

**Title (Sample 1):** Marketing Plan: Industry Characteristics and Performance

**Background:** The following is an excerpt taken from the final section of a marketing plan written as per the requirements for MARK 100, a class offered at San Diego Mesa College (taken Spring 2021). The project, undertaken on behalf of a small ergonomics business based in San Diego County, California, had three major tasks: to assess current market characteristics, to analyze the business's performance and positioning, and to provide recommendations for future business viability. (Full text body: 10 pages single spaced)

**Note:** The name of the organization has been replaced with "(organization name)" in order to protect the identity of the organization and its stakeholders.

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**Potential Macroevironmental Impacts**

Global networks are constantly evolving. From changing technologies and government regulations to industry changes and economic swings, virtually no industry is impervious—occupational health and safety is no exception.

In today's digitally connected world it pays to be technologically savvy. The OHS industry has been undergoing its own renaissance when it comes to technology. These advancements are great tools for increasing the analytic facets of the field and the demand for outside consultants (Spitzer, 2020). New equipment and technologies in the OHS sector have increased industry productivity however these technologies necessitate greater technical knowledge which requires skilled employees that will require higher salaries (Spitzer, 2020). Unlike other industries the OHS sector is not highly susceptible to automation or the elimination of jobs due to advancements in technology because site analyses need to be conducted in person (Spitzer, 2020). The most notable advancements in technology are hardware and software based and have given way to better data collection, storage, and data presentation as well as better modeling techniques that provide customized, targeted, and accurate analyses (Spitzer, 2020). In addition to computer-driven technological developments, advancements in lab and field equipment have aided in gathering data in an efficient and accurate manner (Spitzer, 2020).

The occupational health and safety industry is largely dependent on government regulation. Companies are required to comply with the environmental and workplace safety regulations set forth by both federal and state governments. In the next 5-years, through 2025, corporate profits and employment are expected to increase as new workplace safety laws and regulations go into effect, this, in turn, is expected to stimulate the demand for OHS services (Spitzer, 2020).

Regulation fluctuates with the political climate. While according to Spitzer (2020) deregulation surrounding workplace safety was a potential threat to the OHS industry in 2020, the increase in

funding for state and federal occupational safety agencies is directly correlated to more frequent health and safety inspections, fueling the demand for OHS services. Beyond these demands manufactures are required to create, and employees must be able to recognize and maintain, Globally Harmonized System compliant safety data labels, the groundwork for which often requires the expertise of OHS providers (Spitzer, 2020). State regulations such as California's Occupational Health and Safety Act, also help perpetuate the need for OHS services (Spitzer, 2020).

In the midst of the COVID-19 pandemic the national unemployment rate skyrocketed causing a drop in demand for OHS services (Spitzer, 2020). Prior to the pandemic and in times of strong economic growth, increased activity in the construction and manufacturing sectors bolstered the need for OHS providers (Spitzer, 2020). As an extension of a strong economic growth companies across all sectors redouble their employment efforts, as these entities expand so too does the demand for occupational health and workplace safety practitioners and the services they provide (Spitzer, 2020).

As technology continues to advance, is accepted, and ultimately adopted by OHS providers, competition will continue to grow with streamlined workflows and increased productivity allowing practitioners to provide accurate analyses with greater rapidity (Spitzer, 2020). Customers will demand greater specificity from their OHS contractors which will necessitate the implementation of cutting-edge technologies. In order to keep up with these changes and remain competitive in the industry (organization name) should consider researching and adopting industry-specific technologies that may help their analyses. Communication and outreach are also central factors when it comes to expanding visibility and reaching potential clients. The adoption of some social media, which is free and requires little technical skill, may be beneficial in setting (organization name) from the competition. Keeping abreast of new government regulations, specifically as they relate to ergonomics is also a necessity in order to provide the best, most up-to-date and effective services and interventions.

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**Title (Sample 2):** An Insidious Unknown: Organophosphate fire retardants and cancer—a paper review

**Background:** This paper review explores the potential for certain chemical additives in fire retardants to cause thyroid cancer. The body of the paper is published in its entirety below.

