

The Prevention through Design (PtD) Program's mission is to prevent or reduce occupational injuries, illnesses, and fatalities through the inclusion of prevention considerations in all designs that impact workers. This snapshot shows recent accomplishments and upcoming work.

What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Prevention through Design (PtD) Program works with partners in industry, labor, trade associations, professional organizations, and academia. The program focuses on preventing illness, injury, and fatality by "designing out" occupational hazards and risks.

What do we do?

- **Research** the effectiveness of current PtD interventions, investigate additional solutions for existing design-related challenges, and identify future research needs.
- **Educate** and motivate others to use PtD priorities and processes in collaborative design and redesign of facilities, materials, work processes, equipment and tools by:
 - Helping universities integrate PtD principles into engineering curricula.
 - Encouraging professional accreditation bodies to include PtD in their assessments.
 - Making business leaders aware of potential cost savings from PtD.
- Increase **practice** of PtD by sharing case-studies of real-life PtD solutions, and encouraging stakeholders to apply them and share further.
- Encourage business, labor, government, academic, and consensus standards organizations to integrate PtD into **policy** revisions.
- Produce concise, practical PtD guides and checklists for **small businesses**, their insurers, and the publishers of building code books.
- Advocate **lifecycle sustainability** to address health and safety for all building occupants or users. The U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED®) PtD credits now cover all occupants, including construction and operations and maintenance.

What have we accomplished?

- NIOSH published a suite of documents and training tools for the proposed NIOSH **Occupational Exposure Banding** process which quickly and accurately assigns chemicals into specific categories (bands), corresponding to a range of exposure concentrations designed to protect worker health.
- NIOSH published three **Nanotechnology Workplace Design Solutions**, which provide employers with strategic steps toward making sure employees stay safe while handling nanomaterials. The document release was further shared by industry media, including the **National Safety Council**, **nanowerk**, and **OHSonline**.
- Developed and presented a half-day professional development course to 42 health and safety professionals at the American Industrial Hygiene Conference and Exposition.
- Collaborated with CPWR, The Center for Construction Research and Training, on construction solutions for **ladder grab bars**, **skylights**, **push-fit pipe**, and **vibration protection**.
- Presented PtD methods at three universities, a chemical safety industry meeting, and to a Department of Defense annual conference.
- Contributed to the **DODGE Data & Analytics SmartMarket Report, Safety Management in the Construction Industry 2017** – much of which dealt with PtD/design safety.

What's next?

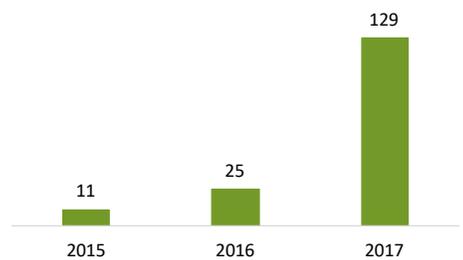
- Publish PtD curricula for Engineering undergrad programs, and industry use, in:
 - Agricultural Engineering
 - Chemical Process Safety
 - Nanotechnology
 - Manufacturing and Industrial Engineering
 - Electrical Systems
- Publish a journal article showing how to use NIOSH-developed Business Case Developer software to make proposals for adoption of PtD processes in a business.
- Publish a Capital Projects Processes web site with PtD guidance for large building projects.
- Write a PtD chapter for Patty's Industrial Hygiene, a standard reference for the fields of occupational health and toxicology.
- Publish eight general-industry PtD Case Studies that include business case evaluations.

Visits to PtD topics/publications web page



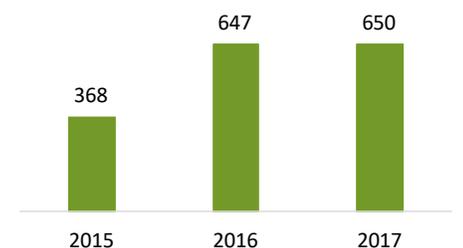
Source: NIOSH Program Records

Projects using PtD LEED® Credits



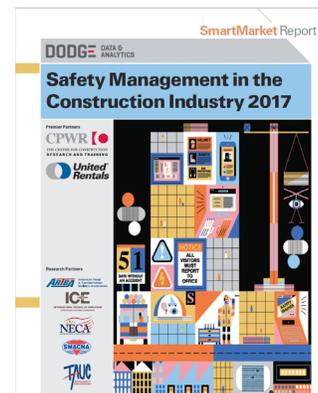
Source: NIOSH Program Records

LEED® Professionals Earning PtD CEU's



Source: NIOSH Program Records

Publication Spotlight: SmartMarket Report



To learn more, visit
<https://www.cdc.gov/niosh/topics/ptd>

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