

affordable housing, workspace, leisure, commerce, and life. And with buildings accounting for 44% of global carbon output, this is an opportunity to redesign the built environment on a global scale. Research some closed-loop systems for urban architecture. Choose one example and explain the controls/converter, feedback loops, and technology or mitigating system that convert a building to sustainability (or better yet, a carbon-negative sink). How could this type of construction or design be incorporated into standards in Western building and construction? Does regulation, tax credits, or carbon cap and trade play a role?

As projections indicate, by 2050, ten billion people will inhabit our planet, with 75% living in urban centers, making redesigning our built environments an urgent imperative (Spiliotopoulou & Roseland, 2020). Palazzo Italia in Milan exemplifies the potential of closed-loop systems in urban architecture to address this challenge. This building employs photocatalytic concrete embedded with titanium dioxide as its control/converter system, which actively neutralizes air pollutants, thereby mitigating urban smog (Spiliotopoulou & Roseland, 2020). Furthermore, its energy management system, optimized by real-time sensors, exemplifies effective feedback loops that adjust operations to maximize energy efficiency and sustainability (Hunt, 2020).

Palazzo Italia serves as a compelling example of how innovative sustainability practices can be integrated into architectural design, representing a significant shift from traditional capitalist systems that often prioritize short-term profits over long-term sustainability. This shift, as advocated by Mang and Haggard (2016), is towards a more holistic, community-focused approach. The building's closed-loop systems and environmentally restorative materials embody this pivot towards a more collectivist and ecologically integrated model. This approach not only addresses environmental concerns but also actively regenerates the environment, challenging the long-standing economic principles that have traditionally guided urban development (Spiliotopoulou & Roseland, 2020). In doing so, it underscores the socio-economic benefits inherent in such a transformation, highlighting the profound impact of these innovative sustainability practices on the quality of life in urban environments.

Such sustainable practices could be incorporated into building codes through regulatory measures, such as mandating the integration of sustainable technologies and offering tax credits or other incentives to encourage their adoption. Additionally, integrating these practices within a carbon cap and trade system could provide economic incentives for exceeding environmental performance benchmarks, promoting broader adoption of sustainable practices (Spiliotopoulou & Roseland, 2020).

Ultimately, if we are to respond effectively to the environmental and social challenges posed by rapid urbanization, a departure from traditional capitalist frameworks towards a model that emphasizes equity, communal resource management, and sustainability is not just a choice but a necessity. Such a transition will not only foster the development of urban environments that enhance the quality of life but also ensure that they are sustainable and resilient in the face of future challenges. The urgency of this transition underscores the crucial role of each individual in this process, including urban planners, architects, policymakers, and environmentalists.

Part 2: Life Cycle Sustainability Assessments. Choose a system component currently creating waste in urban settings (i.e., waste water runoff, carbon-intensive energy production for centralized grids, heat island effects, or human waste). Identify alternative closed-loop systems in design to mitigate or improve the environmental, social, and economic impacts of this component (i.e., green stormwater infrastructure, sustainable energy, green walls,

toilets turning waste into electricity and fertilizer). Determine equilibrium points and symbiotic systems of nature and technology within high-density urban sustainability. Write a compelling argument for the implementation of this technology or method of closed-loop system integration into urban planning as a gold standard. What are the cost-benefits? What are the barriers? What governmental incentives might spur the adoption of this method?

In high-density urban environments, the management of human waste presents a significant challenge, contributing to environmental pollution and posing health risks. However, innovative closed-loop systems, such as those converting human waste into electricity and fertilizer, offer a sustainable solution. One notable example of this is the implementation of anaerobic digesters in urban settings, which transform waste into biogas and nutrient-rich fertilizer, thus addressing the environmental, social, and economic impacts of waste management.

