



Building a Culture of Safety

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RLI Design Professionals
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Course Description

One of the most significant issues facing design professionals involved in construction projects is how to keep workers safe at jobsites. Understanding site safety exposures and how design professionals can appropriately manage their risk and protect the public adds value to workplace safety culture.

Learning Objectives

Gain a general understanding of relevant jobsite safety problems and the risks they pose to site personnel and the public

Learn how liability can flow to different project participants

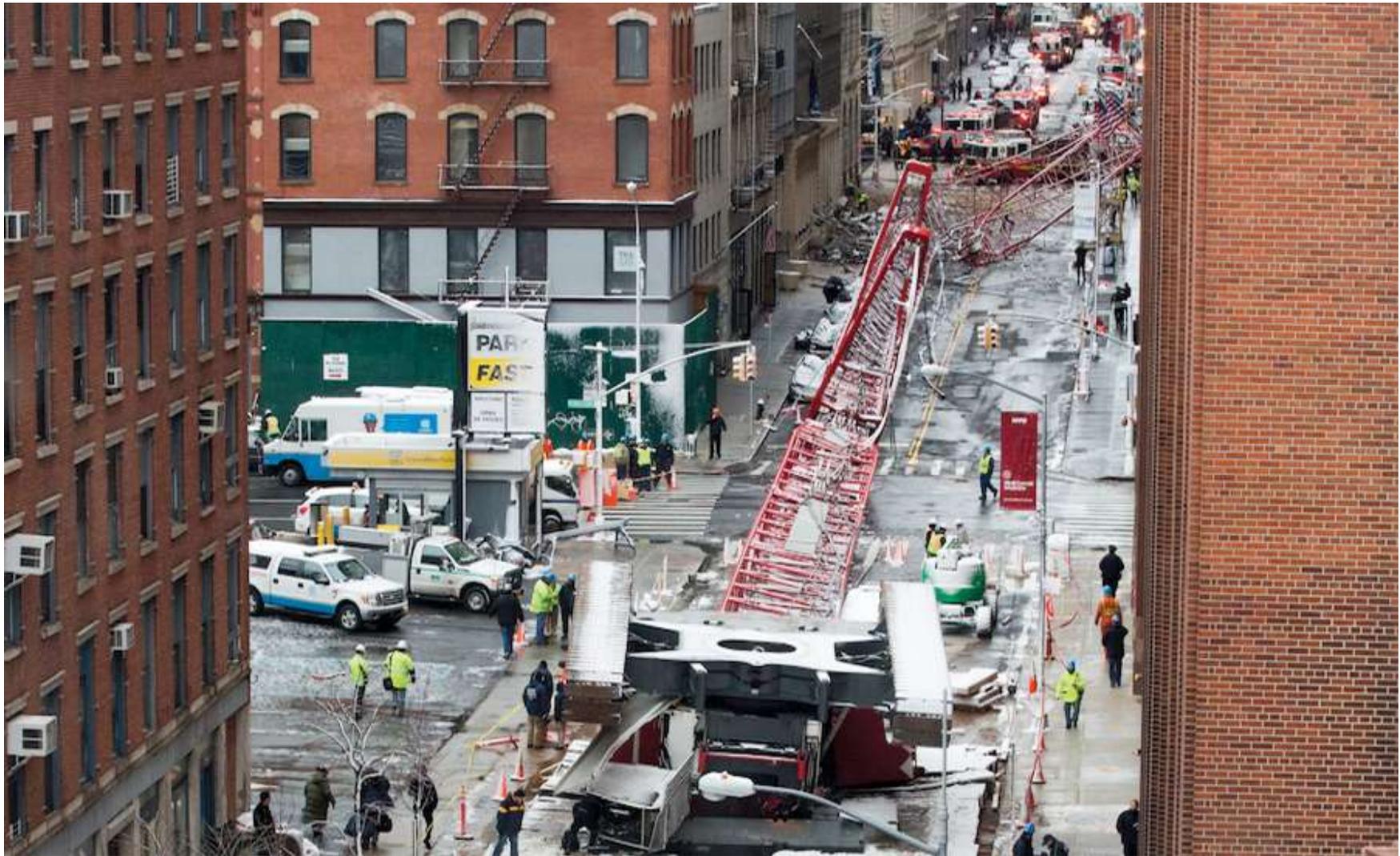
Review case studies about what to do and what not to do when protecting your own employees and the welfare of others

