Unanswered questions

Presented by
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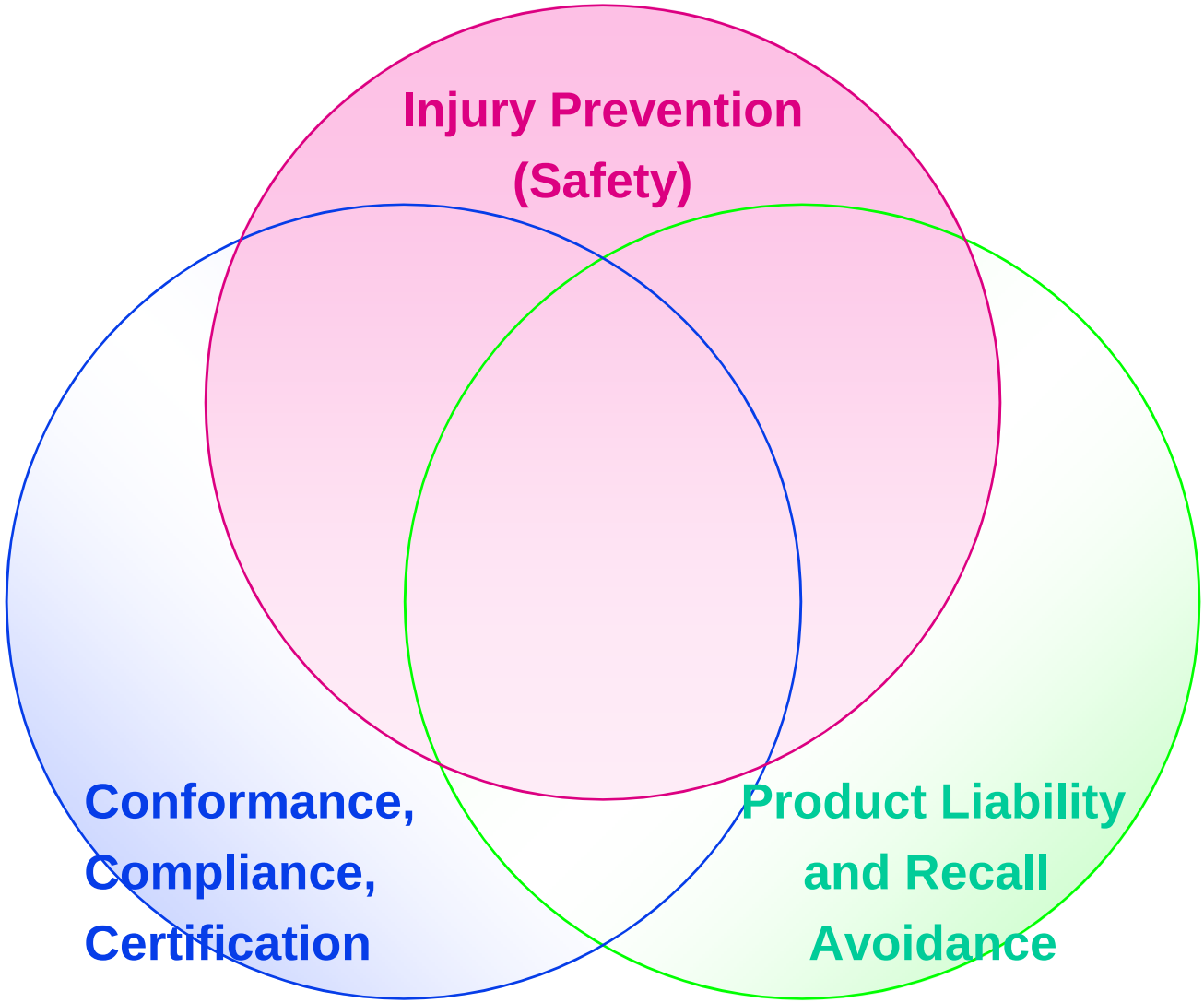


What is a “standard?”

A standard
is a statement describing acceptable performance (by someone)

W. Dwayne Richins
Professor, University of Oregon

What does “hazard” mean?

