

Management values, Leadership, and Safety climate

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Key ideas

There is nothing more practical than a good theory

(K. Lewin)

- Define climate and culture: both are ill-defined
- Identify the sources of climate: culture & leadership
- Proper metrics as key to managing culture/climate

What gets measured, gets rewarded hence managed

A practical theory for Safety Climate

What is organizational climate?

Functional view

- Climate reflects shared (socially verified) assessments of the workplace, i.e. which behaviors are likely to be rewarded & supported (collective sense-making)
- Such shared perceptions are valuable in ambiguous situations: competing operational demands (safety vs. speed), espoused policies vs. enacted practices
- Safety climate reveals the perceived priority or value of acting safely, as assessed and mutually verified by employees (leaders' daily actions as main cues)

Climate as indication of true priorities

'walk-the-talk' test

- Use a safety-climate scale whose items refer to supervisory/peer practices in situations where safety and production present competing demands
- Members pay special attention in such situations because they provide clearest indication of the true priorities (role behaviors likely to be supported)
- **Multilevel model:** Strategic and supervisory leaders may adopt divergent priorities (bounded variation), resulting in distinctive group- and org. level climates

Measuring climate

Multilevel model

Safety-climate scales should identify managerial/peer practices under competing demands (speed vs. safety)

Employees discriminate between practices of senior vs. supervisory leaders (use different cues)

Scale items (Zohar & Luria, 2005):

My supervisor-

- *Refuses to ignore safety rules when work falls behind schedule*
- *Is strict about working safely when we are tired or stressed*