Consider suggestions for workplace safety policy implementation

Jobsite Safety

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General Statistics

Bureau of Labor Statistics

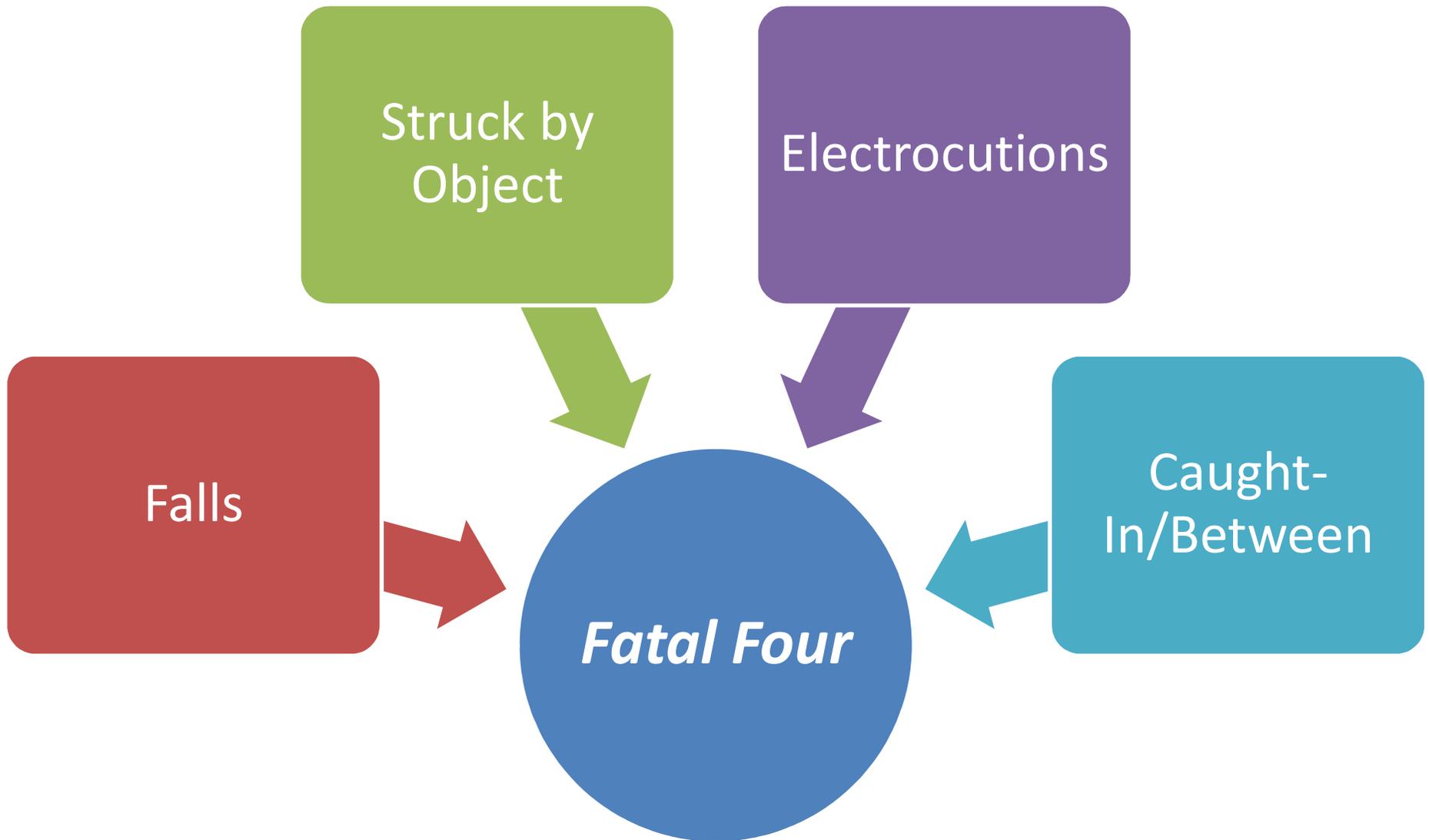
4836 workers killed in 2015

937 in private
construction

93/week

13/day

Construction Statistics



OSHA Standards Most Frequently Violated

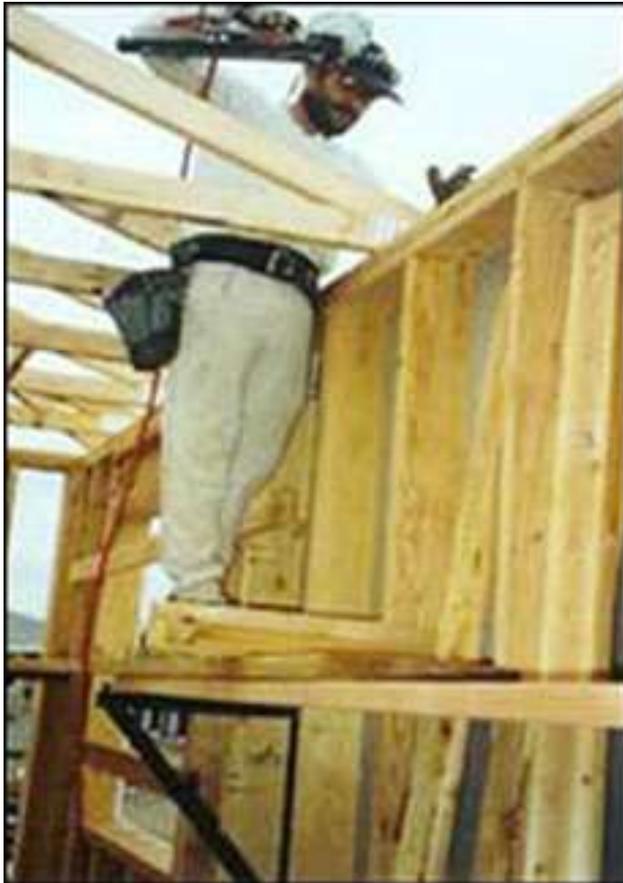
#1 – Fall Protection – 6, 929 citations
Construction Industry

