



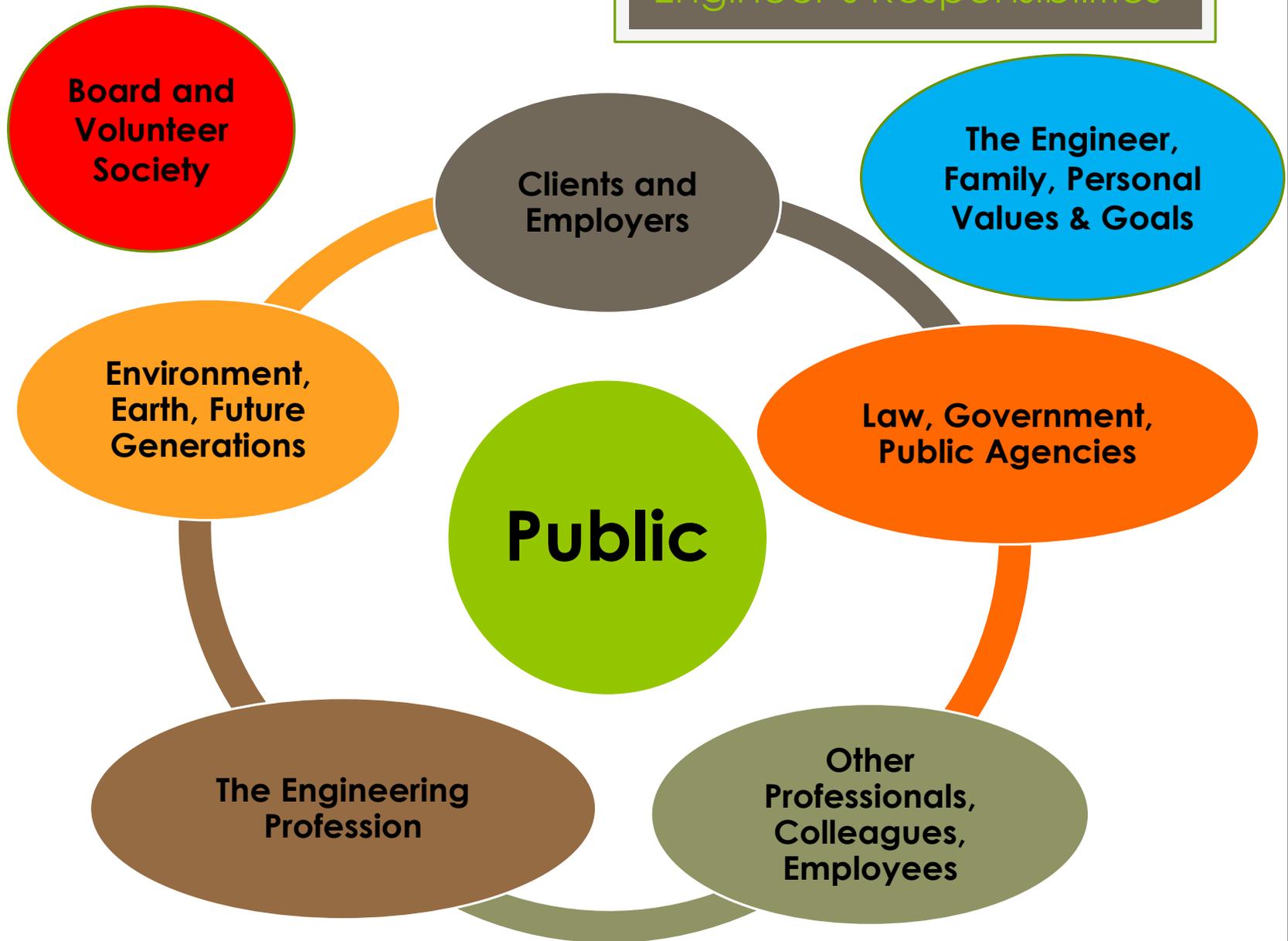
Professional Ethics

ASHE Conference
Charlottesville, VA
April 9, 2018

What is Ethics?

