

A systems framework for worker safety and health that links in organizational performance

Jack Dennerlein

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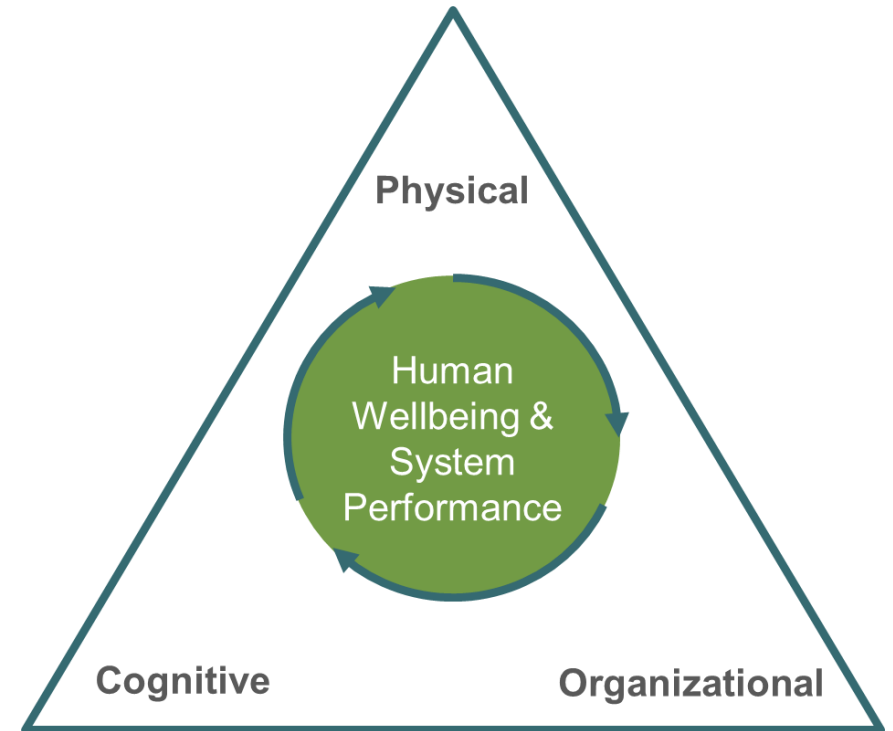
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Ergonomics and Safety promote overall system performance improvements

- Definitions that include system performance
- Systems framework that includes organizational performance
- Experiences implementing systems framework
- Corporate level evidence

Ergonomics (or human factors) is the scientific discipline concerned with the understanding of *interactions among humans and other elements of a system*, and the profession that applies theory, principles, data and methods *to design* in order to *optimize human well-being and overall system performance*

- Systems, specifically human systems
- Design
- Two outcomes
 - Human Well-Being
 - System Performance



- ***Total Worker Health***[®] is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.



<https://www.cdc.gov/niosh/twh/totalhealth.html>

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7 Ways to Improve Operations Without Sacrificing Worker Safety

by David Michaels



David Michaels

1. **Start at the top (Management Commitment)**
2. **Use the right incentives – (Safety Culture)**
3. **Don't blame workers for injuries.**
4. **Rethink how you think about injury rates**
5. **Focus on leading indicators**
6. **Embrace a safety and health management system**
7. **Welcome a regulator as a “cheap consultant.”**

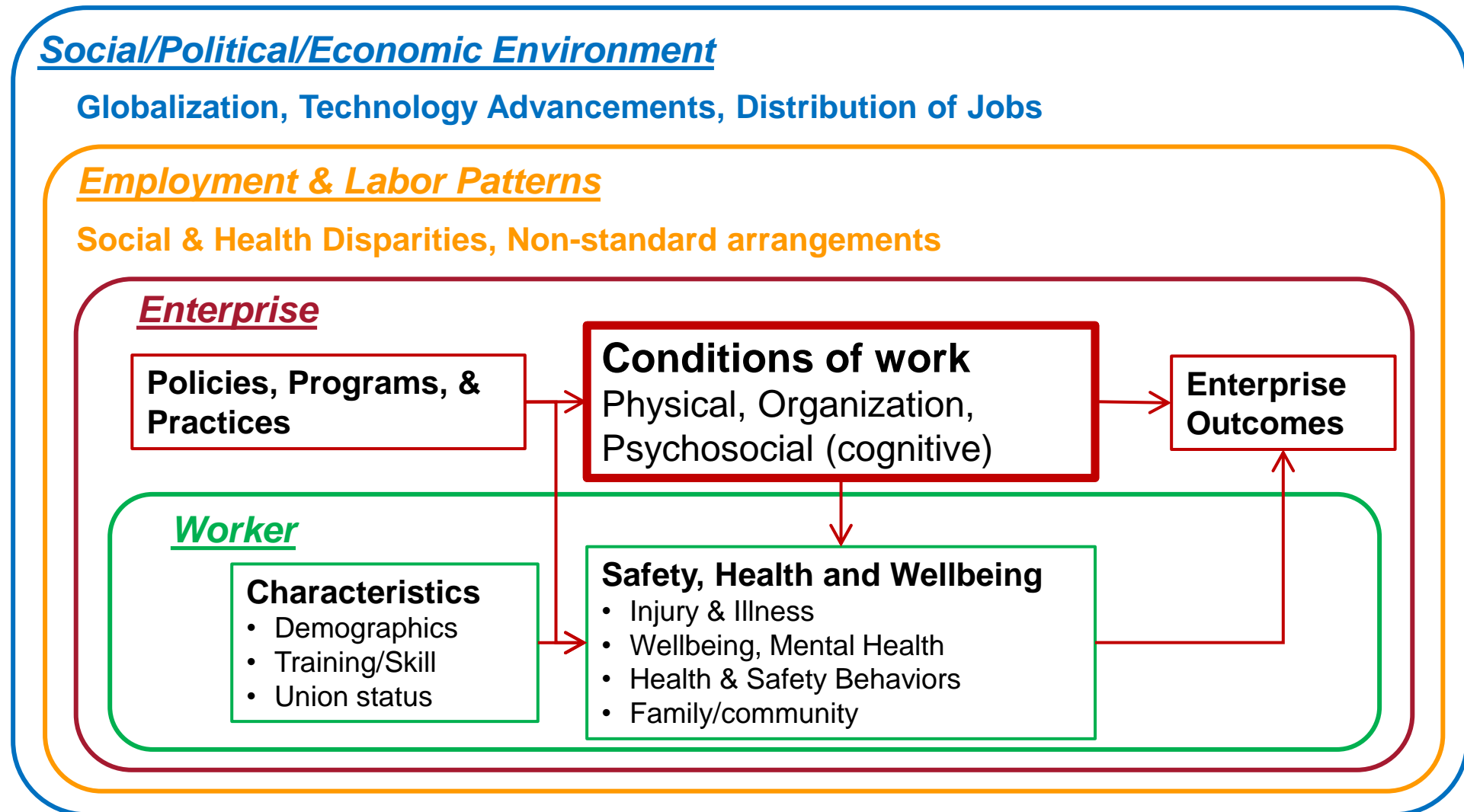
<https://hbr.org/2018/03/7-ways-to-improve-operations-without-sacrificing-worker-safety>