#3 – Scaffolding – 3,906 citations
Construction Industry

#7 – Ladders – 2,639 citations
Construction Industry

Example – Residential Roof Trusses

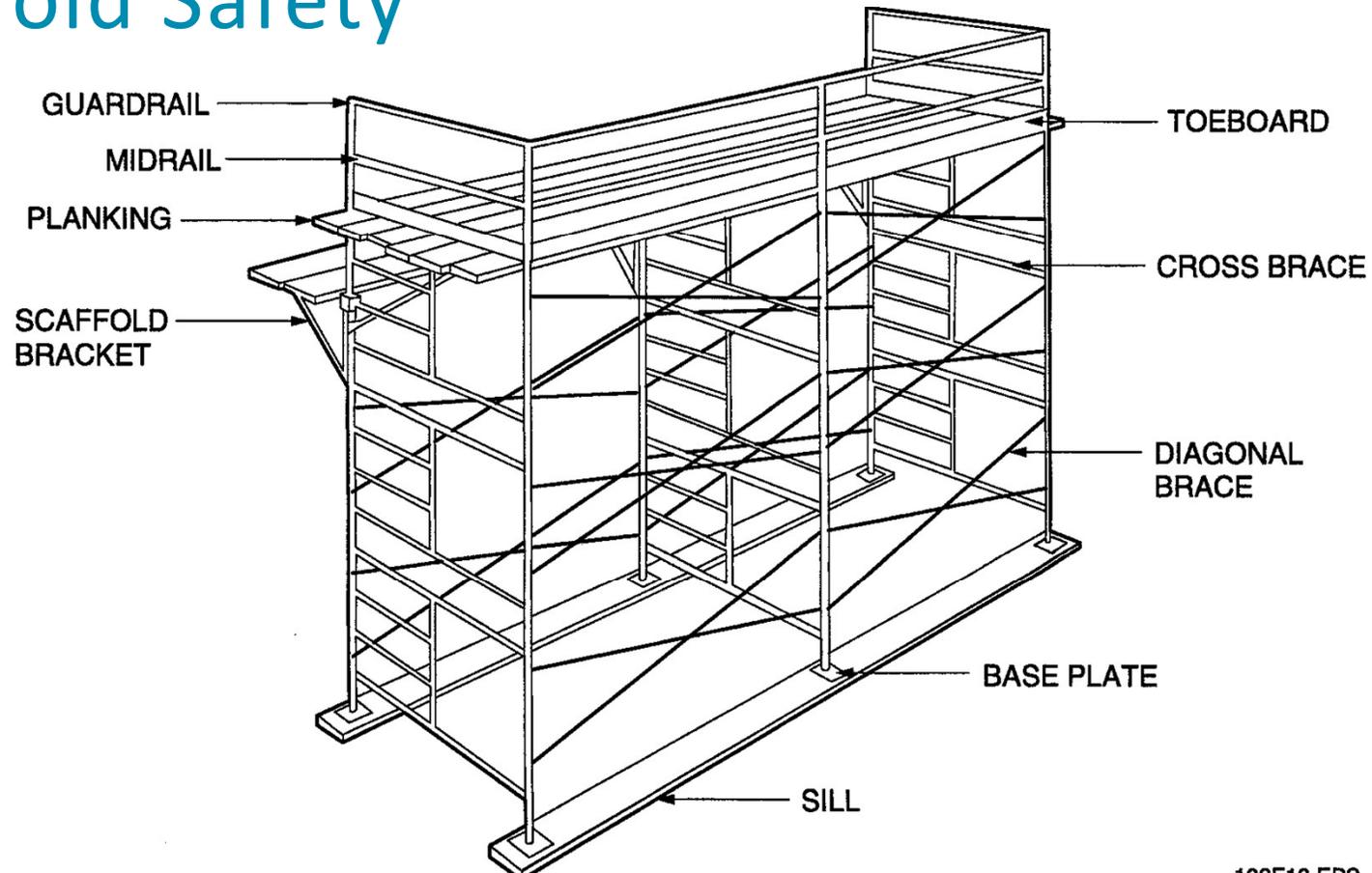
Bracket Scaffold



Ladders



Scaffold Safety



Must be equipped with guardrails, midrails and toe boards

Scaffold Safety

Sound, rigid and sufficient to carry its own weight plus 4x the max intended load without settling or displacement

Erected on solid footing

Unstable or loose objects can't be used as support

Must not be erected, moved, dismantled, or altered except under the supervision of a competent person

Damaged or weakened accessories must be immediately repaired or replaced

Scaffold platforms must be tightly planked with scaffold plank grade material or equivalent.

A "competent person" must inspect at designated intervals

Scaffolds must be at least 10 feet from electric power lines at all times

Ladder Safety

Use the correct ladder for the task

Visually inspect a ladder before use for any defects

Make sure that ladders are long enough to **safely** reach the work area

Mark or tag (“Do Not Use”) damaged or defective ladders for repair or replacement, or destroy them immediately

Never load ladders beyond the maximum intended load or beyond the manufacturer’s rated capacity (user + materials/tools)

Avoid using ladders with metallic components near electrical work and overhead power lines

Calculated Risks

The average person's reaction time is half a second.

In that time you fall 4 feet.

As you fall, gravity pulls you down and your speed quickly increases. That means your impact force increases too.

Once you start falling, you will stop only when you hit a lower surface.

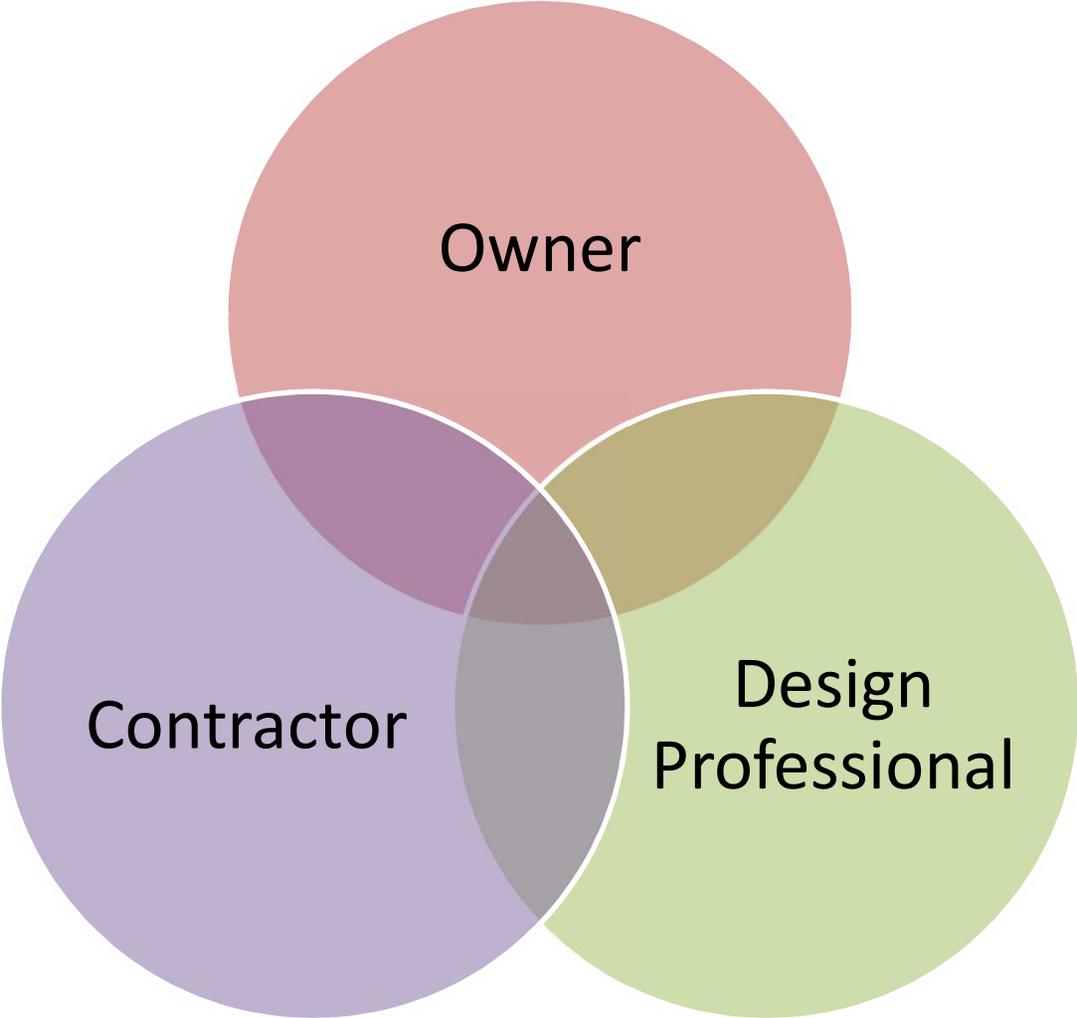
A person who weighs 200 pounds and falls just 6 feet will hit the ground with almost 10,000 pounds of force.