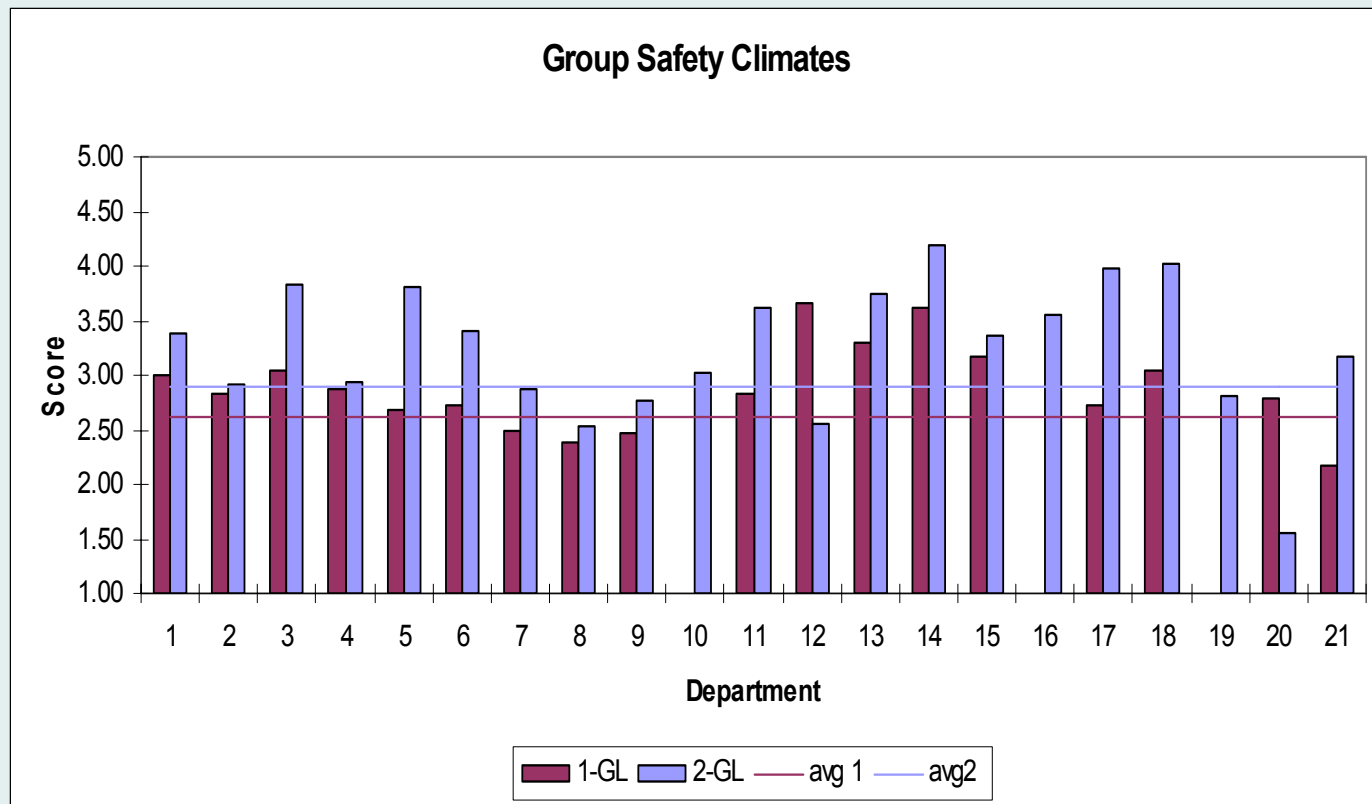
Senior management -

- *Quickly corrects any safety hazard (even if it's costly)*
- *Considers safety when setting production speed and schedules*

Measurement example: Heavy Steel

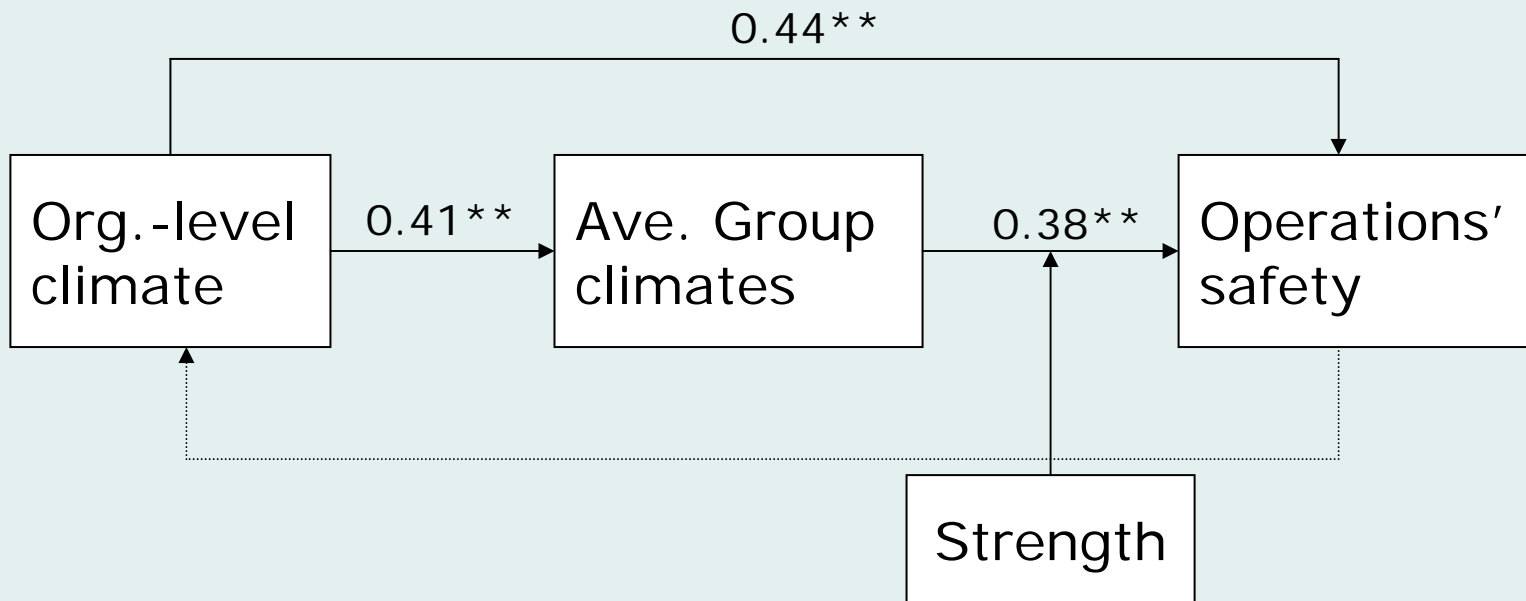
21 workgroups (Zohar & Stuewe, 2006)

Before-after; Group and Org. Climates



Climate predicts safety performance

413 workgroups (Zohar & Luria, 2005)



A practical theory for Safety Culture

Where does climate come from?

What is organizational culture?