Hazard
is a potential source of harm

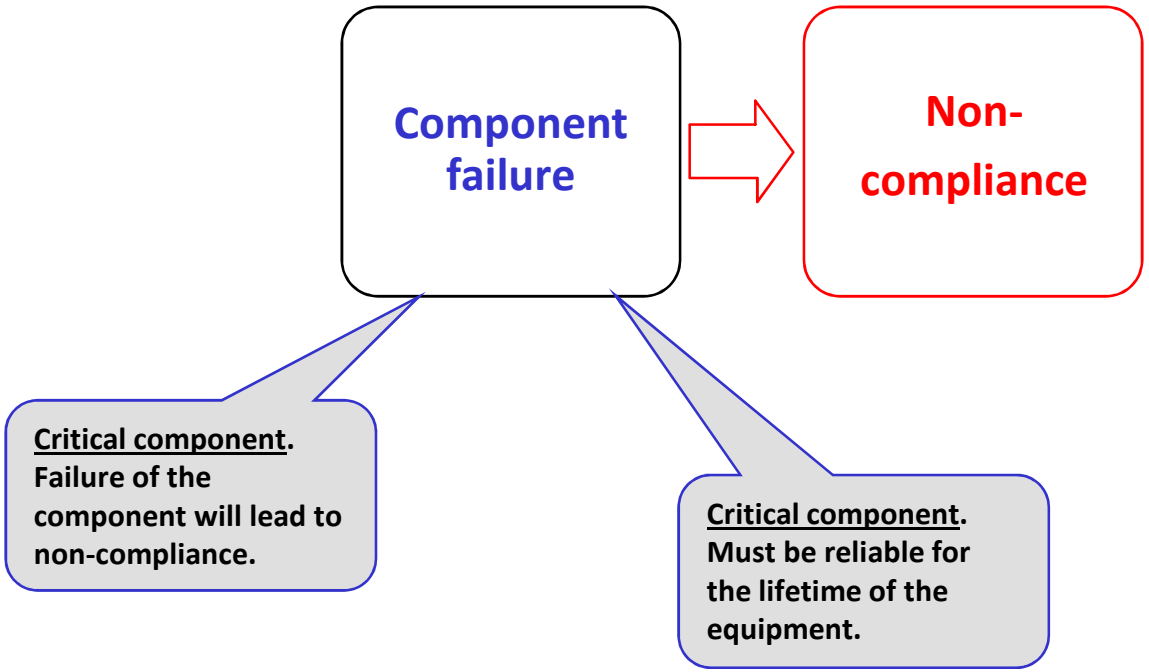
ISO/IEC Guide 51

Hazard
is an early game of chance played with dice, from which craps was derived

Hazard
is an energy source capable of causing injury

HBSE

What is a CRITICAL COMPONENT? Why is it *critical*?



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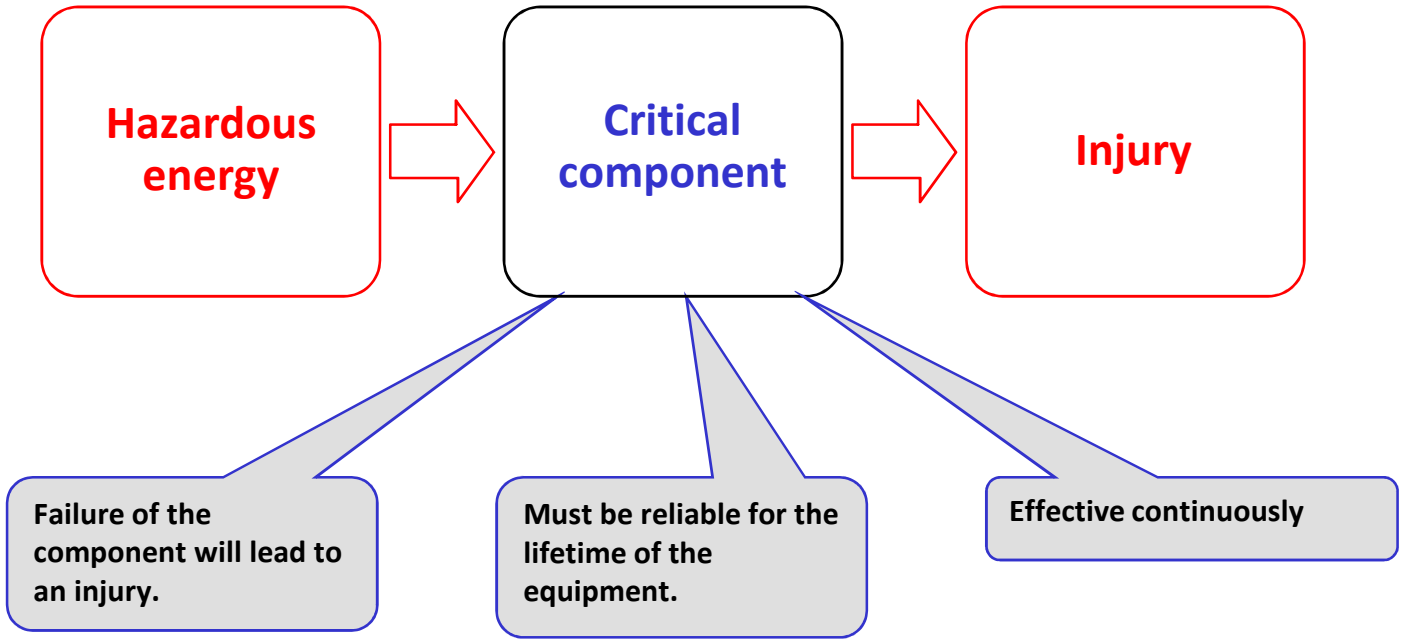