Anaerobic digesters utilize microbial processes to break down organic waste in the absence of oxygen, producing biogas that can be used for electricity and heat (Satchwell et al., 2018). This technology exemplifies the equilibrium between natural and technological systems. The closed-loop nature of this system ensures that waste is continuously recycled, reducing landfill use and methane emissions (Evangelisti et al., 2014). Moreover, the byproduct, digestate, can be used as a high-quality fertilizer, closing the nutrient loop and promoting sustainable agriculture within urban areas (Bringezu & Bleischwitz, 2009).

Implementing anaerobic digestion in urban planning could set a new gold standard for waste management. The cost-benefits of this technology are substantial. The energy produced from biogas can significantly reduce urban energy costs, while the digestate can offset the need for synthetic fertilizers, providing an economic advantage to urban agriculture initiatives (Evangelisti et al., 2014). Additionally, reducing waste transportation and landfill dependency further lowers costs and environmental impacts. However, initial setup costs and the need for public acceptance pose barriers. Public awareness campaigns and government incentives, such as grants and subsidies for initial infrastructure development, are crucial for overcoming these obstacles (Mang & Haggard, 2016; Osmanski, 2020).

Governmental support through incentives is vital to spur the adoption of anaerobic digestion systems. Policies that provide tax credits for renewable energy production and subsidies for sustainable waste management infrastructure can drive the widespread implementation of this technology. Furthermore, integrating anaerobic digestion into urban waste management regulations can ensure consistent and long-term use, promoting broader acceptance and standardization (Gibbons, 2020).

Transitioning to anaerobic digestion systems for managing human waste in urban settings not only addresses significant environmental and economic challenges but also aligns with a regenerative approach to urban planning. By moving away from traditional capitalist models towards more communal and sustainable resource management methodologies, cities can enhance their resilience and sustainability, ensuring a healthier environment and improved quality of life for their inhabitants.

Brian Douglas (Director). (2012, September 16). Control Systems Lectures\2014Closed Loop Control. <https://www.youtube.com/watch?v=O-qgFE9SD4>Links to an external site.

Bringezu, S., & Bleischwitz, R. (2009). Sustainable resource management: Global trends, visions and policies. Greenleaf. <https://cir.nii.ac.jp/crid/1130282272816115968>Links to an external site.

Collia, C., & March, A. (2012). Urban planning regulations for ecologically sustainable development (ESD) in Victoria: Beyond building controls. Urban Policy and Research,

30(2), 105-126. Evangelisti, S., Lettieri, P., Borello, D., & Clift, R. (2014). Life cycle assessment of energy from waste via anaerobic digestion: A UK case study. *Waste Management*, 34(1), 226-237.

Gibbons, L. V. (2020). Regenerative: The new sustainable? *Sustainability*, 12(13), 5483.

Hunt, K. (2018, August 15). What is a Closed-Loop System? How Companies Incorporate Sustainability into Production. *Green Matters*.
<https://www.greenmatters.com/business/2018/08/15/Z16xhYS/closed-loop-system-sustainability-production>Links to an external site.

Mang, P., & Haggard, B. (2016). Regenerative development and design: A framework for evolving sustainability. John Wiley & Sons.

Osmanski, S. (2020, April 27). What Is Greenwashing? All About the Duplicitous Business Tactic. *Green Matters*.
<https://www.greenmatters.com/p/what-is-greenwashing>Links to an external site.

Satchwell, A. J., Scown, C. D., Smith, S. J., Amirebrahimi, J., Jin, L., Kirchstetter, T. W., Brown, N. J., & Preble, C. V. (2018). Accelerating the Deployment of Anaerobic Digestion to Meet Zero Waste Goals. *Environmental Science & Technology*, 52(23), 13663-13669. <https://doi.org/10.1021/acs.est.8b04481>Links to an external site.

Spiliotopoulou, M., & Roseland, M. (2020). Urban Sustainability: From Theory Influences to Practical Agendas. *Sustainability*, 12(18).
<https://doi.org/10.3390/su12187245>Links to an external site.

