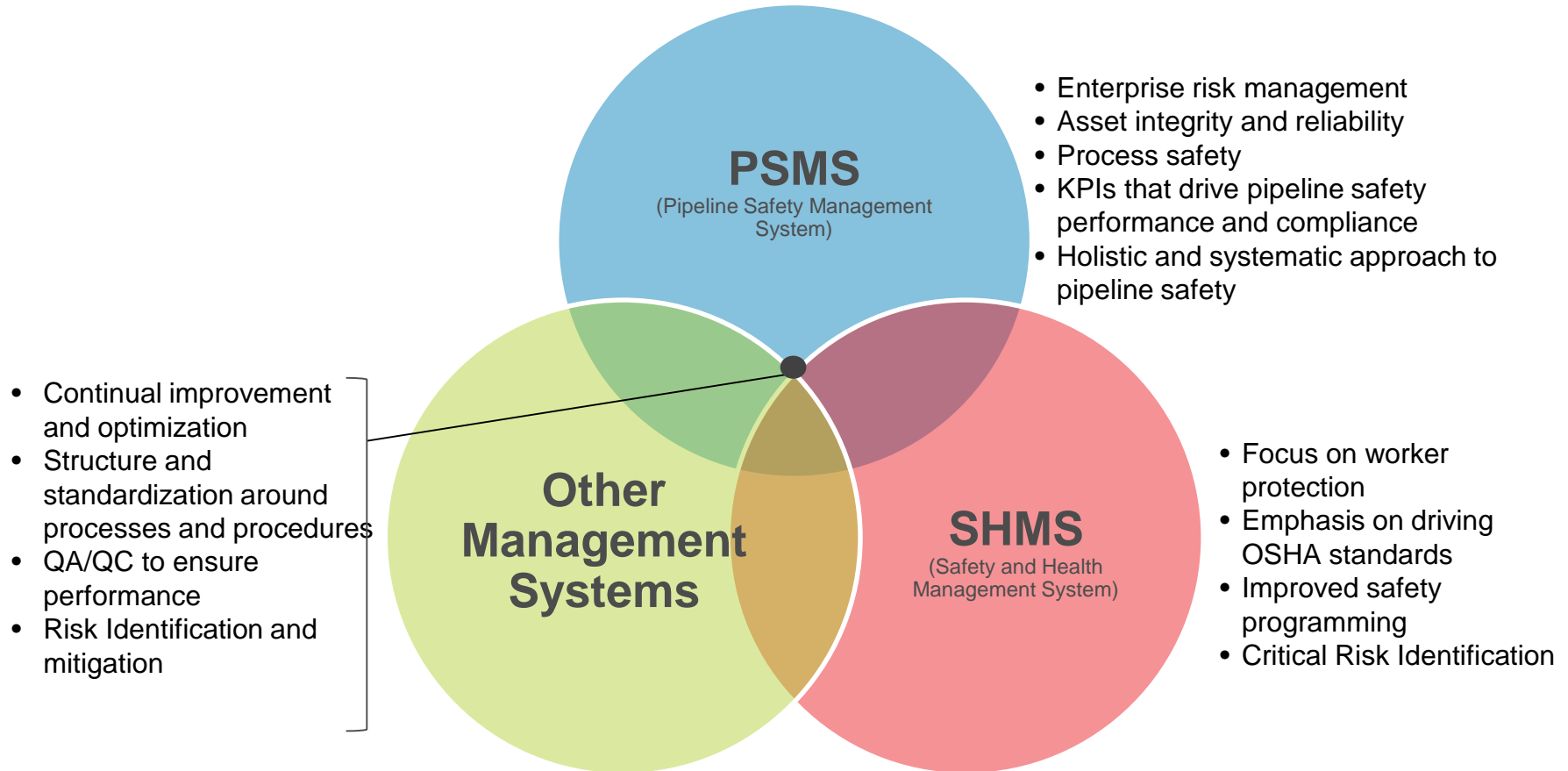
Continuous Process Improvement

What is a Management System – and what is an SMS?

- Synonymous with Process Safety, Systems Engineering

- Occupational Safety v. Process Safety
  - Occupational Safety hazards usually affect one individual worker at a time. On the other hand, process safety hazards may cause major accidents and have catastrophic effects and can result in multiple injuries/fatalities.*

- API RP 1173 provides a framework for pipeline operators developing, maintaining, and continuously improving a Pipeline SMS.

- SHMS framework based on OSHA and ISO 18001 standards relating to occupational safety.

- The framework introduces practices such as corrective action processes and formalizing complex processes, fostering improved communication channels – as well as building on many of our existing processes.

- Promotes an environment of continuous improvement, not maintaining the status quo, and is present in other industries – including nuclear, aviation, and chemical.

*Hopkins, A, *"Disastrous Decisions: The Human and Organisational Causes of the Gulf of Mexico Blowout."*

Safety Management Systems Complement One Another

PSMS
(Pipeline Safety Management System)

- Enterprise risk management
- Asset integrity and reliability
- Process safety
- KPIs that drive pipeline safety performance and compliance
- Holistic and systematic approach to pipeline safety

Other Management Systems

- Continual improvement and optimization
- Structure and standardization around processes and procedures
- QA/QC to ensure performance
- Risk Identification and mitigation

SHMS
(Safety and Health Management System)

- Focus on worker protection
- Emphasis on driving OSHA standards
- Improved safety programming
- Critical Risk Identification