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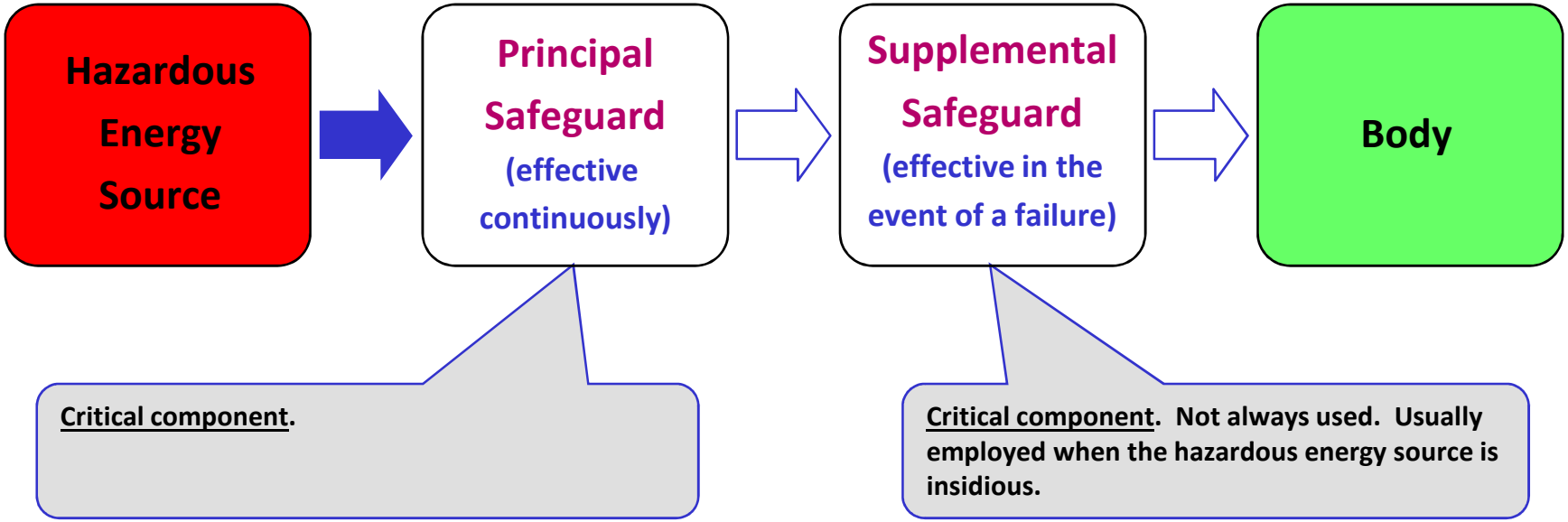


What is “safety”?

At this moment, are you safe?

The concept of "*safe*" implies the question:

“Safe from *what*?”

The condition of "safe" cannot be defined without also identifying the "thing" from which you are safe.

Safety
is freedom from unacceptable risk

ISO/IEC Guide 51

Safety
is the state of being certain that adverse effects *will not* be caused by some agent under defined conditions.

Chongfu Huang
Professor, Beijing Normal University

What is “risk”?

The concept of “*risk*" implies the question:

“Risk of *what*?”

The condition of “risk" cannot be defined without also identifying the "thing" that is the cause of the risk.