Schein's 3-tier model

- **Deep tier:** Shared assumptions about world - human nature, work, management, safety (deeply buried)
e.g. Safety as injury; Safety as compliance (discipline)
- **Surface tier:** Wide range of visible expressions, or artifacts (easy to observe but difficult to interpret)
e.g. Many elaborate safety rules; Rule-based training
- **Middle tier:** Espoused values/beliefs, justify company goals & policies (but discrepancies create ambiguities)
e.g. Safety as no. 1 vs. Safety without disrupting efficiency

Yet, without metrics, culture remains unmanageable (current state of affairs)

Leaders create culture

Operational framework

- **Daily verbal exchanges** between leader & members is a key source of social influence (concrete task issues)
- **Symbolic content or sub-text**, as perceived by the recipient, identifies deeper culture-shaping messages:
 1. True priorities among competing goals, demands
 2. Formal policies vs. informal recognition (discrepancies)
 3. Espoused vs. enacted values (openness vs. authority)
 4. Words vs. actions (e.g. empowerment vs. control)
- **Multilevel model**: Senior leaders create org. culture; Group leaders create sub-cultures for each unit

Improvement of org. culture

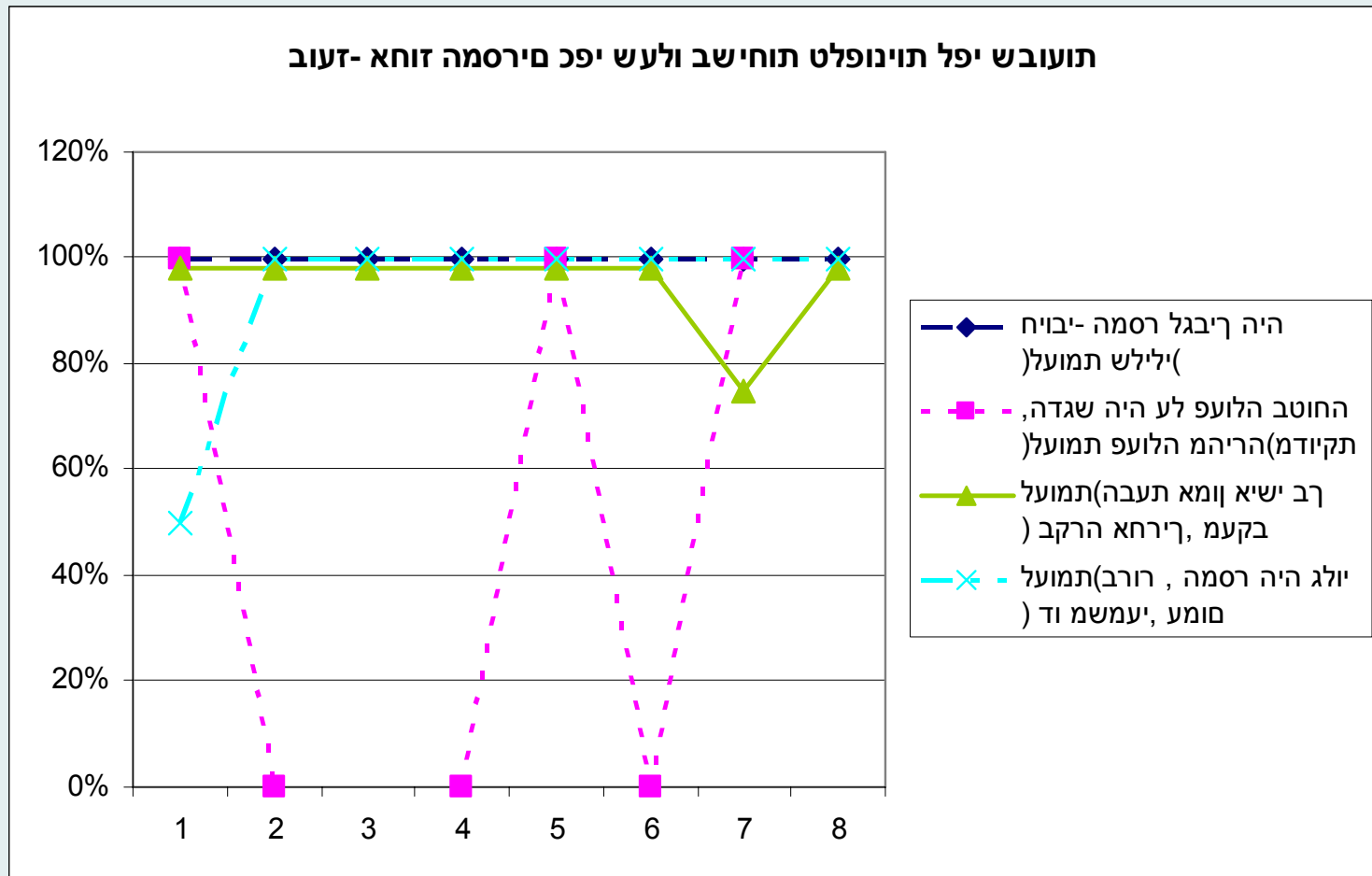
- it is all about the metrics

Symbolic content (sub-text) of daily leaders' exchanges offer an observable culture metric (% messages):

- **Recipients as human detectors:** use a tailored checklist of perceived sub-textual cultural messages
- **Quality-control methods:** use random sampling of exchanges (by consent; agreed sampling framework)
- **Immediate analysis** of each sampled exchange, using recipients as interpreters (3-min. process)
- **Remote measurement:** use cell-phone & internet to collect data, analyze it, and offer bi-weekly personal FB

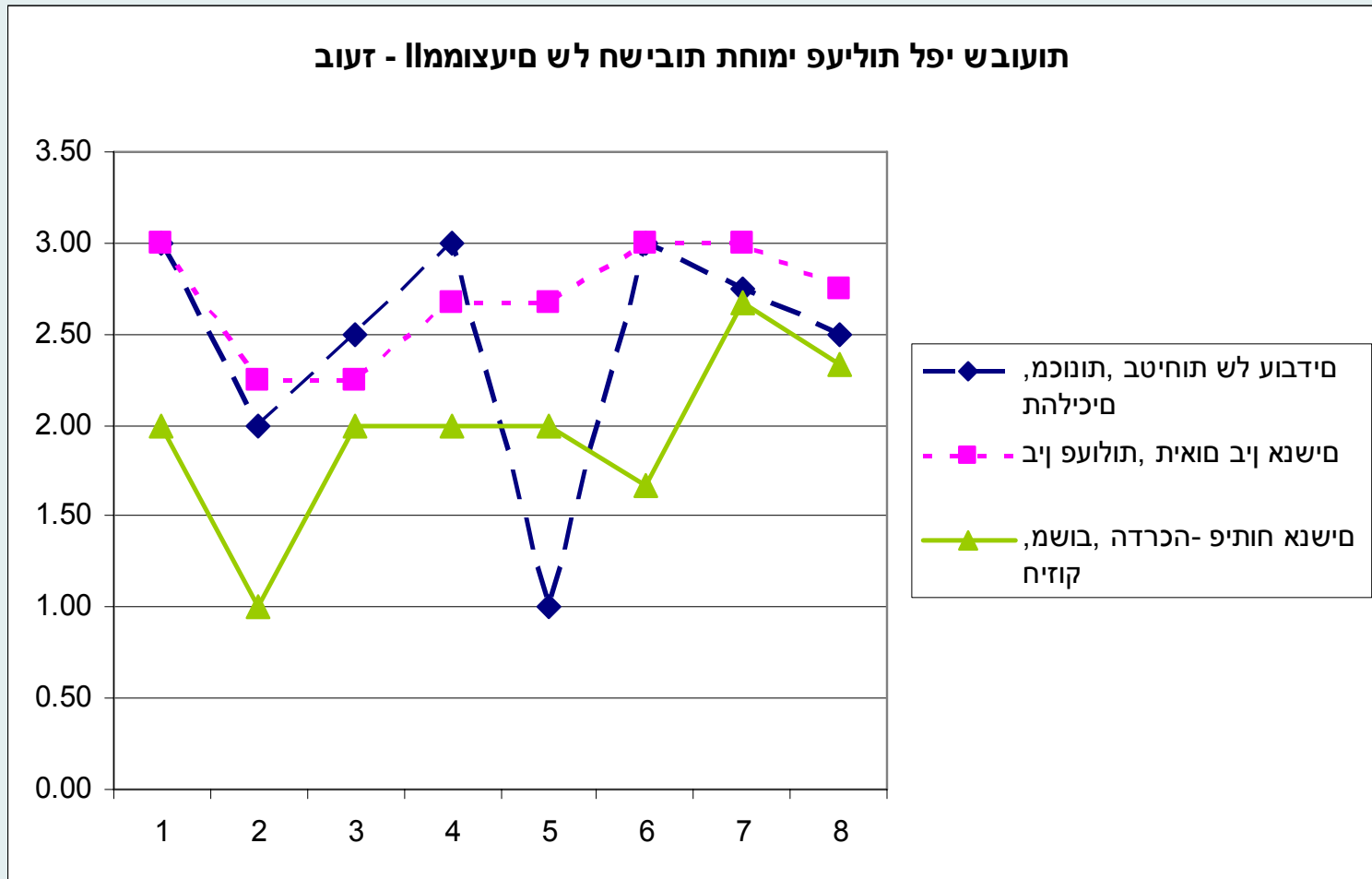
Measure culture with CEO messages (Marble Works)