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Fire retardants are ubiquitous—a paragon of fire prevention worldwide. One class of fire retardants, organophosphate flame retardants (PFRs), though not as overt a fixture as their spinker, extinguisher, or alarm counterparts, are an additive in everything from nail polishes to furniture to plastics. Though some PFRs have been in use since the 1960s their true rise to prominence occurred after the U.S. Environmental Protection Agency (EPA) instituted a phaseout of US manufactured polybrominated diphenyl ethers (PBDEs) in 2004 (EPA, 2017a; Stapleton et al., 2009). This phaseout also mandated the cessation of PBDE sales by the end of December 2013 over concern that these compounds are bioaccumulative and persistent, potentially neuro-, developmental, and reproductively toxic as well as both an endocrine disruptor and teratogen (EPA, 2017a; Hoffman, Garantziotis, Birnbaum, & Stapleton, 2015; EPA, 2017b). Having been found in myriad of foods, drinking water, and dust around the home and workplace, PFRs are of increasing concern to the public health and medical community (Poma, Glynn, Malarvannan, Covaci, & Darnerud, 2017; Lee, Jeong, Kannan, & Moon, 2016; Stapleton et al., 2009). There is a dearth of information surrounding acute exposure to PFRs, which, coupled with the increase in prevalence of PFR use and the compound's current pervasiveness, this lack of peer-reviewed data is cause for concern. Chronic exposure to PFRs are a major concern as a large body of evidence suggests that chronic exposure to PFRs can exert deleterious effects. One potential adverse effect for which research is currently being undertaken is thyroid cancer. Impregnated consumer products are not chemically bound to PFRs which makes environmental leaching and exposure a concern via inhalation and ingestion—an unsettling reality (Meeker, Cooper, Stapleton, & Hauser, 2013). A link between chronic PFR exposure and the development of thyroid cancer is explored in A case-control study of exposure to organophosphate flame retardants and risk of thyroid cancer in women Deziel et al. (2018). The 20 year survival rate for thyroid cancer patients is 90%—despite this, thyroid cancer is the most prevalent form of endocrine cancer worldwide, costing the the US 1.6 billion USD since 1985 and is expected to exceed 3.5 billion USD by 2030 (Deziel, Yi, Stapleton, Huang, Zhao, & Zhang, 2018).

While the carcinogenesis of PFRs have been documented in animal models through various peer-reviewed articles the International Agency for Research on Cancer (IARC) have yet to classify any of these compounds (IARC, n.d.; Deziel et al., 2018). In mouse models at least 5 PFRs (IPP, EDHP, IDDP, BPDP, and TMPP) have been linked to elevated progesterone levels (Schang, Robaire, & Hales, 2016). Additionally this study found that exposure to PFRs affect

steroidogenesis, or the creation of steroids, by altering gene expression in Leydig cells (Schang et al., 2016). The study also determined that three PFRs (IDDP, IPPP, or TOCP) downregulate the enzyme Hsd3b by 25 to 40% (Schang et al., 2016). An extensive review of the literature yielded little in the way of toxicokinetics though it seems that at least two PFRs are quickly metabolized in the liver (TDCPP and TPP) to diesters (BDCPP and DPP) (Cooper, Covaci, van Nuijs, & Stapleton, 2013; Lynn, Wong, Garvi-Gould, & Kennish, 1981; Nomeir, Kato, Matthews, 1981; Sasaki, Suzuki, Takeda, Uchiyama, 1984). Unfortunately existing research does not elucidate upon the biological or toxicological effects of these esters (Deziel et al., 2018). Data on the mechanism of action for PFRs is preliminary, inchoate, and conflicting (Deziel et al., 2018).