Risk

is the combination of the probability of occurrence of harm and the severity of that harm

ISO/IEC Guide 51

Risk

is the inverse of safety

(is the state of being certain that adverse effects *will* be caused by some agent under defined conditions)

is a scene in the future associated with some adverse incident

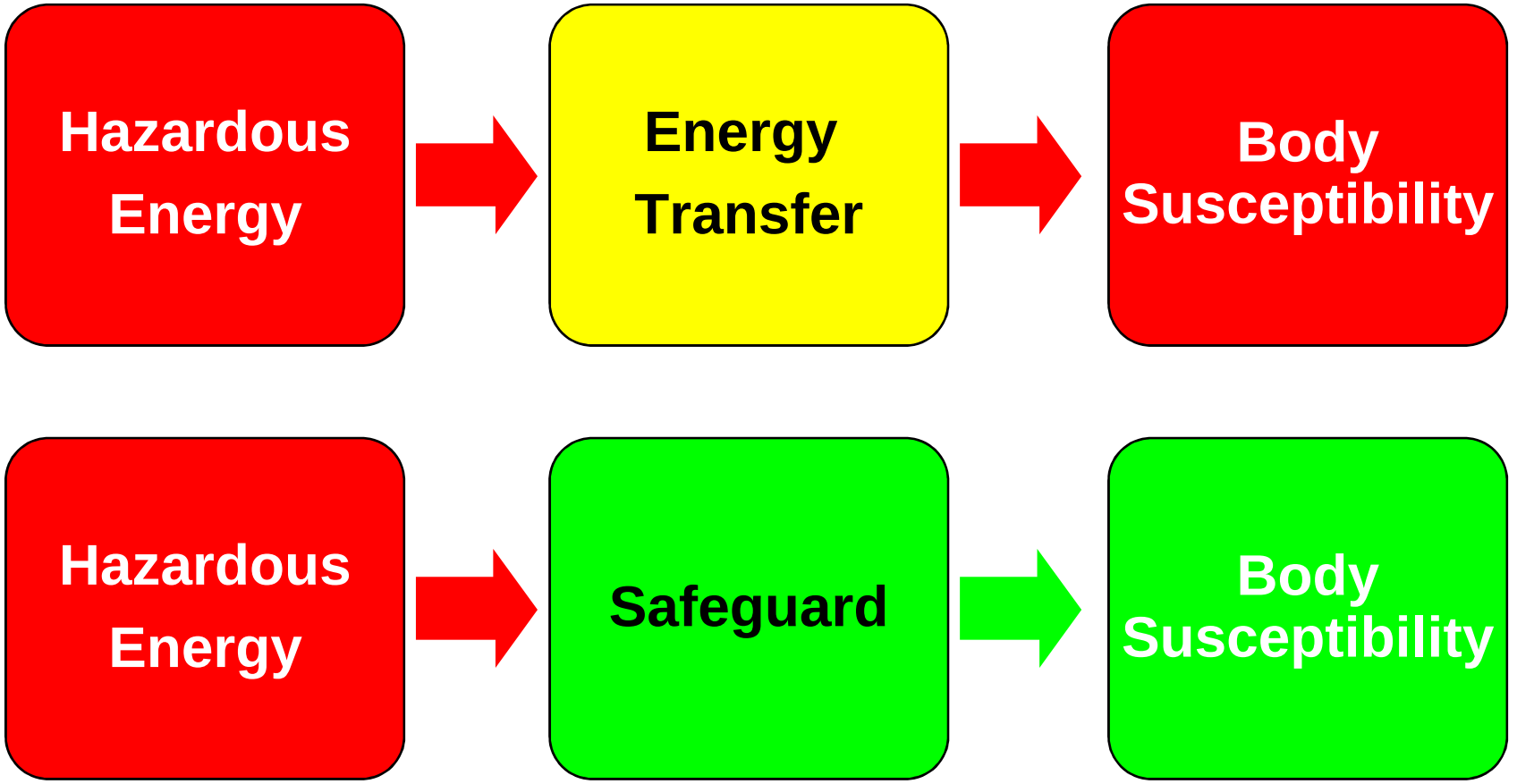
Chongfu Huang
Professor, Beijing Normal University

How does injury occur?

The 3-block model.

Ray Corson
HP Loveland, now Agilent

3-block models



Can a product be designed, and evaluated for safety…

WITHOUT
a safety standard?

A product *CAN* be designed, and evaluated for safety…

WITHOUT a safety standard!!!

Which is the more important parameter:

- clearance dimension, or
- electric strength voltage?