Liability

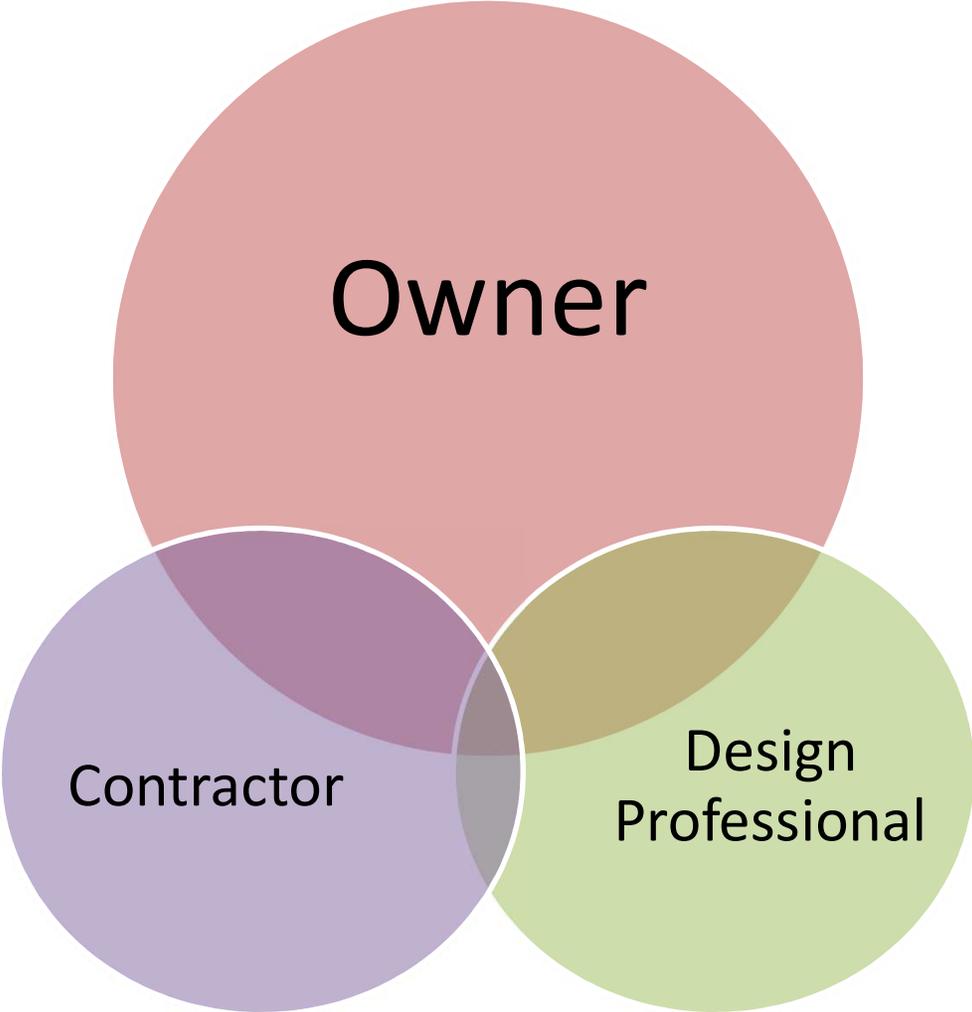
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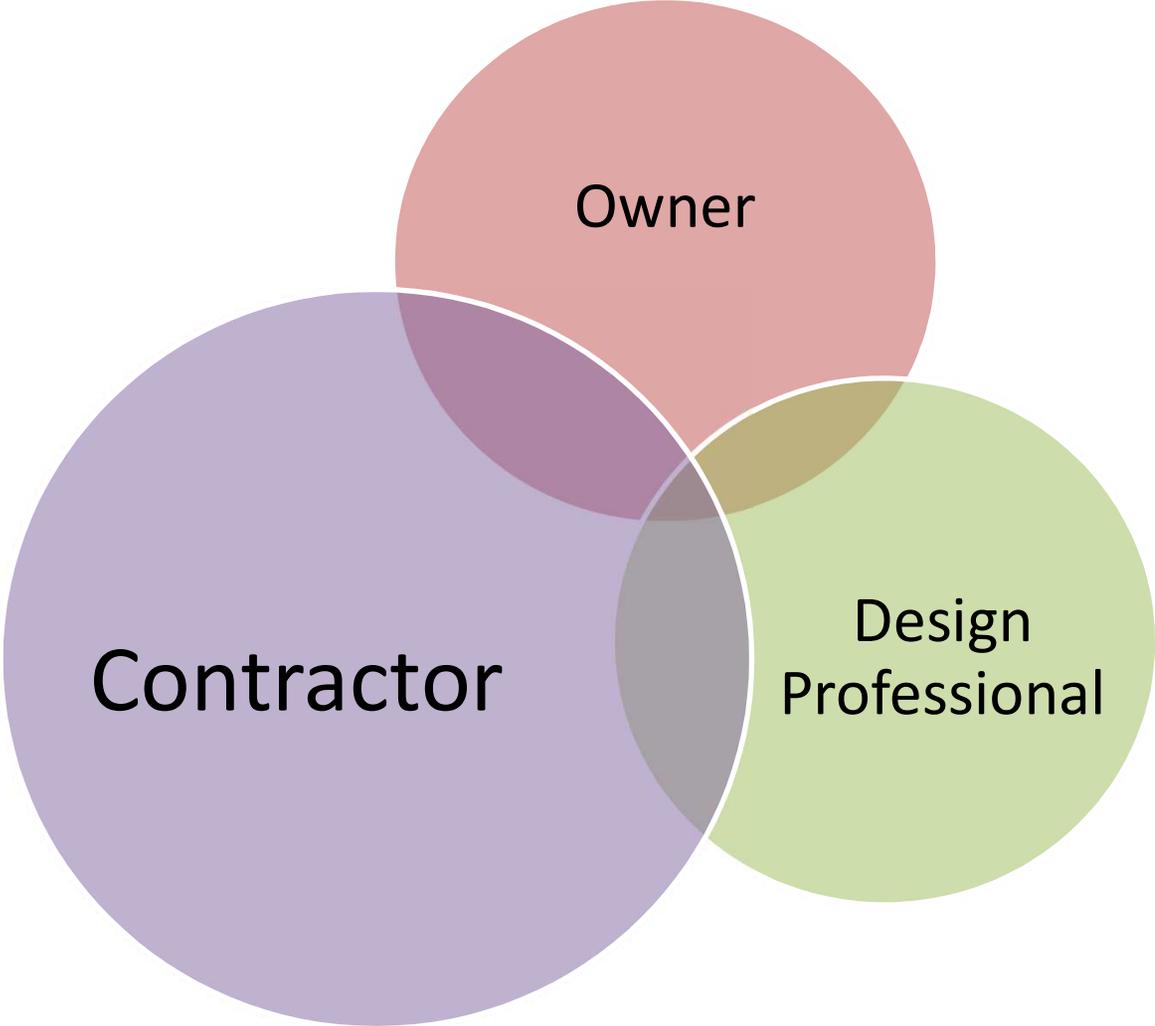
Liability