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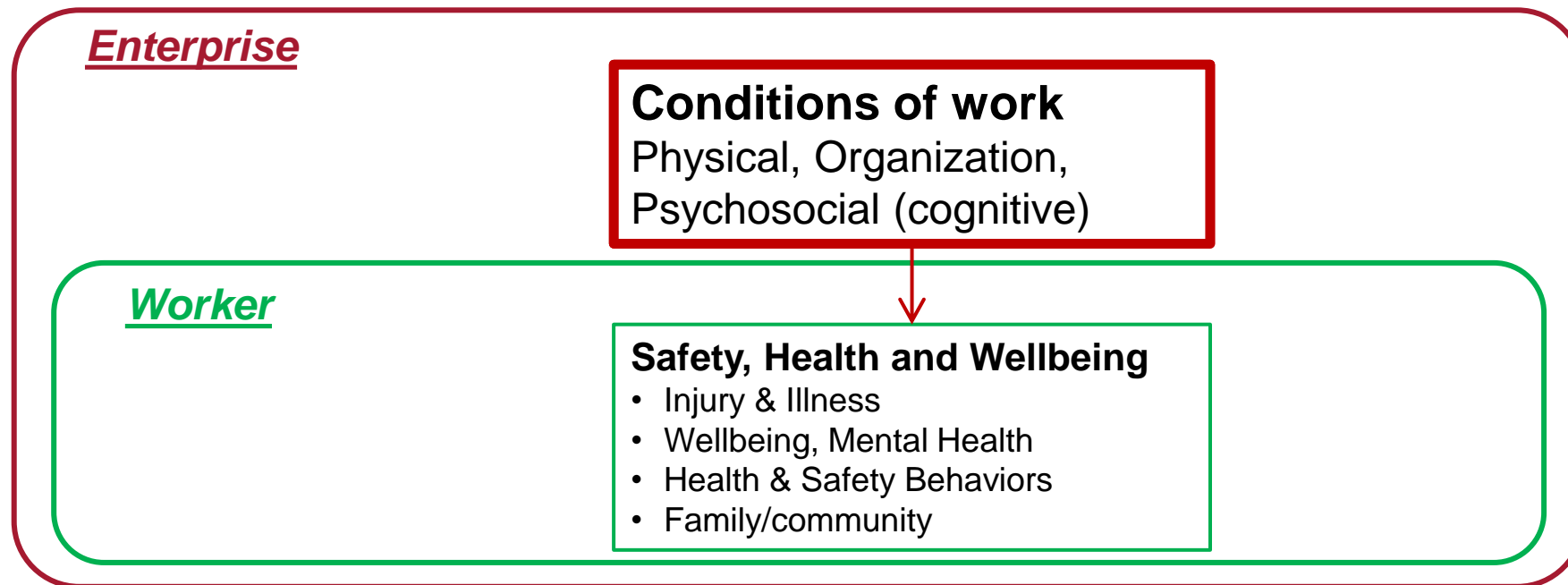
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Systems framework