- ✓ A system of moral principles
- ✓ Set of rules for what's right and what's wrong
- ✓ Code of conduct governing behavior
- ✓ Guideline for making good decisions
- ✓ List of **professional responsibilities**
- ✓ Duties you owe to **other people and to society** as a whole

Engineer's Responsibilities



Public Perception

Gallup Poll:

Please tell me how you would rate the honesty and ethical standards of people in these different fields -- very high, high, average, low, or very low?

Engineers

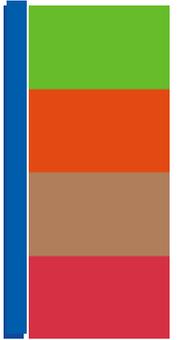
	Very high	High	Average	Low	Very low	No opinion	Very high /High
	%	%	%	%	%	%	%
2012 Nov 26-29	16	54	25	2	1	2	70
2009 Nov 20-22	12	50	31	3	1	3	62
2006 Dec 8-10	13	48	33	2	1	4	61
2003 Nov 14-16	12	47	36	2	*	3	59
2001 Nov 26-27	12	48	34	1	1	4	60
2000 Nov 13-15	9	47	36	3	*	5	56
1999 Nov 4-7	8	42	42	4	1	3	50
1998 Oct 23-25	10	40	43	3	1	3	50
1997 Nov 6-9	9	40	40	3	1	7	49
1996 Dec 9-11	9	39	41	2	1	8	48
1995 Oct 19-22	9	44	38	3	1	5	53
1994 Sep 23-25	9	40	42	4	1	4	49
1993 July 19-21	8	41	41	3	1	6	49
1992 Jun 26-July 1	7	41	40	3	*	9	48
1991 May 16-19	7	38	39	3	1	12	45
1990 Feb 8-11	8	42	37	3	1	10	50
1988 Sep 23-26	10	38	41	3	1	7	48
1985 July 12-15	11	42	37	3	*	8	53
1983 May 20-23	7	38	39	2	1	13	45
1981 July 24-27	9	39	35	4	1	12	48
1977 July 22-25	8	38	43	3	1	6	46
1976 June 11-14	10	38	43	3	1	4	48

GALLUP®

How Do You Solve an Ethical Dilemma?

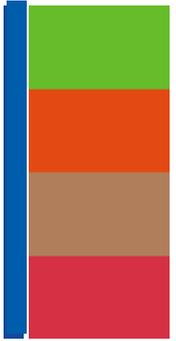
- Study the code of ethics
- Look for additional resources
- Ask the right questions
- When in doubt, seek help!

THE ASCE CODE OF ETHICS



- **CANON 1:** Engineers shall hold paramount the **safety, health and welfare of the public** and shall strive to comply with the principles of **sustainable development** in the performance of their professional duties.
- **CANON 2:** Engineers shall perform services only in areas of their **competence**.
- **CANON 3:** Engineers shall issue **public statements** only in an **objective and truthful** manner.
- **CANON 4:** Engineers shall act in professional matters for each employer or client as faithful **agents or trustees**, and shall avoid **conflicts of interest**.
- **CANON 5:** Engineers shall build their professional reputation on the **merit** of their services and shall **not compete unfairly** with others.
- **CANON 6:** Engineers shall act in such a manner as to uphold and enhance the **honor, integrity, and dignity** of the engineering profession and shall act with **zero tolerance** for **bribery, fraud, and corruption**.
- **CANON 7:** Engineers shall continue their **professional development** throughout their careers, and shall provide opportunities for the professional development of those engineers under their **supervision**.
- **CANON 8:** Engineers shall, in all matters related to their profession, treat **all persons fairly** and encourage **equitable participation** without regard to gender or gender identity, race, national origin, ethnicity, religion, age, sexual orientation, disability, political affiliation, or family, marital, or economic status.

ASHE CODE OF CONDUCT



A: The **safety, health and welfare of the public** will be held prominent in the conduct of work by ASHE members.

1. ASHE members shall perform their work recognizing the importance of protecting the safety, health, property and welfare of the public.
2. If, during the conduct of work, a member's judgement is compromised or overruled in such a way that endangers the safety, health, property, or welfare of the public, the member shall notify the appropriate authority.
3. Members shall refrain from association with any person or business venture, which they suspect to be engaged in fraudulent or dishonest business practices.

