

# **An Introduction to Combustible Dust Hazards & Mitigation Methods**

Jason Reason, CIH, CSP, CHMM  
Director of Combustible Dust Services

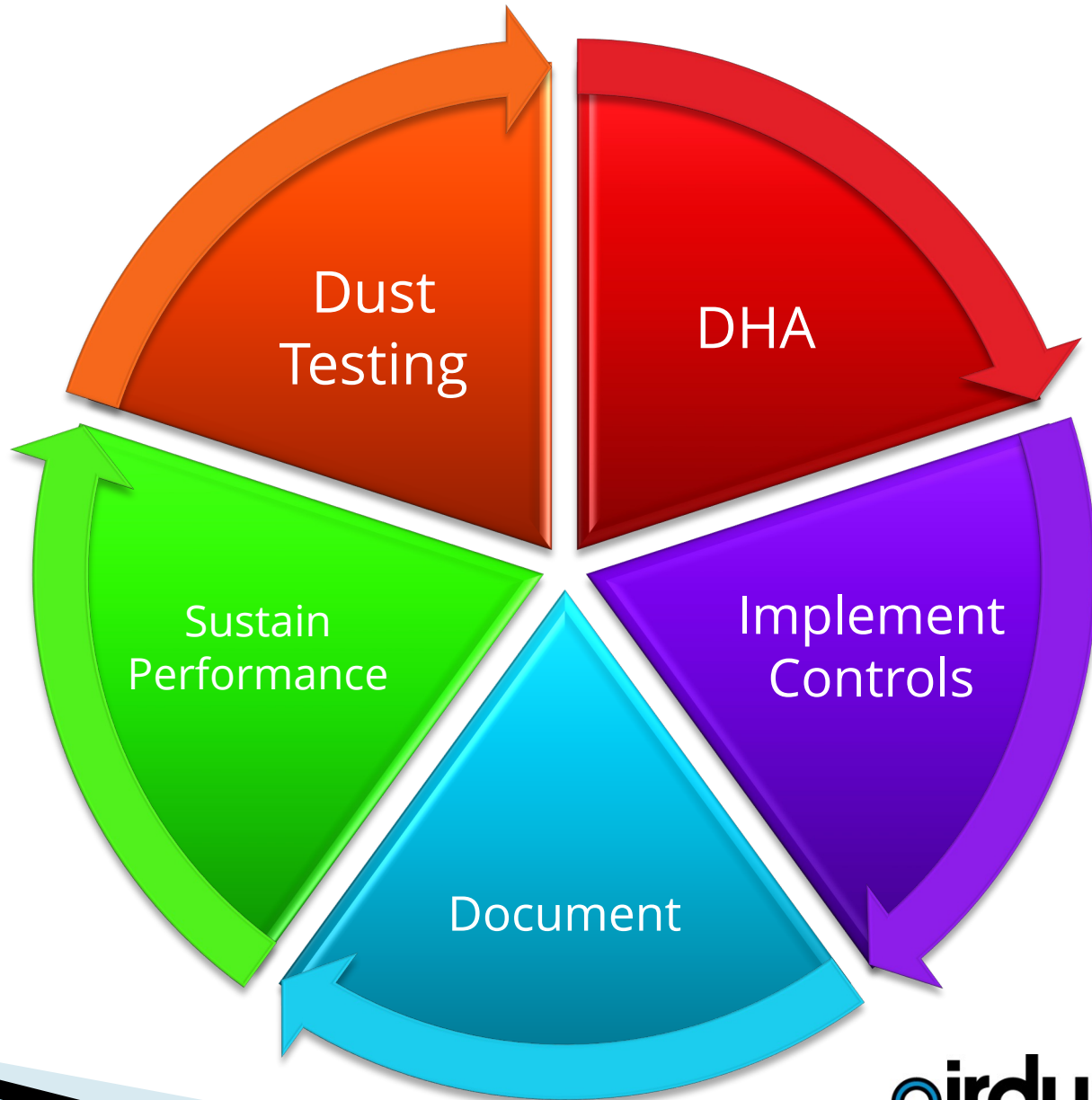
# Jason Reason, CIH, CSP, CHMM

- ▶ 12.5 years as OSHA Compliance Officer
- ▶ Performed hundreds of DHAs & Design Reviews (DRs) in myriad of industries
- ▶ Assisted in developing requirements for NFPA 652, 484 and 2021 IBC/IFC
- ▶ 2019 ASSP Fire Practice Specialty Safety Professional of the Year
- ▶ Top 10 Speaker at 2019 NSC Conference