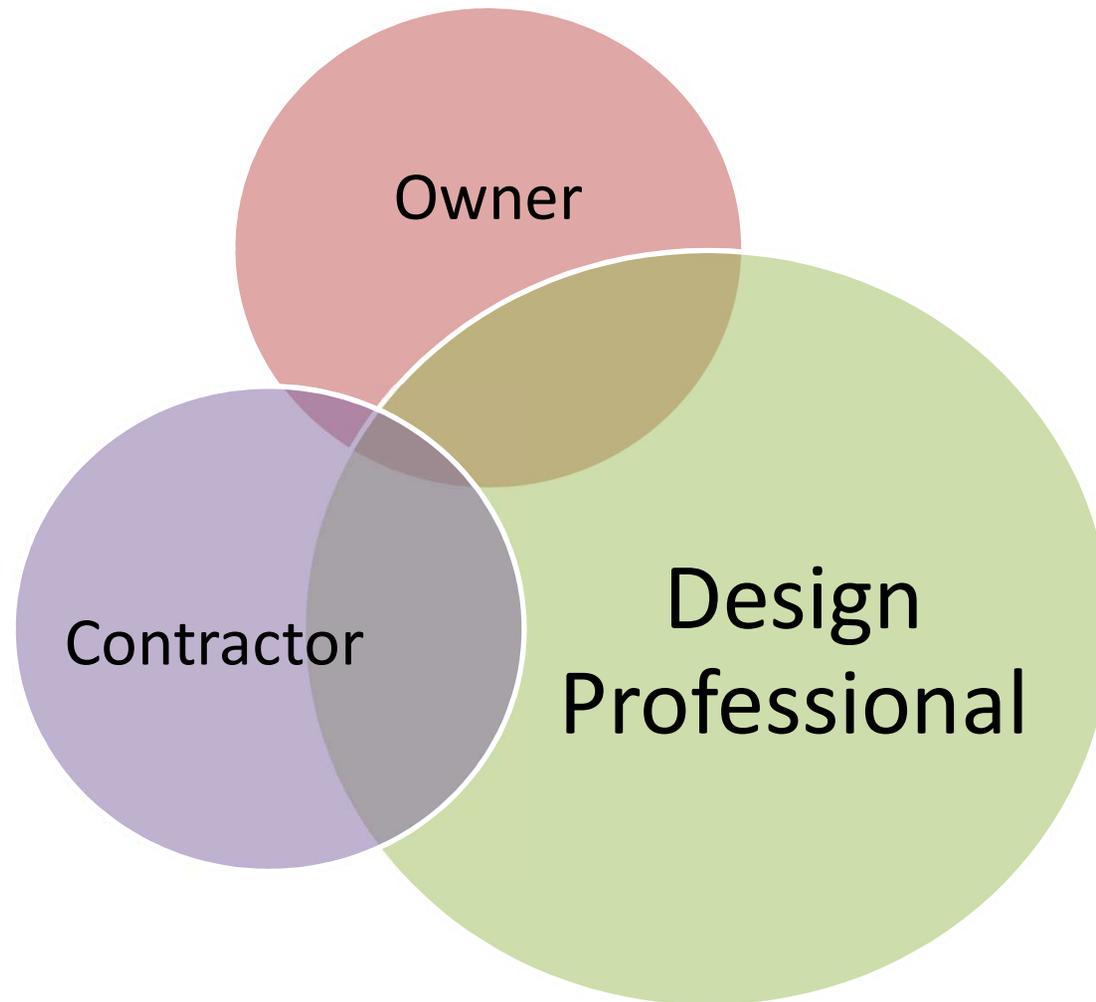
Owner Liability



Contractor Liability



Design Professional Liability



Contract Language

“Engineer shall not at any time supervise, direct, control, or have authority over any contractor work, nor shall Engineer have authority over or be responsible for means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a contractor to comply with Laws and Regulations applicable to such contractor’s furnishing and performing of its work.”