- Metrics reflect perceived **leader** messages



Measure culture with lower level messages

- Metrics reflect daily priorities by **subordinates**



Meeting the safety culture challenge

Senior leader exchanges can change safety culture:

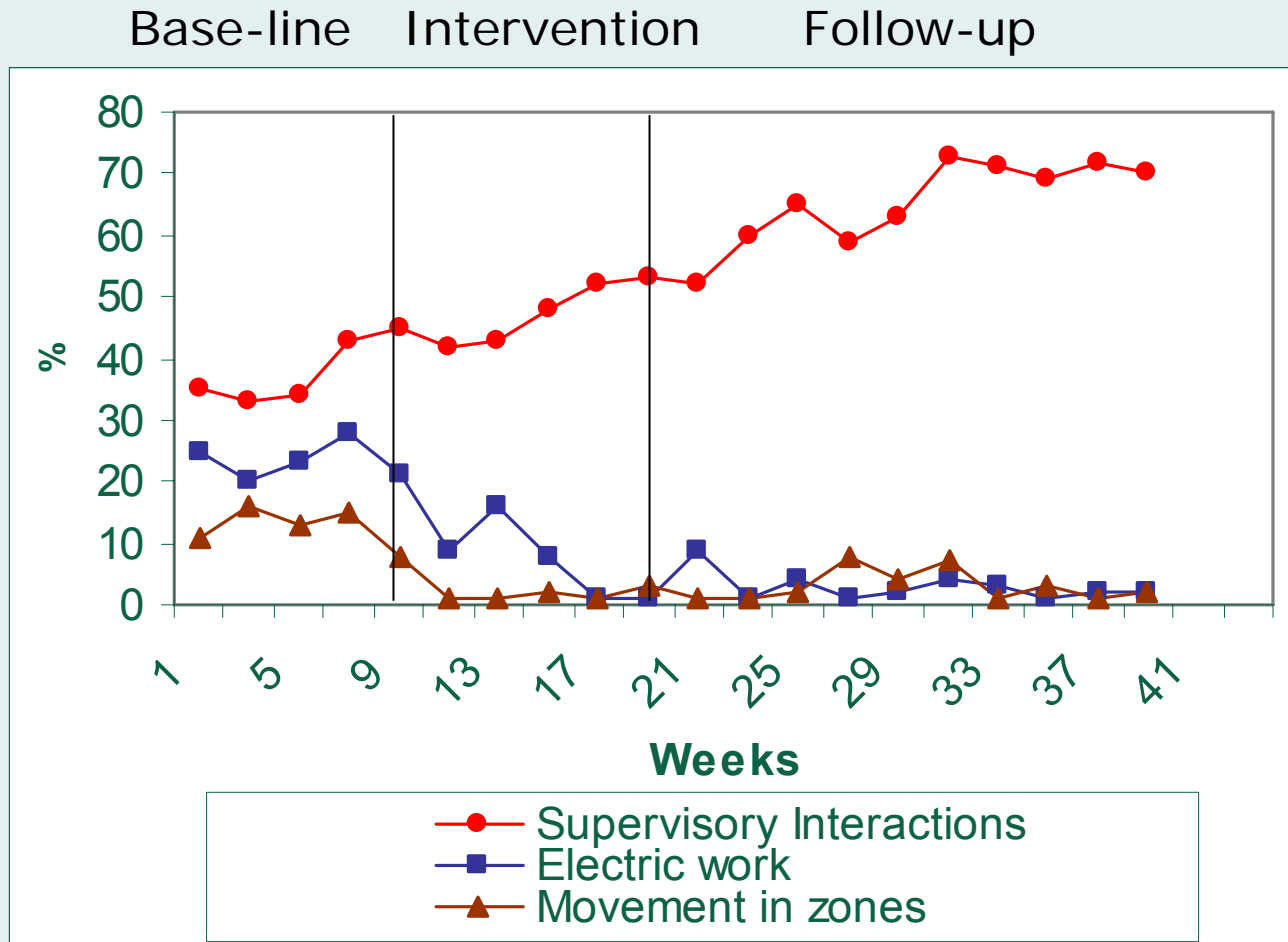
- **Modify basic assumptions:** from safety-as-injury to safety-as-(ongoing) reliability
- **Reverse the priority/utility** due to the high incentive power of frequent recognition/attention: $U_{\text{safe}} > U_{\text{unsafe}}$
- **Leverage culture to improve safety climate** as the key mediator of employee performance (coffee-filter model)