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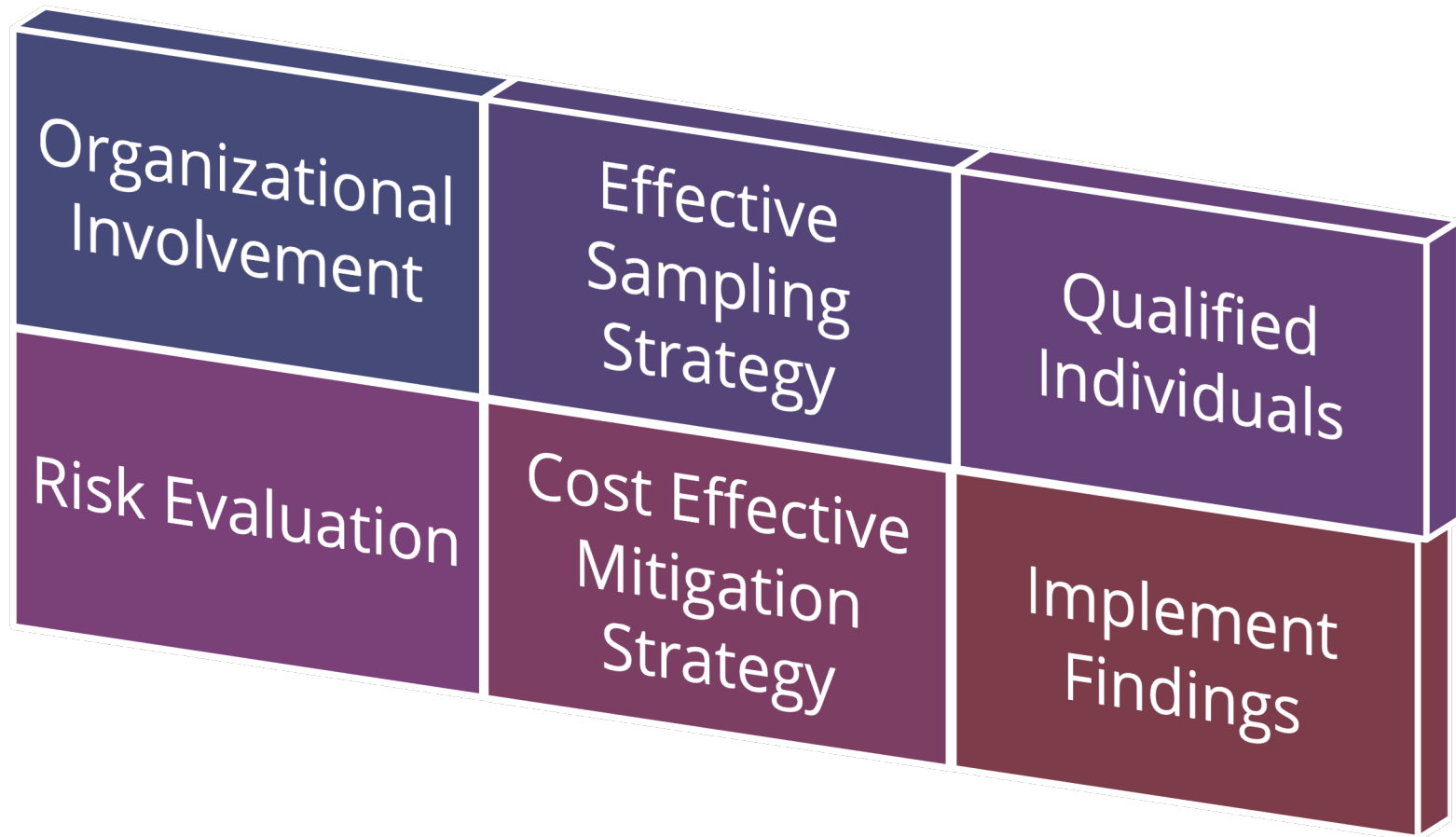
- ▶ NFPA Technical Committees
  - Chair of Committee for Wood & Cellulosic Materials (**NFPA 664**)
  - Principle Member of Committee for Handling & Conveying of Dusts, Vapors and Gases (**NFPA 91, 654 & 655**)
  - Principle Member of Committee for Fundamentals of Combustible Dusts (**NFPA 652**)
  - Principle Member of Committee for Combustible Metals and Metal Dusts (**NFPA 484**)
  - Member of Correlating Committee for Combustible Dusts (**Over all NFPA combustible dust committees**)

# Combustible Dust Hazard Mitigation Process



**HOW MANY  
STANDARDS IN THE US  
ADDRESS  
COMBUSTIBLE DUST  
HAZARDS?**

# Foundation of An Effective DHA



# Anatomy of An Effective DHA

- ▶ Sources of Ignition
- ▶ Process Equipment
- ▶ Dust Collection Systems
- ▶ EHS Programs/Policies
- ▶ Housekeeping
- ▶ Cleaning Methods
- ▶ Contractors
- ▶ Electrical Classification
- ▶ Explosion Protection & Prevention Systems
- ▶ Fire Protection Systems
- ▶ Preventative Maintenance Programs
- ▶ Building Construction
- ▶ Emergency Egress
- ▶ Dust Testing
- ▶ Dust Reactivity
- ▶ Flame-Resistant Garments

# Explosion Protection Methods

## Passive

- ▶ Deflagration Venting
- ▶ Deflagration Pressure Containment
- ▶ Deflagration Venting Through Flame-Arresting Device

## Active

- ▶ Oxidant Concentration Reduction
- ▶ Deflagration Suppression Systems
- ▶ Dilution with a Noncombustible Dust







# Questions???

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