EJCDC E-500 (2014)

Contract Language

The Architect shall advise and consult with the Owner during the Construction Phase Services.

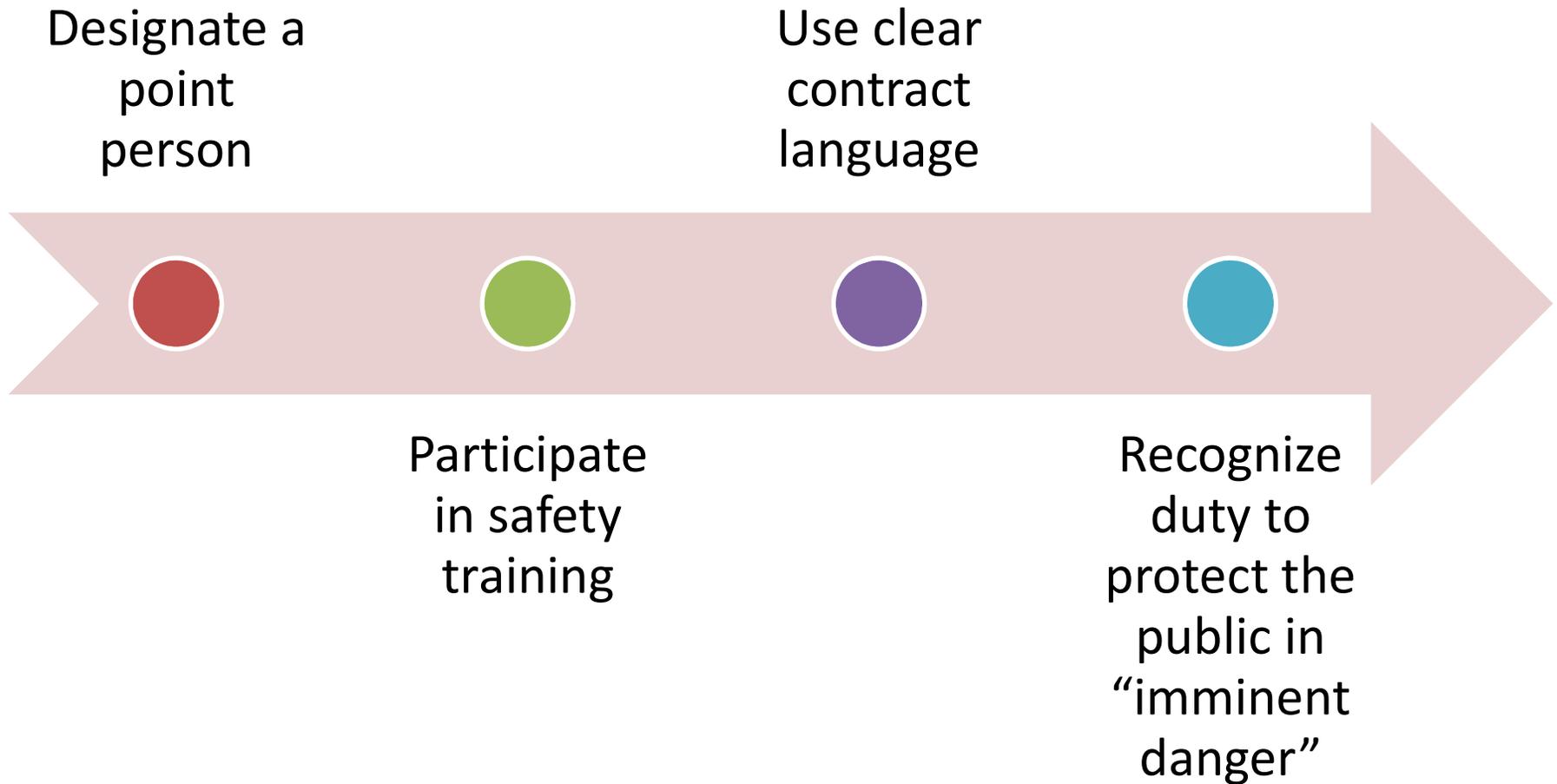
The Architect shall have authority to act on behalf of the Owner only to the extent provided in this Agreement.

The Architect shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the work, nor shall the Architect be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents.

The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the work.

- AIA B101-2017, Section 3.6.1.2

Construction Observation



Case Studies

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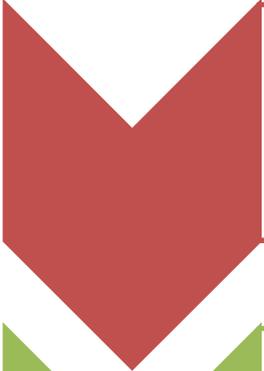
Carvalho v Toll Brothers and Developers

Engineer has a **legal duty** to exercise reasonable care for the safety of workers on a construction site when the engineer has a contractual responsibility for the progress of the work, **but not for safety conditions, yet is aware** of working conditions on the construction site that create a risk of serious injury to workers.



**If you see something that's an imminent danger,
it creates a duty to act.**

Herczeg v Hampton Transportation Municipal Authority

- 
- “We reject any notion that a duty arises **solely** upon an engineer’s actual knowledge of dangerous conditions.

- 
- If someone is under **no legal duty to act**, it matters not whether that person is actually aware of a dangerous condition.

- 
- Conversely, if someone **by contract or course of conduct** has undertaken the responsibility for worker safety, that person **may still be liable** even in the absence of actual knowledge of the dangerous condition if they should have known of the condition.”

Miller v DeWitt

“If the architect knew,
or in the exercise of reasonable care
should have known,
that the shoring was unsafe,
they had the
contractual right and corresponding duty
to stop work until the unsafe condition
was remedied.”

Hunt Construction Group v Garrett



Practical Tips

Contracts

- Clear scope of services
- No responsibility to inspect work for safety concerns or control/direct the means and methods
- No right or duty to stop work

On Site Actions

- Selectively choose meetings
- Don't direct contractor on how to do their job
- Report safety concerns to party in charge and follow-up with documentation

Documentation & Records

- Keep and maintain detailed records
- Contract, notes, correspondence, field logs, etc.