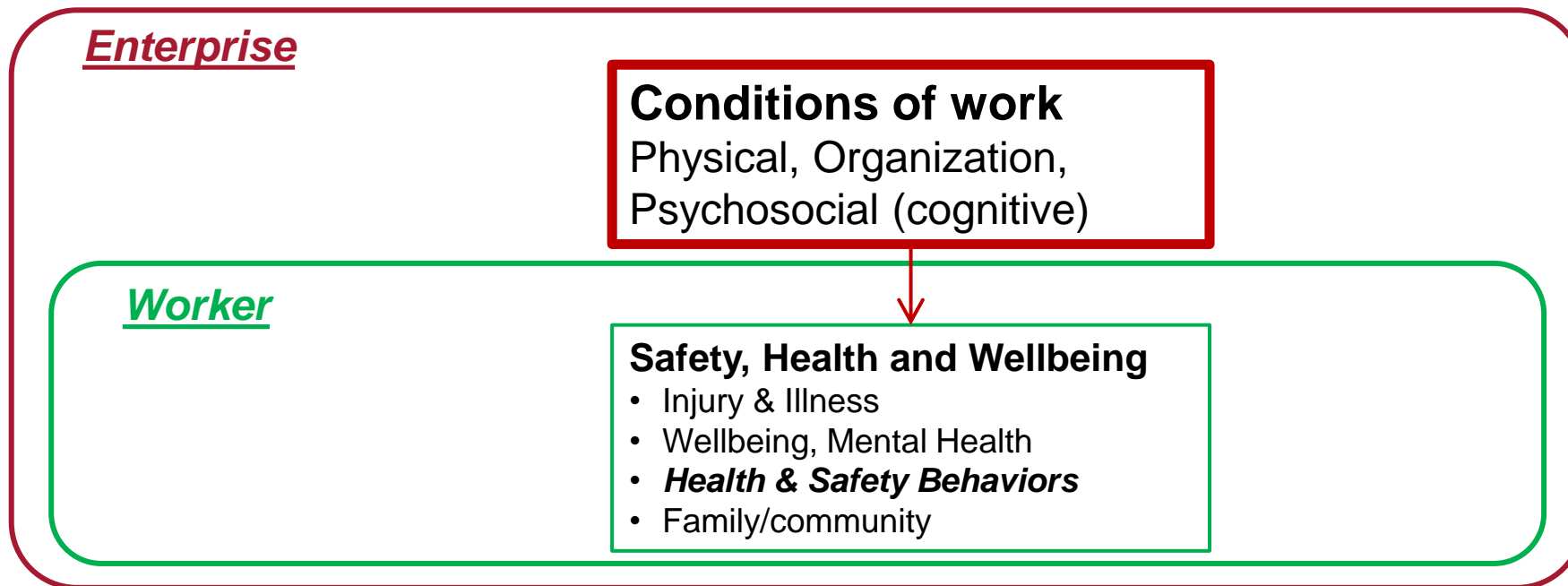
Systems framework



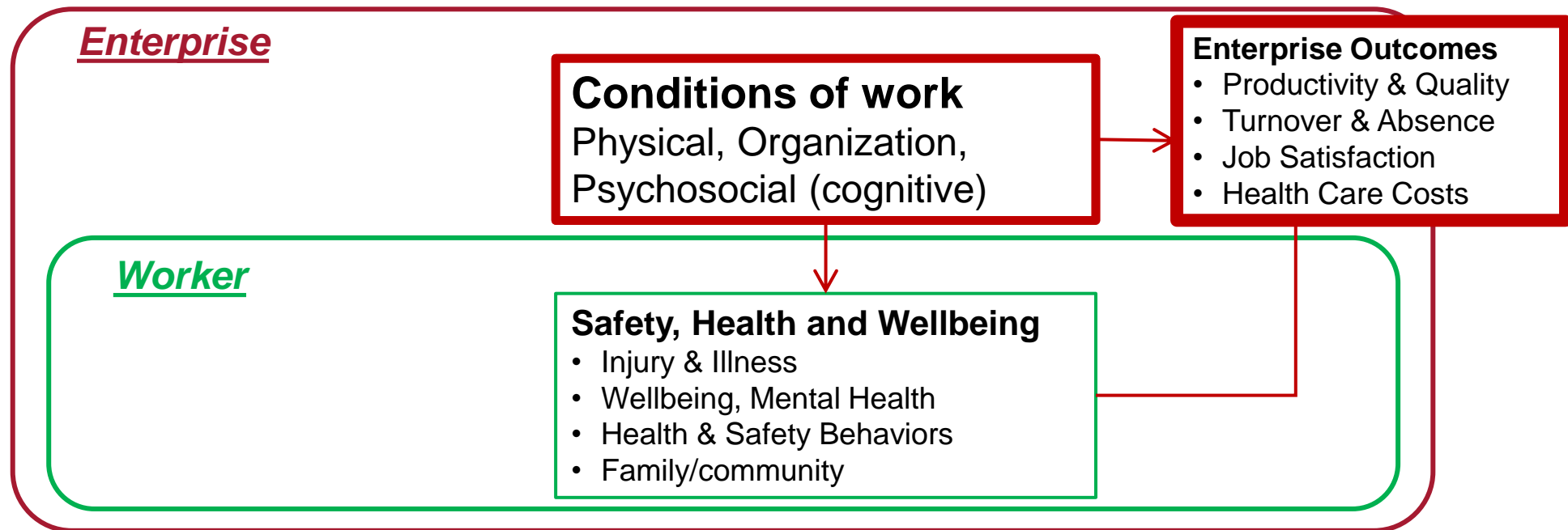
Systems framework

Safety Climate is based on the functional construct of organizational climate where workers understand what is being rewarded (and penalized) within *complex and ambivalent organization*.

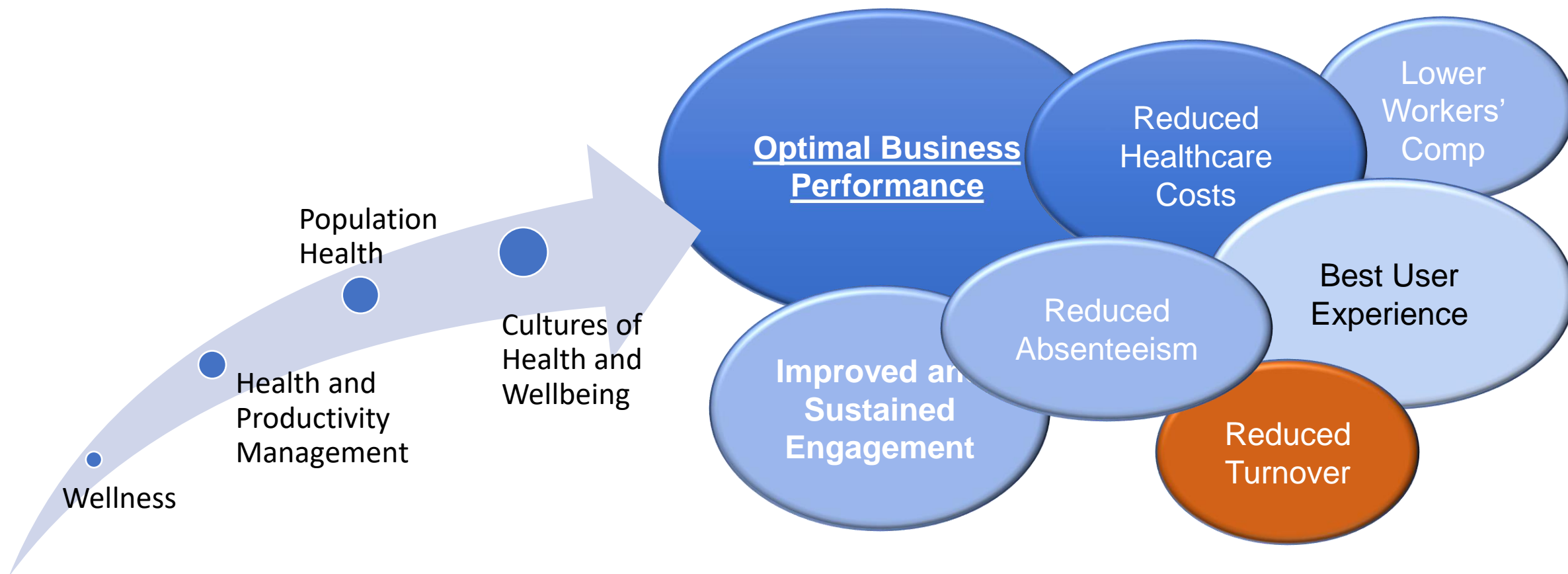
Climate perceptions require detection from multiple cues in the presence of competing demand and inconsistent policies



Systems framework



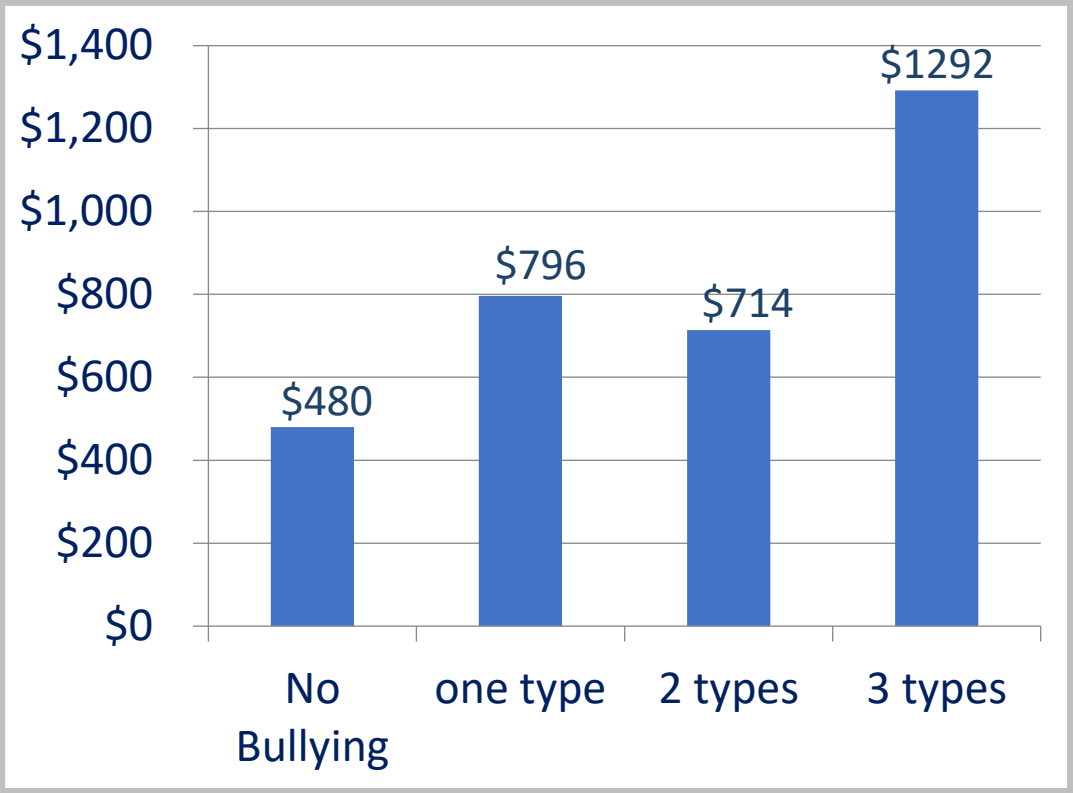
Moving towards a Culture of Health and Wellbeing Improves Business Performance