B: Members should provide or perform services solely in areas of their **expertise or competence**

1. ASHE members shall perform work assignments only when qualified by training, education, or experience in the specified field or service involved.
2. ASHE members shall recommend, approve or promote only those products or services in which they have competence and knowledge.

C. Members shall act in a **professional, ethical, and moral manner** when conducting business and other matters related to the highway industry and their profession.

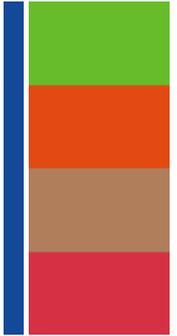
1. ASHE members shall identify all known and potential conflicts of interest to their employers or clients informing them of any business association, which could influence or appear to influence their judgement or quality of service.
2. ASHE members can accept compensation from more than one party for performing the same services providing that the circumstances are fully disclosed and agreed to by all interested parties.

D. Members should maintain the utmost **integrity in the solicitation** of their products and services.

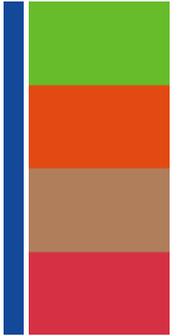
1. ASHE members shall be entirely truthful when representing their business experience, professional qualifications or product performance.
2. ASHE members shall not offer, give, solicit or receive any gift, political contribution or other valuable consideration with the intent of receiving favorable consideration of a contract award, materials or other work.

Case Study 1: Timesheets

- Firm institutes new policy, requiring all timesheets to be filled out in pencil
- Firm's vice president is assigned responsibility for reviewing all timesheets and making corrections where hours are incorrect or billed to wrong job
- Firm's owner begins to direct VP to alter timesheets; e.g., to increase hours billed or to charge time to overhead when funds for a job have been expended



Case Study 1 (cont.)



- Fundamental Canon 6:

"Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession **and shall act with zero tolerance for bribery, fraud, and corruption**"

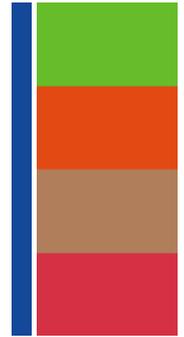
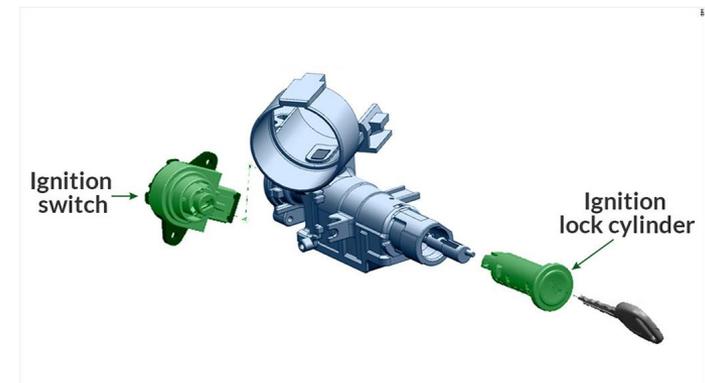
Guideline a: "Engineers shall not knowingly engage in business or professional practices of a **fraudulent, dishonest or unethical nature.**"

- CPC finds that the member violated Canon 6 and recommends a letter of admonition

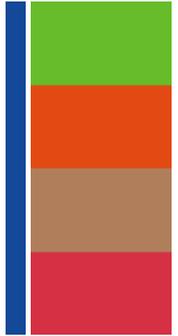


Case Study 2: General Motors

- GM engineers receive reports of problem with ignition switch; knee brush or heavy key fob pulls ignition out of run position, causing “moving stalls”
- Engineers dismiss as safety issue, but fail to consider other systems that might be affected by stall
- Meanwhile, reports of front-impact collisions in which air bags fail to deploy treated by GM as rare/mysterious. Question assigned to various committees, none of which undertakes serious investigation
- Ultimately problem is not addressed for over a decade; 124 deaths and 274 injuries attributed to the faulty ignition switch



Case Study 2 (cont.)