While there is a lack of data specifically pertaining to toxicokinetics of PFRs, the evidence from observed physiological effects resulting from exposures can be extrapolated to other research in the area of thyroid oncology. In the Deziel study (2018) the authors postulated that through their review of the literature they can extrapolate observations on the physiological effects of PFRs to oncological study findings conducted on the thyroid (Deziel et al., 2018). The metabolites of some PFRs increase the thyroid hormone thyroxine (T4) which is stimulated by thyroid stimulating hormone (TSH) (Huang, Rusiecki, Udelsman, & Zhang, 2018). Elevated levels of TSH are implicated in thyroid cancer (Moeller & Führer, 2013). Furthermore, elevated triiodothyronine (T3) and T4 are associated with an increased risk of ovarian, pancreatic, and prostate cancer development (Moeller & Führer, 2013). While the Deziel study failed to find a correlation between PFRs and thyroid cancer, given an extensive review of the literature, this is the only study of its kind, therefore correlation may still be forthcoming thus it is imperative that further research be undertaken (Deziel et al., 2018).

Chronic exposure to PFRs can result in the development of neurotoxic, allergenic, teratogenic, or reproductive complications, despite the lack of evidence to support carcinogenicity in the thyroid (Wei et al., 2015; Deziel et al., 2018). The frequency with which PFRs are utilized in the manufacture and addition to consumer products and their pervasiveness in the workplace, home, and biosphere, make the lack of research on these compounds particularly alarming. Manufacturers are not required to label the presence of PFRs in their products (Stapleton et al., 2012). The lax regulation concerning labeling of consumer products containing PFRs at the federal level makes it difficult for consumers to avoid these potentially hazardous compounds. For all of the aforementioned reasons it is imperative that limiting exposure begin with legislation that focuses on enhancing corporate transparency. Additional research is needed in all areas of PFRs but specifically in the field of human toxicology before a full phaseout of PFRs can be considered. In order to spur interest in PFR research, the allocation of grant monies for educational institutions and funding for federal and state agencies conducting research on PFRs needs to be considered.

The endocrine toxicity that was expounded upon in Deziel et al. (2018) is disconcerting not solely for the oncological ramifications but for any unforeseeable dysfunction with the thyroid

that may result from the overproduction of hormones and the alteration of gene expression. Despite the lack of correlation between PFRs and thyroid cancer presented in Deziel et al. neurotoxicological, allergenic, teratogenic, and reproductive toxicity remain a concern in both occupational and domestic settings alike (Wei et al., 2015).

Only through a concerted, multidisciplinary, effort, will we uncover the full extent of the harm brought by these compounds, though in these endeavors there is hope for a healthier future.

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**Title (Sample 3):** How do we deliver an appropriate hand washing campaign to reduce consumer-level food contamination?

**Background:** This piece was a written response to a question posited on Packback, an educational question-and-answer platform, the question is provided in the title above. The response is published in its entirety below.

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Oh summer, picnics are in full swing, the kids are laughing and playing—running, skipping jumping—and little Jimmy has his hands in the potato salad—“Wait, what?! Jimmy no!” It only takes a second for foodborne illness-related outbreak to occur. Food safety doesn’t stop with the food handler, consumers can also infect their own food. Preventing foodborne illness is everyone’s business but it’s incumbent upon us as public health officials to convey the importance of food safety to the general public. Presenting a culturally competent, age-appropriate intervention is imperative for us to spread our message effectively.

I think it goes without saying that the US is an incredibly diverse country and this isn’t solely relegated to nationalities, heritage, or ethnicity; we have some stark regional differences as well. Every single one of them is dramatically different in food, speech, and general way of life. During the summer, in particular, people enjoy gatherings, some foods (Mexican, Ethiopian, sushi, sandwiches [tacitly supporting the theory that hotdogs and hamburgers are sandwiches], and in little Jimmy’s case—potato salad). Finger foods are at high risk for being contaminated by the consumer, a study conducted by researchers at Michigan State University found only 95% of people who used a public restroom failed to wash their hands properly (Borchgrevink, Cha, & Kim, 2013). Those that improperly wash their hands before they eat are taking the bacteria on their hands, transferring it to their food, allowing the bacteria to multiply in their intestines and have a family reunion of their own sometimes with fatal consequences. There are several major elements that we need to consider: our complacency as a society, cultural competence, and age appropriateness.