What gets measured, gets managed (culture & climate)

Applications and interventions

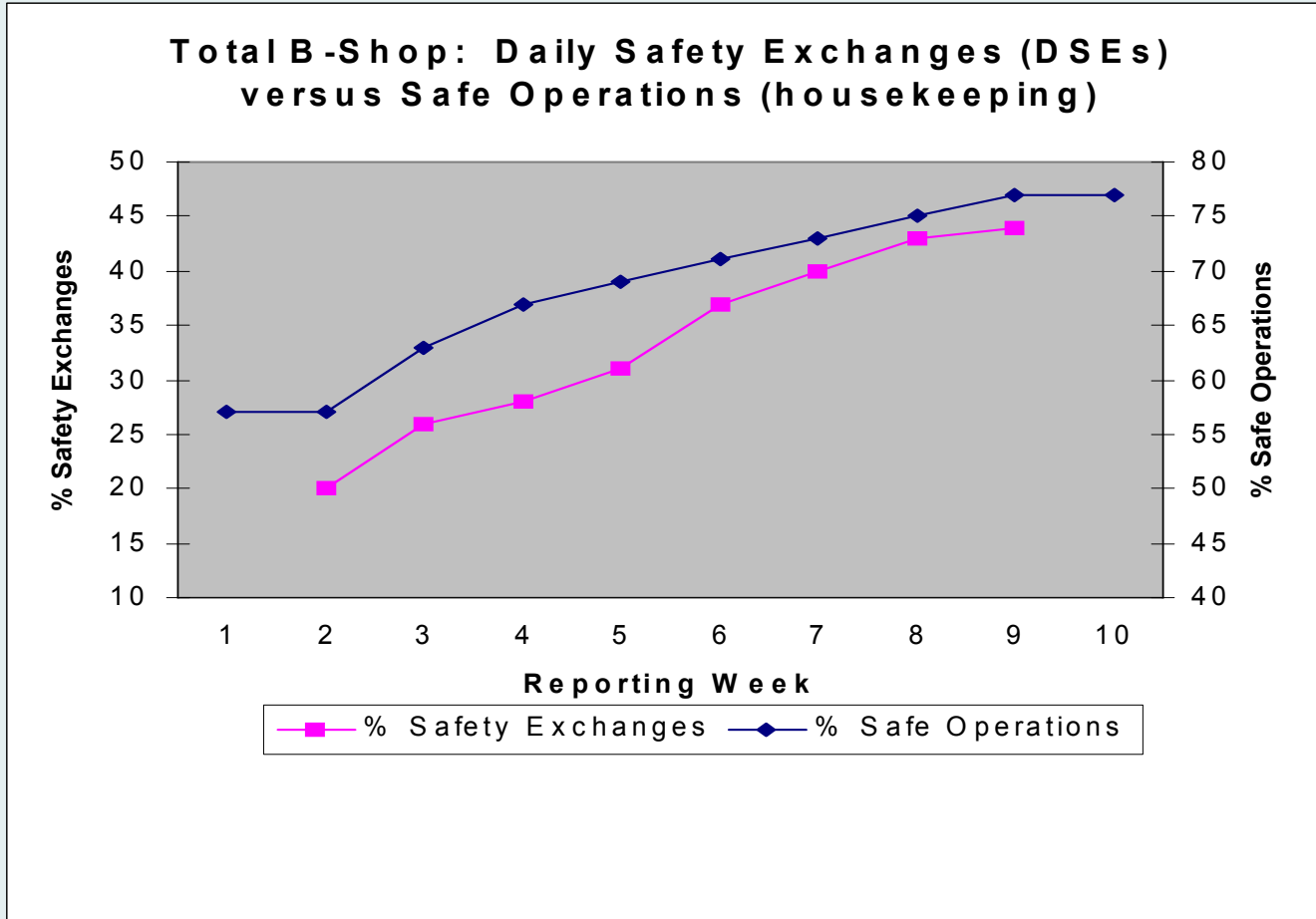
Intervention example: Oil refinery

Safety exchanges & unsafe operations (%)