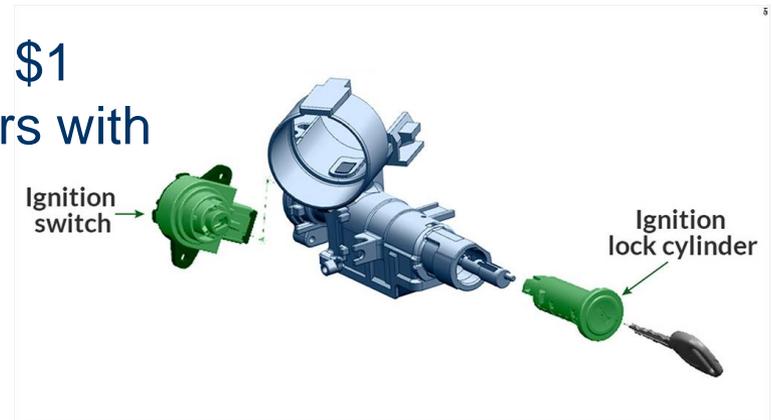


■ Fundamental Canon 1:

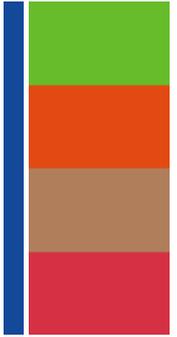
Engineers shall **hold paramount the safety, health and welfare of the public** and shall strive to comply with the principles of sustainable development in the performance of their professional duties.

- Independent review finds a corporate culture lacking in personal accountability; staff describe “GM salute” = arms crossed, fingers pointing in other directions

- GM still in litigation, potential payout of \$1 billion to accident victims and customers with decreased vehicle values



Case Study 3: Departing Employee



- VP of an engineering firm has a falling out with the firm's owner, decides to leave and start his own practice
- Prior to departure, VP calls several of firm's clients to let them know that he has given notice, and expresses 'grave concerns' about the firm's ability to provide a similar quality of service to clients after the VP leaves
- Several of firm's clients choose to terminate work with the former employer and establish contracts with VP's new practice

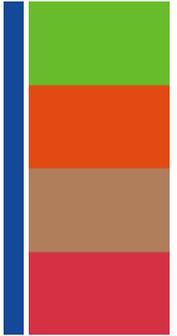


Case Study 3 (cont.)

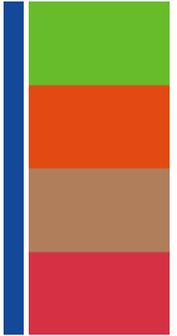
- Fundamental Canon 4:

Engineers shall act in professional matters for each **employer or client as faithful agents or trustees**, and shall avoid conflicts of interest.

- CPC finds that the member violated Canon 4 and recommends expulsion
- Member presents defense at hearing before Board of Direction.
- While the Board upholds the CPC's finding of a Canon 4 violation, it votes instead to suspend member for 5 years.



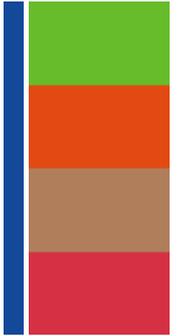
Case Study 4: Shell Corporation



- Large firm seeking contract work offers to fund an employee in establishing a company under the employee's name
- As the employee is of Filipino descent, this new firm registers as DBE and bids as subcontractor on projects
- When successful, work is actually done by employees of the large firm, using email addresses, business cards, and stationery using DBE's name
- Over several years, millions in contracts are funneled to the large firm through the DBE



Case Study 4 (cont.)



- **Fundamental Canon 5:**

“Engineers shall build their professional reputation on the merit of their services and **shall not compete unfairly with others.**”

- **Fundamental Canon 6:**

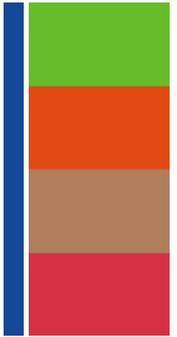
“Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with **zero tolerance for bribery, fraud, and corruption**”

- Whistleblower files suit under federal False Claims Act; companies are ordered to pay \$2M in restitution. Owners and firm both receive criminal sanctions and debarment from future contracts.