Workplace Policies

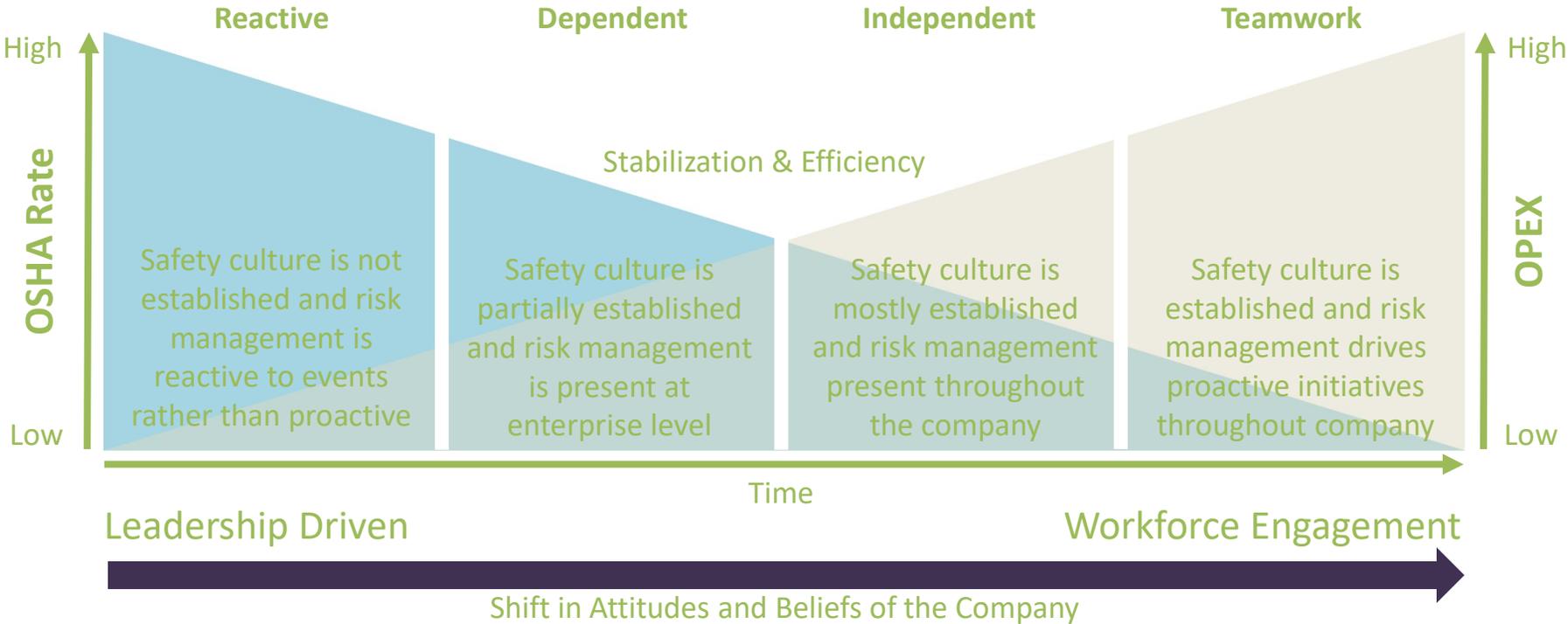
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Building Blocks



Safety Culture & Operational Excellence (OPEX)