Mental Health Care Costs and Bullying

(N = 841 hospital workers, 2012)

2-year mental health care costs



Types:

- Being ignored/excluded,
- Being humiliated/ridiculed,
- Withholding information

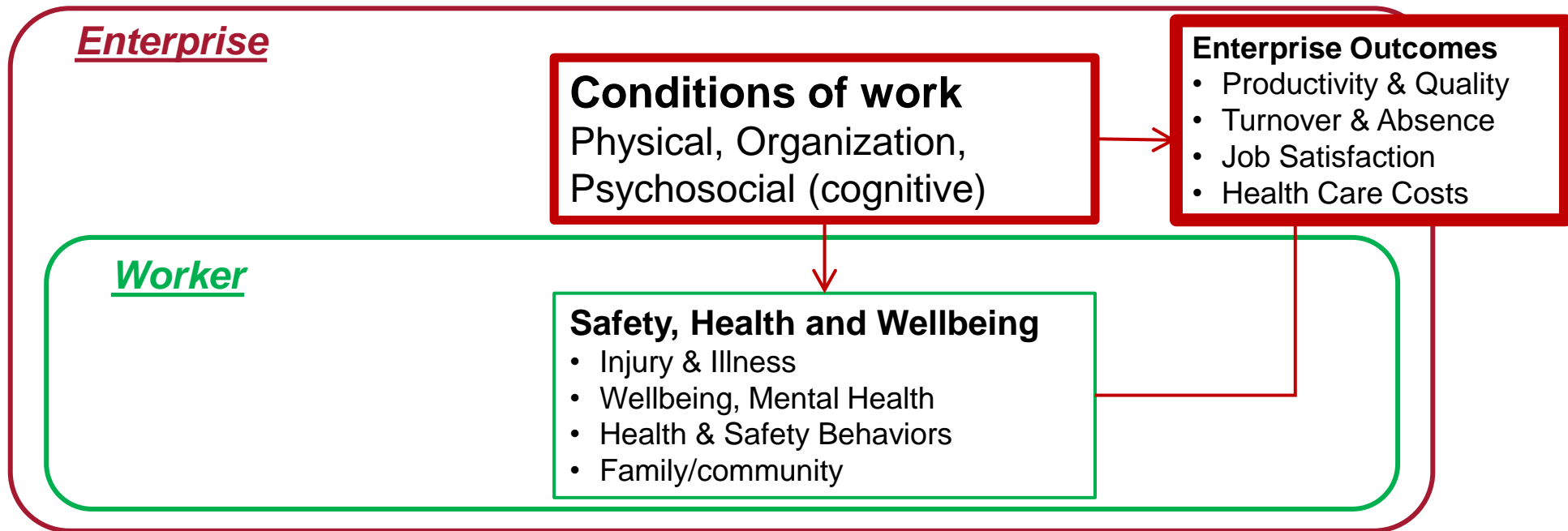
Workplace incivility and bullying may carry monetary costs to employers, which could be controlled through work environment modification.

What's the value added?

- ***Improve effectiveness of worksite strategies to improve worker health***
 - Improve outcomes
 - Increase participation
 - Enhance a culture of trust
- ***Manage costs***
 - Reduce absence, turnover
- ***Generate revenue***
 - Become stronger organization
 - Improve job satisfaction & engagement
- ***Promote brand reputation***
 - Improve market performance