Case 5: The Expert Witness

- Engineer retained by personal injury attorney to review roadway deterioration at scene of client's auto accident
- Engineer provides draft report, attributing the deterioration to improper maintenance by state DOT
- Attorney reminds engineer that state immunity will likely preclude recovery for attorney's client
- Engineer later submits final report to attorney, and this time claims improper design caused the conditions that led to accident
- Engineer testifies as expert witness in litigation against engineering firm responsible for design of roadway



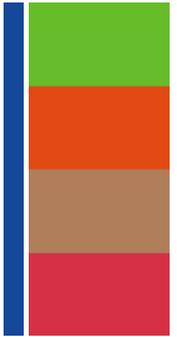
Case 5:

- Fundamental Canon 3:

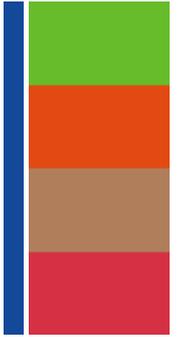
“Engineers shall be **objective and truthful** in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony.”

Guideline c: “Engineers, when **serving as expert witnesses**, shall express an engineering opinion only when it is founded upon adequate knowledge of the facts, upon a background of technical competence, and **upon honest conviction**.”

- CPC finds that the member violated Canon 3 and recommends a two year suspension



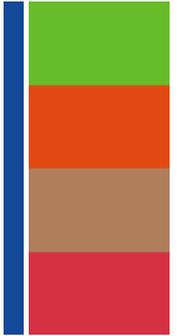
Case Study 6: Competence



- Structural engineer renovating his family-owned restaurant signs and seals plans for a commercial kitchen hood and exhaust system.
- After multiple rejections by the building department for “substantial design inadequacies,” engineer is reported to state board
- Board notes that plans did not reflect a safe and functional system, and engineer “showed a complete lack of knowledge of this aspect of engineering.”



Case Study 6 (cont.)



■ Fundamental Canon 2:

“Engineers shall **perform services only in areas of their competence.**”

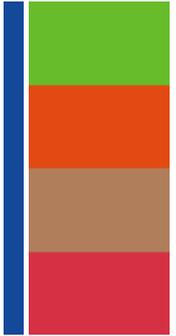
Guideline a: "Engineers shall undertake to perform engineering assignments only **when qualified by education or experience** in the technical field of engineering involved."

Guideline c: "Engineers shall not affix their signatures or seals to any engineering plan or document dealing with **subject matter in which they lack competence** by virtue of education or experience."

- CPC finds that the member violated Canon 2, recommends five year suspension
- Member chooses instead to resign from the Society



Tips for Resolving an Ethical Dilemma

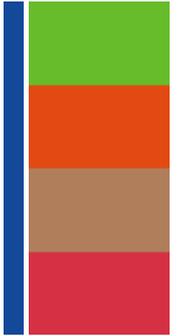


Suggested Tests for Evaluating Actions

(M. Davis [1997], C. Skooglund, J. Smith, & P. Harper)

Harms test	Do the benefits outweigh the harms, both short-term and long-term?
Reversibility test	Would I think this was a good choice if I traded places?
Colleague test	What would my professional colleague say?
Legality test	Would my choice violate a law, or a policy of my employer?
Publicity test	How would my choice look on the front page of tomorrow's newspaper? What if everyone behaved this way?
Wise relative test	What would my grandmother say? Would I want her to know what I'm doing?
Hiding test	Do I want people to know what I'm doing?
Self-respect test	How will I feel about myself after I make this choice?

YOUR ROLE IN PROMOTING ETHICS



Make good decisions:

- Policies = review applicable codes of ethics, policies
- Law = understand the law and your legal obligations
- Universal = what is generally understood to be the right thing to do; talk to others whose opinions you respect
- Self = what do you think; do you feel good about decision you make

...and help others do the same:

- Create a corporate culture that promotes ethics
- Define your organization's values
- Communicate those values
- Demand compliance
- Reward compliance and penalize noncompliance

Questions?

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