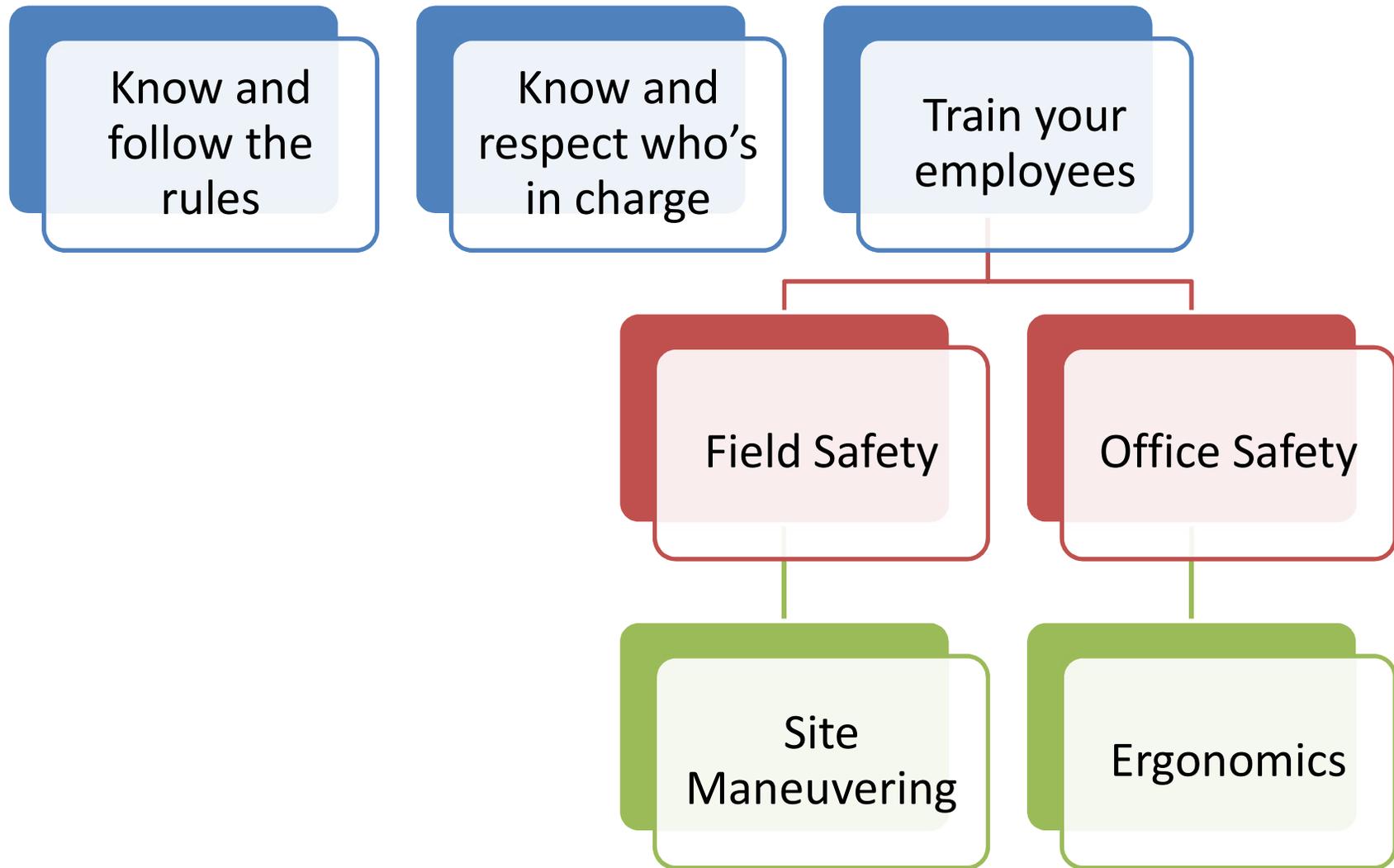


DuPont Bradley Value Curve™



Credit to Carl Johansen – Consolidated Edison Company

Lessons Learned



Hearts and Minds



Return to Work - Employer

Decreased workers compensation insurance costs

Stoppage of lost time with an offer of a reasonable light duty assignment

Lower experience modification factor may result in more business opportunities

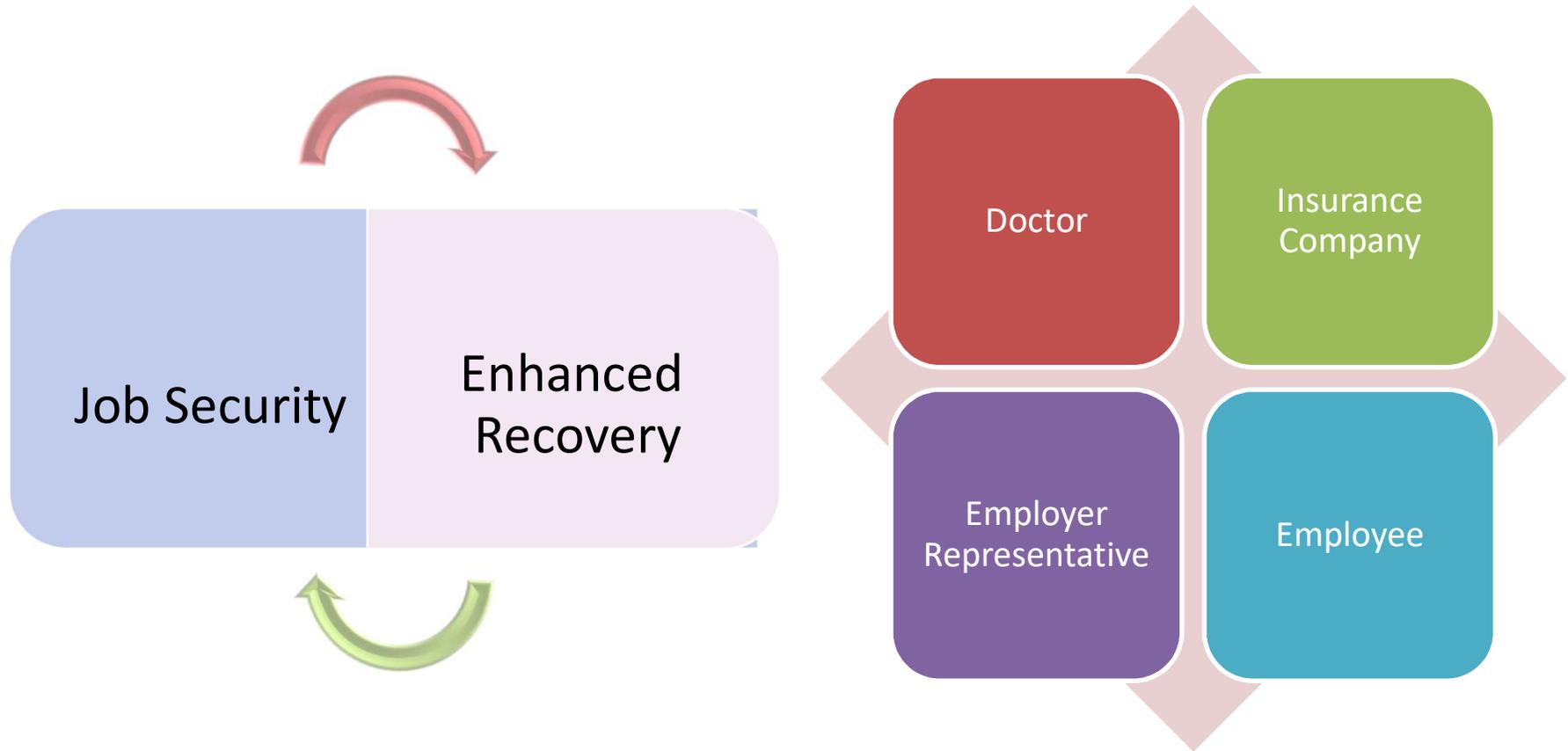
Increased employee morale

Diminished chance of recurring injury or illness

Cost savings not having to recruit, hire, and train replacements

Improved productivity

Return to Work Benefits - Employee



Resources

National Association of Home Builders – Fall Protection Toolkit

- <https://www.nahb.org/en/research/safety/fall-protection-toolkit.aspx>

OSHA Construction Standards and Resources

- <https://www.osha.gov/SLTC/fallprotection/construction.html>

OSHA Small Business Handbook

- <https://www.osha.gov/Publications/smallbusiness/small-business.html>

OSHA Guide for Fall Protection in Residential Construction

- <https://www.osha.gov/doc/guidance.html>

Thank you for your time!

QUESTIONS??

**This concludes The American Institute of Architects
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