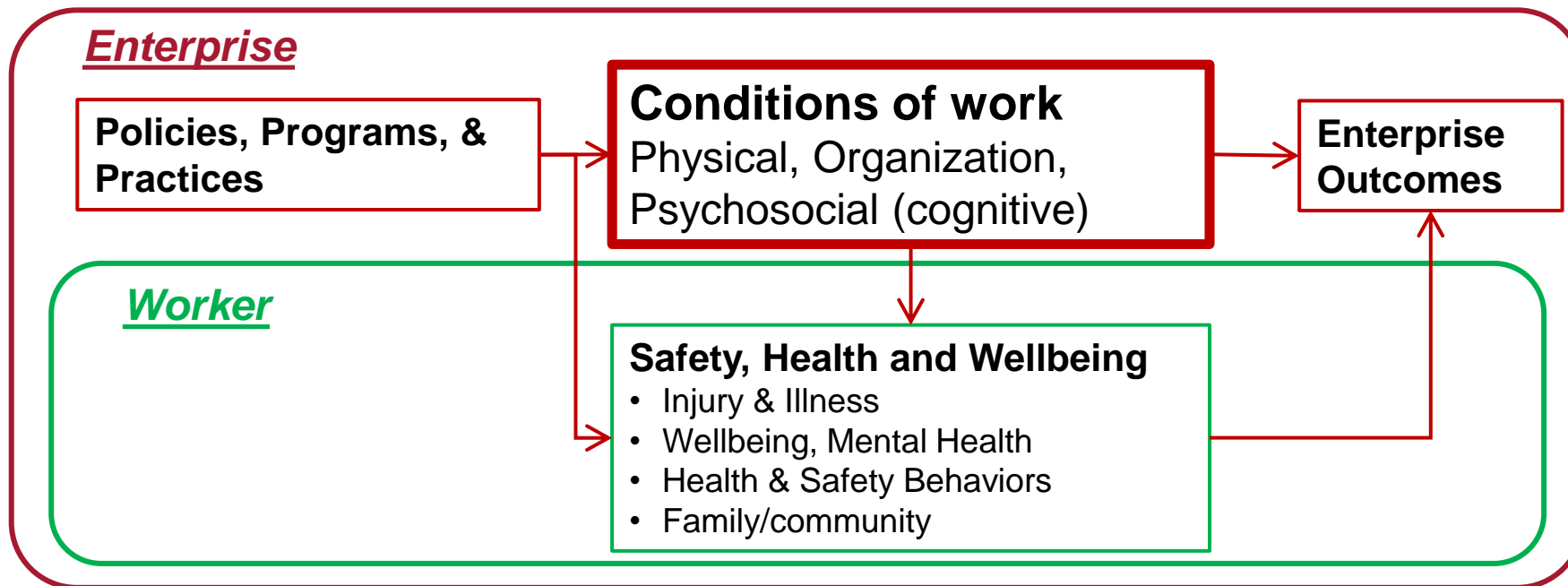


Systems framework

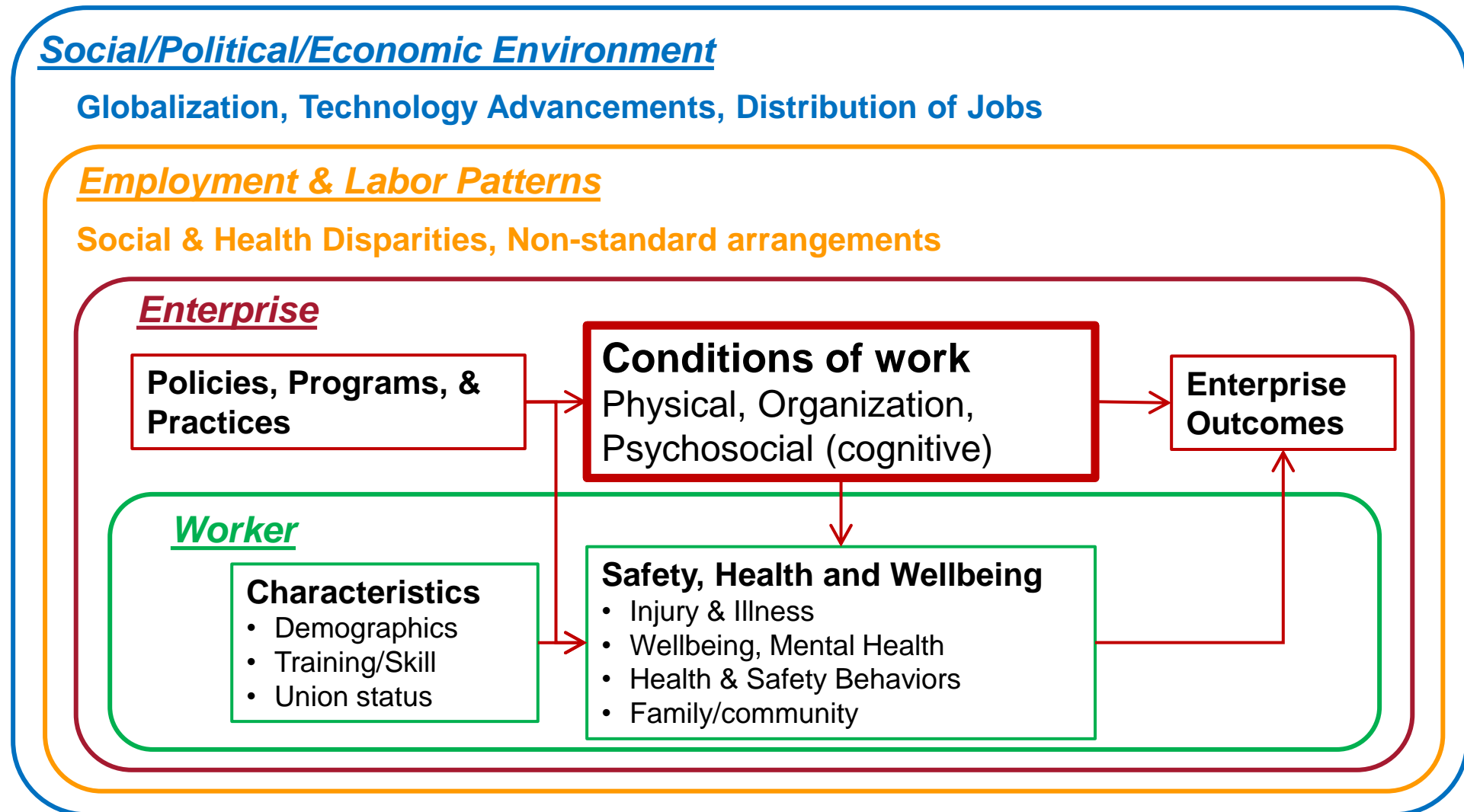


Systems framework

- *Total Worker Health*[®] is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.



Systems framework – Context matters!



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The *Integrated Systems Approach* – Building on 30 years of research

1. Leadership commitment
2. Participation (All levels of an organization)
3. Policies, programs, and practices that foster supportive working conditions
4. Comprehensive and collaborative strategies
5. Adherence
6. Data-driven change



The *Integrated Systems Approach* – Building on 30 years of research

Run programs in

- Construction
- Health Care
- Manufacturing
- Food service
- Education
- Transportation

Partners in

- United States
- India
- Chile
- Brazil
- Great Britain



Implementing an Integrated Approach

Weaving Worker Health, Safety, and Well-being
into the Fabric of Your Organization

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Work.
Life.
Oregon.



Worker Well-Being: 5 easy steps

1. Identify
2. Engage
3. Design
4. Action
5. Review

Hospital-Wide Integrated Safe Patient Mobilization Program



Pre-post program evaluation in an urban hospital

- Increase patient mobilization
- Reduce worker injuries associated with mobilization

Hospital-Wide Integrated Safe Patient Mobilization Program



Key Characteristics

Leadership commitment

- Internal marketing campaign
- Commitment communicated

Comprehensive and collaborative

- Engaged multiple departments
 - Management committee
 - Coordinating committee
 - Across department infrastructure

Conditions of work

Physical

- Lifts in every room
- Laundry/maintenance program

Work organization

- Integrated patient care plans
- One-on-one training

Psychosocial

- Training of nurse directors
- Mentoring Program

Equipment use scale increased
Lifting injuries decreased
Patient outcomes improved too

8% (95th CI 7 – 11%)
27% (95th CI 11 – 40%)



Worksite Health Promotion



by Nico Pronk, Ph.D., FACSM, FAWHP; David Lagerstrom; and Jane Haws, B.A., B.S.N., R.N., M.B.A.