As a society and as public health officials we can become complacent or disillusioned in that we believe adults are going to take proper hygienic safety precautions, unfortunately, in reality, this isn't necessarily the case. Only about 5.3% of adults wash their hands for 15 seconds or more and 30% use soap (Borchgrevink et al., 2013). Provided they have a bond, parents are a primary factor in children developing hygiene behaviors and this trend is particularly poignant in handwashing (Song, Kim, & Park, 2012). These two findings paint a pretty dramatic picture, one that is especially concerning for us as public health practitioners. This serves as a wakeup call for us as public health practitioners, one that indicates that this area is in the need of an effective intervention.

We need to find a way to effectively relay our message to our target demographic, often our messaging tends to be overly dry or academic resulting in a disconnect between the target population and the medical community, ultimately resulting in a failed campaign. Humor can be a great catalyst for adoption of a behavioral information campaign. Striking a balance between levity and gravity of the issue. We also need to consider age appropriateness, inappropriate communication—words that are above a child's current vocabulary level or running a commercial targeted at children on the nightly news for example—will fail to resonate with the audience. Culture is also a major consideration here, telling people to change their eating habits by using utensils for foods that are traditionally eaten by hand in lieu of hand washing practices can be construed as an attempt to acculturate societies and breed resentment for the medical and public health communities.

I think we would do well to model our interventions off of other pre-existing campaigns. A joint campaign between the FDA, USDA, and CDC, that was run in 2014 is a good place to start (Parsons, 2014; MultiVu, 2014). If we were to change the message to emphasize the importance of handwashing this may be a good ad to run targeting pre-teens, teens, and young adults. There are also a myriad of very creative posters that have been developed on a local scale to encourage hand washing, unfortunately these posters haven't been widely distributed (Gregory, 2017; SlowRobot, n.d.; ).

It only takes one person to spread foodborne illness, and until we come up with an effective communication campaign there will be more little Jimmy's playing in the potato salad.

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#### **Title (Sample 4):** Application Essay Excerpt

**Background:** This is an excerpt from an application essay submitted to a university in May of 2021. It is part of a larger triptych.

**Note:** Due to the sensitive nature of the essay I have omitted several lead-in paragraphs, I have also omitted the university and degree name, replacing them with “(university name)” and “(program name)” respectively.

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Through the healing process, the interminable nights with crisis counselors, the numerous attempts to plunge myself into a lifeless abyss, I have come to understand the importance of compassion and acceptance. Being bisexual, I had accepted my sexual orientation long ago; these insecurities exacerbated, conjured up once again, by the wraiths that haunted me in the academy, from the upper echelons of my undergraduate university administration to my peers. As this group exerted its baneful vitriol another arose, a sympathetic, beneficent, unrelenting, unwavering, contingent that mollified the voices in my mind, a community that saved my life.

The vestiges of my erstwhile life still a poignant reminder of the hurt, a pain that no one should endure. These tribulations reinforced the importance of the intangible: compassion and community; an undying travail to give my all to both my peers and strangers alike, no matter the obstacle, no matter their belief. I know what it's like to stare down seemingly Sisyphean tasks, though I am also intimately acquainted with the role moral support and encouragement play in surmounting the barriers erected in one's mind, the empowerment that arises through perseverance.

This personal edict to be a force for good, a central catalyst in my decision to pursue a (program name). This covenant, an interminable plight punctuated by the many institutionalized inequities which have ensnared society's most vulnerable in a perpetual cycle of poverty, discrimination, and alienation, enkindle my resolve. Working on the frontlines of the pandemic I bore witness to the importance of communication and the systemic inequities a dearth of communication creates. A paucity of culturally competent communication and social marketing abound perpetuating this rift—a gap that I aspire to fill, an endeavor that can be brought to fruition through the knowledge and discipline imparted upon me through (university name). The (program name) will uniquely enable me to be a formidable voice in fighting for diversity, equality, and parity—to propel me, affording me the capacity to radically challenge and redefine paradigms, to be an unstoppable force for good.

Communication is a humane anodyne for assuaging trepidation and curing society's ills; its practitioners are at the forefront of a just society, consumed by a sedulous quest to uphold the sanctity of all we hold dear. Life is fleeting, flesh and bone ephemeral. What we elect to do with

every evanescent second defines us, this, a reaffirmation of an inviolable truth—to be part of something greater than myself, to be a force for meaningful change.

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