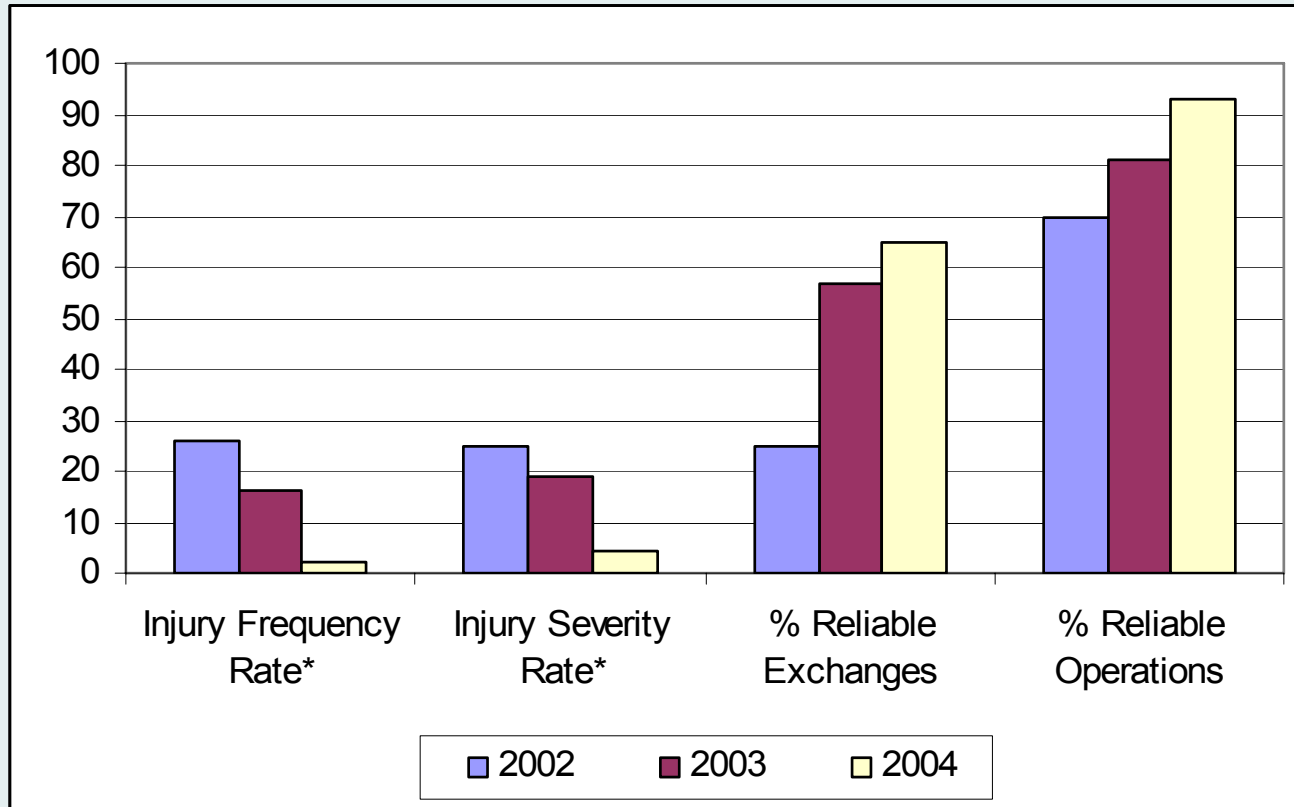
Steel Company

Safety exchanges & safety compliance (%)



Intervention: Fiber-plastics

Two years later



Adjust Frequency data (*10); Severity data (*100)

Conclusions

- **Practical theory**: safety climate and culture can be defined in a manner that reduces ambiguity
- **Good measurement**: use theory-based measurement scales as the key for research and applications
- **Third age of safety**: shifting from worker compliance to leaders' daily practices
- **Leaders create culture → climate**: any real change depends on the company's senior leadership

Thank You