

IPRO 310: Designing Prototypes for Blind Swimmers Code of Ethics

Overarching Principle

Provide a safe, effective, and reliable assistive device for visually impaired swimmers.

Law and Regulation

Pressure: Increase sales and maximize profits.

Risk: Violate product liability laws as a result of negligence.

Pressure: Release the product quickly to the market.

Risk: Failure to provide a warranty for the product.

Pressure: Proceed to the testing phase of the design process quickly.

Risk: Conduct product tests while participating members are not properly certified by the Institutional Review Board (IRB).

Pressure: Produce and test a prototype quickly.

Risk: Failure to adhere to the guidelines under IRB and Americans with Disabilities Act (ADA) for testing with human subjects and people with disabilities.

Pressure: Produce a safe product.

Risk: Failure to provide or falsely report warnings about product use (i.e. claim it is safer than it is).

Pressure: Produce a design quickly.

Risk: Infringe on patents by not doing the necessary research or by knowingly using a patented design.

Measures: Results of civil or criminal proceedings.

Canon: Respect the laws and regulations set forth by any institution as well as U.S. patent law. We shall also provide proper documentation of the uses and risks involved in the use of our product as well as a written warranty.

Contracts

- Pressure: Expand into the market quickly and increase sales.
Risk: Offer bribes to get contracts from outside parties (i.e. swimming coach/lifeguard).
- Pressure: Time constraints in testing the device.
Risk: Failure to establish proper and thorough contracts with test subjects. (i.e. consent forms).
- Pressure: Market the product and/or show the designs accomplishments to academic community.
Risk: Breaking confidentiality agreements (publish collected data without the consent of those involved in collecting it).
- Pressure: Operate with the full cooperation of outside parties.
Risk: Failure to abide by contracts with test subjects or outside contractors (i.e. lifeguards/pool facilities).
- Measure: Results of civil or criminal proceedings and consequent IRB sanction.
- Canon: Respect contracts and agreements with all parties involved in this endeavor. We also shall not reveal data collected without proper consent of all parties involved.**

Professional Codes

- Pressure: Produce and sell a product to customers quickly.
Risk: Manufacture a product that does not adhere to guidelines of the Swim Coaches Association for the inclusion of disabled swimmers.
- Pressure: To make the product more attractive to investors.
Risk: Falsify data for market research.
- Measure: Complaints from clients.

Results from independent testing of the product that does not correlate with reported data.

Canon: Follow standards and guidelines set forth by related associations and accurately report the true value of the product.

Industry Standards

Pressure: Develop a product that is affordable.

Risk: Use materials and manufacturing processes that do not create a safe product.

Pressure: Release the product quickly.

Risk: Sell a product that does not meet the design intent.

Pressure: Desire to cut pre-production testing costs.

Risk: Failure to obtain certification from a professional testing laboratory such as Underwriters Laboratories (UL).

Risk: Create a device that does not meet the standards set by the Assistive Technology Industry Association.

Measure: Negative feedback from human test subjects.

Action taken by regulating agencies against the company for not following set standards.

Customers refuse to purchase/use the product due to lack of certification by a respected testing laboratory such as UL.

Canon: Provide a product that is safe, effective and reliable as well as meets the standards of the assistive technology industry.

Community

Pressure: Lower cost of manufacturing the device.

Risk: Use of inexpensive and low quality materials to manufacture the device.

Pressure: Develop a product that would be widely used in swimming competitions.

Risk: Develop a product that is not easily accessible to all competitors.

Scenario: The product is to be used in worldwide games such as the Olympics but is only available to U.S. competitors.

Measure: Device breaks down in the pool causing harm to the facilities and swimmers resulting in possible lawsuits against the company.

Consumers get disqualified from competitions because of an unfair advantage.

Canon: Understand our responsibility to manufacture a product, which assists the blind and visually impaired community while promoting an equal playing field among competitors and maintain a high quality product.

Personal Relations

Pressure: Tight deadlines for developing and prototyping important aspects of the product.

Pressure: Secure funding for next phase of testing.

Risk: Failure to provide feedback to our outside partners and investors in a timely manner.

Risk: Provide fictitious data to investors.

Risks: Failure to conduct research according to Human Rights Guidelines.

Pressure: Keep relationships with our partners on good terms.

Risk: Failure to provide accurate feedback on performance.

Measure: Loss of investors because of lack of trust.

Canon: Maintain honest and strictly professional relationships with all stakeholders (customers, suppliers, managers, employees, investors).

MORAL VALUES

Pressure: Lower the cost of the pool test.

Risk: The use of less than professional pool staff.

Pressure: Recruit enough blind swimmers for a pool test.

Risk: Lying and making false assurances to the blind swimmers.

Pressure: Keep Pool test on schedule to avoid going over budget.

Risk: Putting the test subjects at risk by not taking proper precautions.

Pressure: Develop a product that is marketable.

Risk: Failure to disclose what the product does or does not do.

Pressure: Develop a device that meets the design parameters

Risk: Develop a device that does more harm than good (i.e. works, but is harmful to use).

Pressure: Receive feedback that proves the effectiveness of the design

Risk: Not being honest with people who review the design (test subjects) or ask leading questions when collecting data.

Measure: Sanction by the IRB.

Canon: Respect and maintain honesty with our consumers, partners, and all test subjects.