The APEX program aligns leadership commitment with comprehensive pipeline safety management and continuous improvement activities to drive a culture of safety & excellence that enables Southern Company Gas to become the safest, most reliable, and most innovative natural gas company in the US.
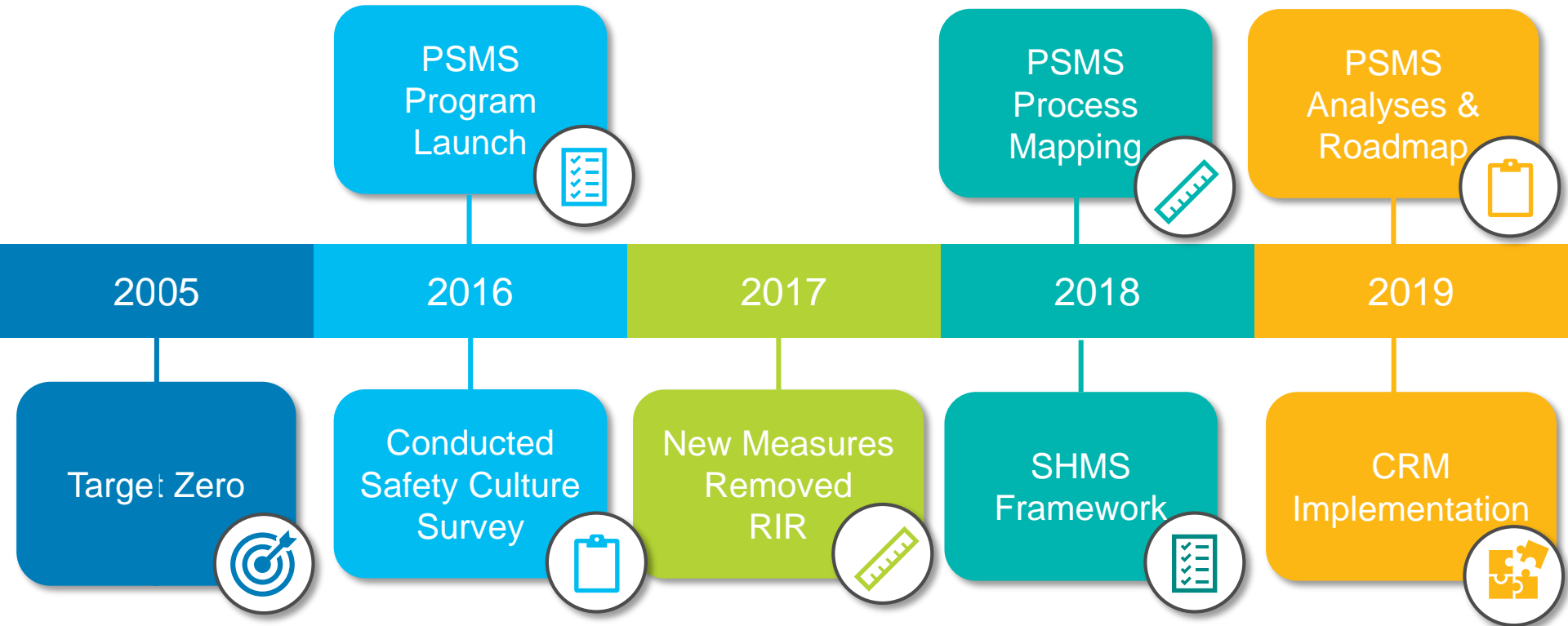
Leadership and Management Commitment

Throughout the benchmark interviews, senior leadership commitment was consistently rated higher than middle management commitment. However, distinctions were frequently made between verbal leadership support and actual resource allocation and investment made in developing, implementing, and sustaining a PSMS program.

25% Verbal Leadership Commitment

13% Actual Leadership Investment

62% Limited Leadership Support
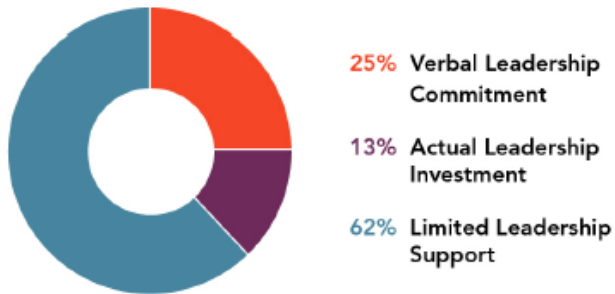
Barriers to executive leader commitment include:

- A lack of actual investment (money and resources) in the program beyond verbal recognition of its importance.

- Different priorities and ownership across distinct regions and operating units, organizational structures, and disparate operations from mergers and acquisitions.

- Not aligning key business metrics to the program early on to promote PSMS-supportive behaviors.

*Mosaic, "*2018 PSMS API RP 1173 Benchmark Report.*"

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Safety Evolution Timeline at Southern Company

2005	2016	2017	2018	2019

2016: PSMS Program Launch

2018: PSMS Process Mapping

2019: PSMS Analyses & Roadmap

2005: Target Zero

2016: Conducted Safety Culture Survey

2017: New Measures Removed RIR

2018: SHMS Framework

2019: CRM Implementation

System-Based Performance

Years prior to 2016 DO NOT include SoGas
Years prior to 2019 DO include Gulf Power

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2011	0.66	0.13
2012	0.62	0.22
2013	0.57	0.14
2014	0.63	0.20
2015	0.61	0.14
2016	0.81	0.19
2017	1.08	0.11
2018	1.37	0.13
2019	1.43	0.08

RIR   SIR

System-Based Performance and Next Steps

- Continue to implement and mature within the frameworks of PSMS and SHMS. Focal points around culture, risk management, and organizational learning.
- Work the roadmaps developed by analyses through initiatives and programs.
- Measure progress on program maturity and implementation as metrics are developed.
    - Develop key performance indicators of system performance as maturity enhances.
- Consolidate and standardize process, where applicable, and align SHMS and PSMS efforts.

Questions?