Life Works@TURCK

A Best Practice Case Study on Workplace Well-being Program Design

- TURCK is the North American headquarters of a German technology company and employs approximately 500 employees in two locations near Minneapolis, MN.
- *The integrated approach at TURCK brings together environmental health and safety, a climate of well-being, and continuous improvement that results in sustainable health, well-being, and growth for the company and its employees*



Worker Stress → Organizational inefficiency



Identify & Plan

Create Change



Determine workers' experiences

Adapt & Sustain



March 2020: The COVID-19 pandemic changed work (everything)

Building organizational resilience for worker safety, health, and well-being during the time of COVID-19



Peters SE, Dennerlein JT, et al. *The Lancet Public Health*. 2022; 7(2): E188-E194

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Build a culture of health leads to improve business success



<https://www.globalreporting.org/cultureofhealthforbusiness/Pages/default.aspx>



Improves Brand and their ROI

S & P 500



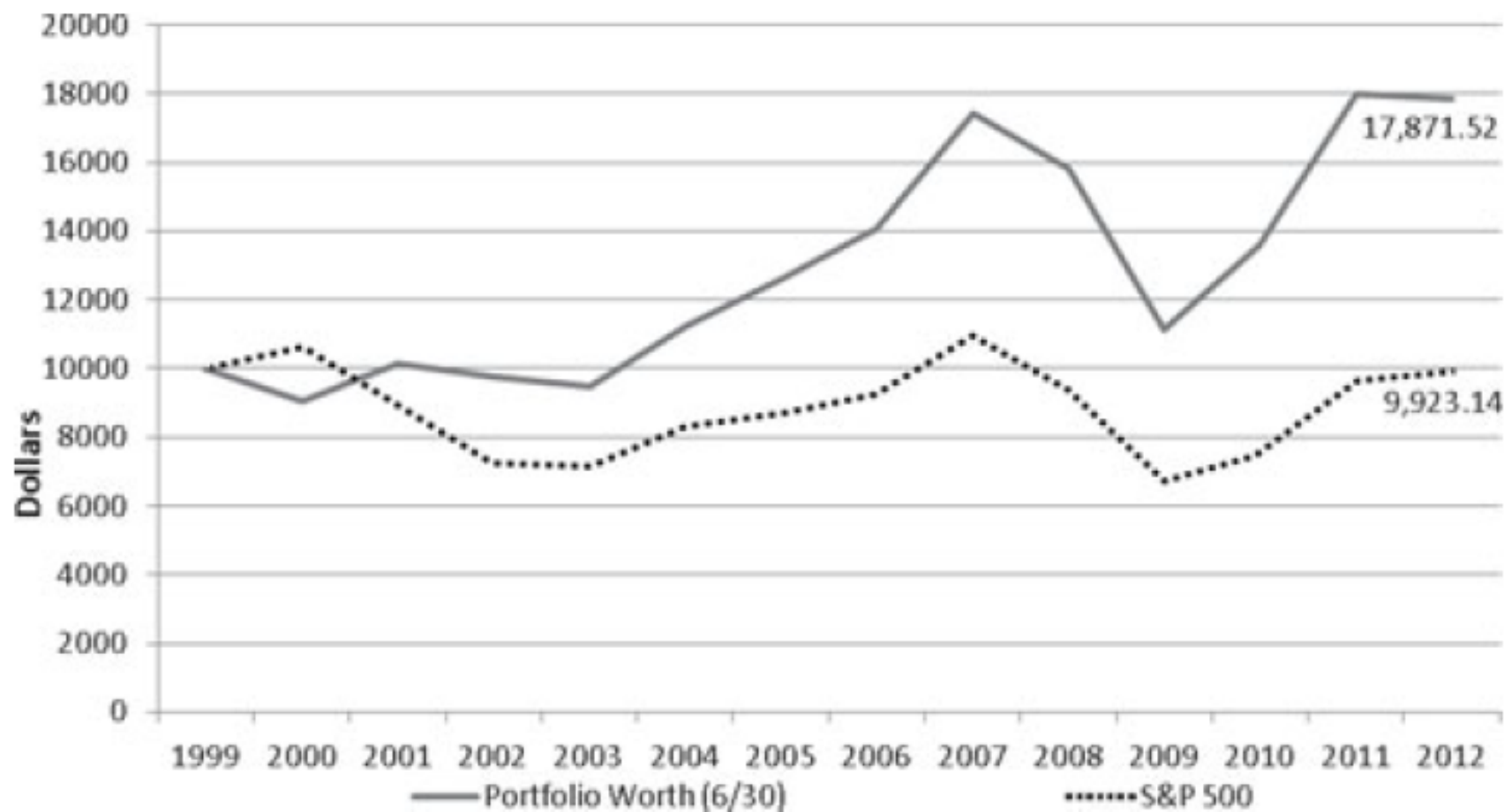
Market Performance

STANDARD & POOR'S **500** vs.

ACOEM Corporate Health Achievement Award Winners



Market Performance



**STANDARD
& POOR'S 500**

Market Performance

CME AVAILABLE FOR THIS ARTICLE AT ACOEM.ORG

Linking Workplace Health Promotion Best Practices and Organizational Financial Performance

Tracking Market Performance of Companies With Highest Scores on the HERO Scorecard

Jessica Grossmeier, PhD, MPH, Ray Fabius, DO, Jennifer P. Flynn, MS, Steven P. Noeldner, PhD, Dan Fabius, DO, Ron Z. Goetzel, PhD, and David R. Anderson, PhD, LP

Objective: The aim of the study was to evaluate the stock performance of publicly traded companies that received high scores on the HERO Employee Health Management Best Practices Scorecard in Collaboration with Mercer® based on their implementation of evidence-based workplace health promotion practices. **Methods:** A portfolio of companies that received high scores in a corporate health and wellness self-assessment was simulated based on past market performance and compared with past performance of companies represented on the Standard and Poor's (S&P) 500 Index. **Result:** Stock values for a portfolio of companies that received high scores in a corporate health and wellness self-assessment appreciated by 235% compared with the S&P 500 Index appreciation of 159% over a 6-year simulation period. **Conclusions:** Robust investment in workforce health and well-being appears to be one of multiple practices pursued by high-performing, well-managed companies.

Learning Objectives

- Become familiar with recent research linking investment in workforce health, safety, and productivity with the stock price of publicly traded companies.
- Describe the characteristics of the HERO Employee Health Management Best Practices Scorecard for assessing companies' implementation of evidence-based workplace health promotion (WHP) practices.
- Summarize the association between HERO Scorecard and organizational financial performance, and discuss the implications for workplace health and safety programs.

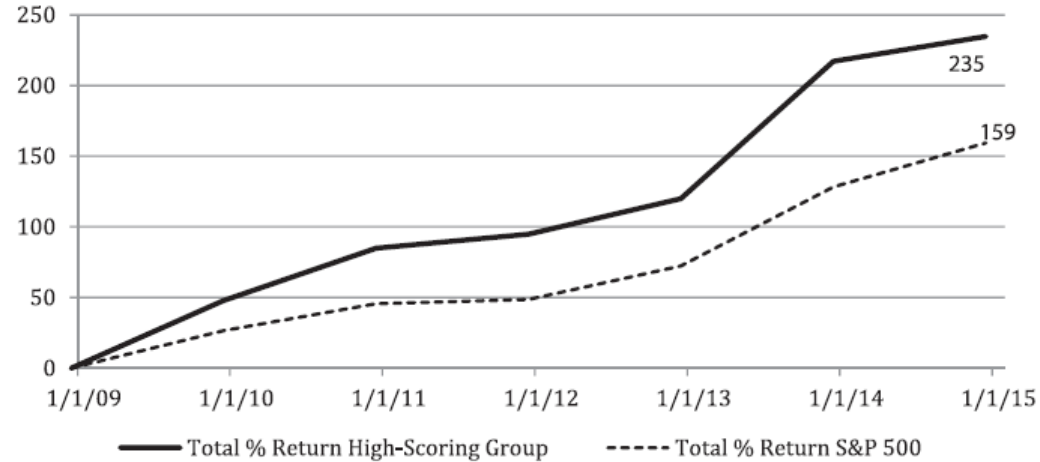
Numerous studies link employee health risks and diminished health to higher health care costs,¹⁻⁴ increased absence,^{5,6} and lower on-the-job productivity.^{7,7-13} Emerging research also associates lower employee well-being with higher turnover rates¹² and lower levels of engagement with work.¹⁴ As a result, a growing number of business leaders view investment in workforce health and well-being as a strategic investment in human capital.¹⁵

Lending credence to the idea that good health is good business, companies with the most effective workplace health promotion (WHP) programs report superior market performance, shareholder returns, and revenue per employee.^{16,17} This observation is one contributor to the development of the Parhamus Endeavor Fund (PARWF), a diversified US core equity fund that

invests in large-capitalization companies that have been recognized as good employers to work for such as American Express, Google, and IBM.¹⁸ This fund was created in 2005 and has consistently outperformed the general stock market. The creation of this fund is evidence that traders find information about company investments in human capital meaningful, suggesting that they may also have an appetite for sources of information about company investments in workforce health and well-being. Further evidence is found in a movement to incorporate information about employer investments in workforce health, safety, and productivity into corporate responsibility reporting.¹⁹⁻²³ In summary, there are emerging indications that investments in workforce health and well-being are correlated with financial impacts and this evidence has garnered the attention of forward-thinking employers and members of the investment community. In response to this desire for information about investments in workforce health and well-being, additional strategies are needed to identify the companies implementing the level and type of WHP initiatives that align with a company's financial success.

One potential identification tool is the HERO Employee Health Management Best Practices Scorecard in Collaboration with Mercer® (HERO Scorecard), which has been correlated with health care cost reduction.²⁴ It has not yet been determined whether a company's use of the best practices detailed in the HERO scorecard are related to the broader value proposition for investment in workforce health and well-being that may be reflected in the performance of its stock. A 2013 study conducted by Fabius et al¹⁸ was among the first to associate investments in workforce health, safety, and productivity with the stock price of publicly traded companies. That study drew from a pool of companies that were recognized by the American College of Occupational and Environmental Medicine (ACOEM) as investing in a "culture of health" at an exemplary level. The HERO Scorecard is broadly available to all employers in the United States, regardless of organization size, and tends to draw a larger, more representative sample of organizations that provide information about their use of best practices in workforce health and well-being.

The development of the HERO Scorecard and its predictive validity has been described in detail elsewhere,²⁵ but an overview is



From the Health Enhancement Research Organization (Dr Grossmeier), Edina, Minnesota; HealthNEXT (Dr Ray Fabius), Newtown Square, Pennsylvania; Mayo Clinic Global Business Solutions (Ms Flynn), Rochester, Minnesota; Mercer Health & Benefits, LLC (Dr Noeldner), New York, New York; Cooper University Hospital (Dr Dan Fabius), Camden, New Jersey; Truven Health Analytics (Dr Goetzel), Bethesda, Maryland; Johns Hopkins Bloomberg School of Public Health (Dr Goetzel), Washington, DC; and StayWell (Dr Anderson), St. Paul, Minnesota.

Funding for this study was provided by the Health Enhancement Research Organization (HERO) Research Partners which include contributions by Bravo Wellness, Kaiser Permanente, Prudential Financial, and StayWell.

Health Enhancement Research Organization, Mayo Clinic Global Business Solutions; Mercer Health & Benefits, LLC; Truven Health Analytics; and StayWell are members of HERO.

All authors assist employers in developing workforce health and well-being programs and this research supports this pursuit.

Authors Grossmeier, Fabius, Flynn, Noeldner, Fabius, Goetzel, and Anderson have no real or potential conflicts of interest.

The JOEM editorial board and planners have no financial interest related to this research.

Address correspondence to: Jessica Grossmeier, PhD, MPH, Vice President, Research, Health Enhancement Research Organization, 7400 Merco Boulevard, Suite 270, Edina, MN 55439 (jessica.grossmeier@hero-health.org). Copyright © 2015 American College of Occupational and Environmental Medicine.

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health enhancement research organization

Grossmeier *J Occup Environ Med* 2016 Jan;58(1) 16-23

Market Performance

The Stock Performance of C. Everett Koop Award Winners Compared With the Standard & Poor's 500 Index

Ron Z. Goetzel, PhD, Raymond Fabius, MD, Daniel Fabius, DO, Enid C. Roemer, PhD, Nicole Thornton, BA, Rebecca K. Kelly, PhD, RD, and Kenneth R. Pelletier, PhD, MD (he)

Objective: The aim of the study was to explore the link between companies investing in the health and well-being programs of their employees and stock market performance. **Methods:** Stock performance of C. Everett Koop National Health Award winners ($n = 26$) was measured over time and compared with the average performance of companies comprising the Standard and Poor's (S&P) 500 Index. **Results:** The Koop Award portfolio outperformed the S&P 500 Index. In the 14-year period tracked (2000–2014), Koop Award winners' stock values appreciated by 325% compared with the market average appreciation of 105%. **Conclusions:** This study supports prior and ongoing research demonstrating a higher market valuation—an affirmation of business success by Wall Street investors—of socially responsible companies that invest in the health and well-being of their workers when compared with other publicly traded firms.

Workplace health promotion programs are designed to improve the health and well-being of employees and their dependents. Companies that excel in their workplace wellness efforts can apply for and win recognition through numerous vehicles including earning the C. Everett Koop Award (Koop Award). The Koop Award is conferred annually by The Health Project, a nonprofit organization founded in 1994 to promote employer achievements in improving population health cost-effectively.

An opportunity presented itself to study whether Koop Award winning companies, recognized by The Health Project for improving workers' health and saving money for the employer, outperform other publicly traded firms based on their stock market performance. Specifically, we were interested in examining stock price appreciation, a public measure signifying a company's increasing worth, for companies that win the Koop Award, compared with "average" companies comprising the Standard and Poor's (S&P) 500 Index. The hypothesis tested was that companies applying for and winning the Koop Award, thereby earning the distinction of having outstanding workplace health promotion (wellness) programs, would realize financial gains that extend beyond those simply offering traditional employee benefit programs.

BACKGROUND

The genesis for this analysis is an increasing interest in, and adoption of, workplace health promotion programs by US

businesses, partly fueled by a specific provision of the 2010 Affordable Care Act (Section 2705) that encourages employers to implement comprehensive worksite health promotion programs. Currently, approximately half of all employers with more than 50 employees offer wellness programs of varying comprehensiveness, with large employers being more likely to have a complex program.¹ Initiation and expansion of these programs has been spurred by the belief that organizations will benefit at the business or enterprise level by reducing the company's operating costs, in the form of medical expenditures, as well as improving worker productivity, although that assumption has been challenged by some critics.²

The connection between a company's health promotion program and overall business results assumes high employee awareness of and engagement in workplace health promotion and disease prevention programs. A further assumption is that participation in the workplace program will lead to improved health, more engaged and happier employees, and to improved workforce performance, all of which impact the organization's bottom line. It is also assumed that loyalty and commitment to the organization are influenced by workers' attitudes toward their employers and that workers who feel their company truly cares about their health and well-being are more likely to remain with the organization longer and be more motivated to perform at a high level.

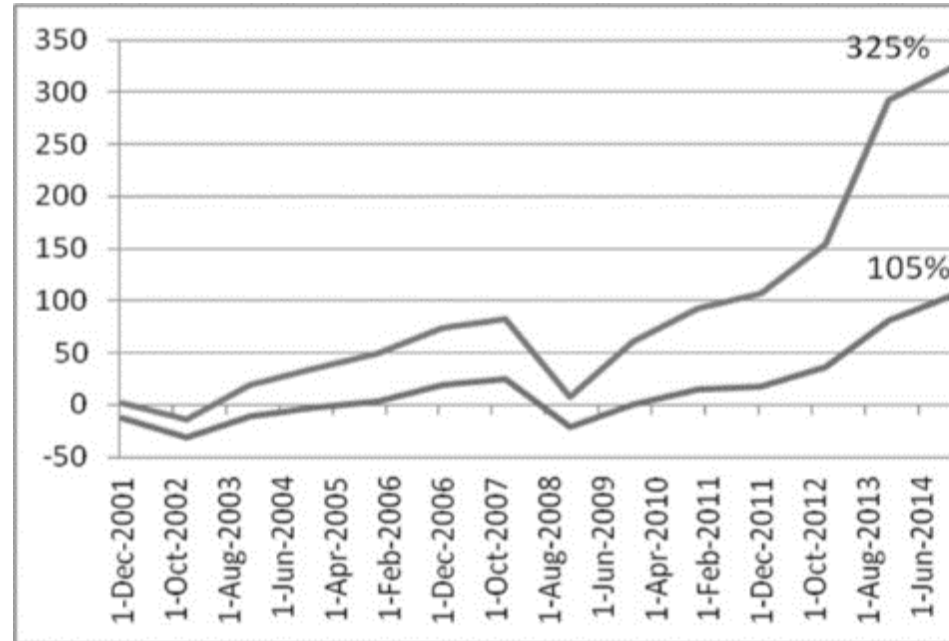
STOCK PERFORMANCE OF COMPANIES FOCUSED ON HEALTH AND SAFETY

Research showing a relationship between companies' human resources practices, in particular their health and safety programs, and their stock performances is now emerging. In 2013, Fabius et al published a seminal article in which the authors tracked the stock price of companies winning the American College of Occupational and Environmental Medicine's Corporate Health Achievement Award (CHAA). The analysis followed theoretical stock purchases of CHAA winning companies and found that winners outperformed the S&P 500 by a ratio approaching 2:1.³ Across an investment period from 1999 to 2012, the cumulative return on the theoretical portfolio containing CHAA winning companies was 79% (ie, \$1.79 returned for every dollar invested) compared with a relatively flat return for the S&P 500 (ie, about a dollar earned for a dollar invested). After weighting based on winners' scores in the CHAA rating system, starting the portfolio with the first winner, and excluding outliers, this relationship persisted, indicating a strong correlation between companies with exemplary health promotion and safety programs and improved financial performance.³

CORPORATE SOCIAL RESPONSIBILITY AND BUSINESS PERFORMANCE

In addition to examining workplace health promotion practices and financial performance, researchers have examined the stock performance of companies rated high in corporate social responsibility (CSR). CSR can be broadly defined as having company-sponsored programs that aim to improve the environment, the community, or the health and safety of workers.

The evidence that socially responsible companies do no worse, and may in fact do better business-wise, than their less



From the Institute for Health and Productivity Studies (Dr Goetzel, Dr Roemer, and Ms Thornton), Johns Hopkins Bloomberg School of Public Health, Washington, DC; Truven Health Analytics (Dr Goetzel), The Health Project, Bethesda, Maryland; HealthNEXT (Dr Raymond Fabius), Unionville, Pennsylvania; Cooper Medical School of Rowan University (Mr Daniel Fabius), Camden, New Jersey; The University of Alabama (Dr Kelly), Tuscaloosa, Alabama; and University of Arizona School of Medicine and University of California (Dr Pelletier), San Francisco, California.

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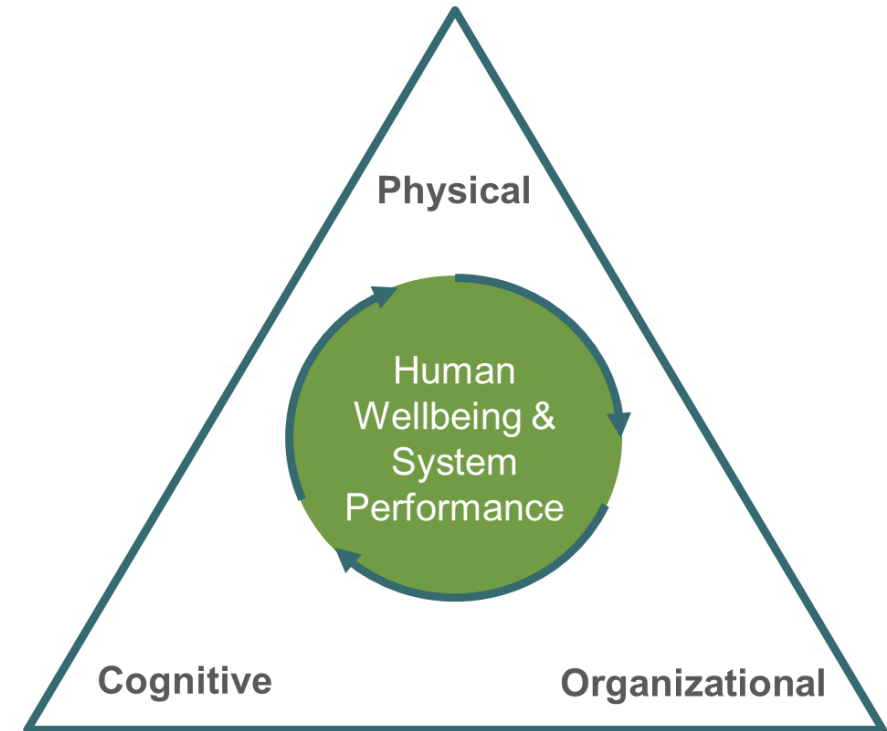
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