Post Author 2

Pricilla

Part 1: With projections of the global population reaching ten billion by 2050, and 75% estimated to live in urban centers and cities, our built environment is becoming ever-more critical in creating infrastructure for affordable housing, workspace, leisure, commerce, and life. And with buildings accounting for 44% of global carbon output, this is an opportunity to redesign the built environment on a global scale. Research some closed-loop systems for urban architecture. Choose one example and explain the controls/converter, feedback loops, and technology or mitigating system that convert a building to sustainability (or better yet, a carbon-negative sink). How could this type of construction or design be incorporated into standards in Western building and construction? Does regulation, tax credits, or carbon cap and trade play a role?

Thinking of the closed loop system, it is best to think of a circle. It is continuous much like the continuous arrows forming the traditional recycle logo. Many companies today are utilizing the closed-loop system where their products are being repurposed and reused in a variety of ways. Some companies reuse their product waste material as compost for future crops and some companies reuse their aluminum cans for future product packaging. Closed-loop systems in urban architecture creates a balance in which buildings, their occupants, and the surrounding environment work harmoniously to create resources instead of depleting them. There is evidence that shows that the incorporation of regenerative elements can produce greater returns over time. This approach uses dynamic governance systems to monitor and share the costs and benefits of urban life. It also allows for a variety of objectives to be achieved. From managing water, reusing byproducts, to optimizing renewable resources across communities in new and innovative ways has clear benefits (ZFG, 2019). Considering how much buildings contribute to carbon emissions, it is wise to start creating a framework that supports more sustainable architecture in future urban developments. As seen in the Going Green video, utilizing recycled materials and decisive architectural designs helps reduce the amount of energy needed to keep

buildings cool which greatly reduces their carbon footprint. Using nature as the inspiration for designing buildings is the best way to combat climate change. Evidence has also shown that smart buildings not only benefit the planet, but they can also benefit our economy and our well-being. In order to make a bigger impact for our planet, we need to ensure every new building is designed in a way that keeps sustainability in mind.

When thinking about how the natural world functions, there is no control system in place. It rains when there is too much precipitation in the clouds, wind is caused by the changes in atmospheric pressures, and lightening occurs when warm air mixes with cooler air masses. When taking this into consideration when designing sustainable closed-loop architecture, we need to find ways to harness renewable energy through dependable methods. Creating a feedback loop would help a smart building utilize natural resources in efficient ways. In the example of the smart buildings displayed in the Going Green video, some buildings utilize wind to cool their interiors but what if there are high winds? A feedback loop would communicate with the controller set in place to avoid an excessive amount of wind from entering the building. A happy equilibrium between resources and resources needed would be met without disrupting life within the building. In addition to utilizing natural and reusable resources like solar and wind, utilizing green spacing within the designing of a building can further aid in the carbon sink. Some buildings in China has begun utilizing green spacing to combat carbon emissions, absorb solar heat, and bring comfort to the inhabitants through biophilia (Going Green, 2020). Seeing as much of the country has preexisting architecture throughout major cities, the best plan for approaching smart building technology would be through designing improvements. Much like homeowners receiving tax credits for adding solar panels to their homes, corporations are allowed to receive the same benefit for making changes to their buildings in the support of sustainability. The "green tax" encourages individuals and businesses to make environmentally friendly choices. The IRS offers Environmental, Social, and Governance (ESG) tax incentives that promote sustainable practices and discourages activities that harm the environment. As our world is changing, more businesses are taking advantage of the ESG tax incentives by choosing more sustainable business practices (Thomas Reuters Tax & Accounting, 2023). It is becoming clear that choosing sustainability is no longer stigmatized but rather preferred by many businesses, especially considering how many of our natural resources are being depleted and the cost of living in the U.S. is becoming astronomical. Finding areas that will help save money and maintain the well-being of our planet benefits us all on so many levels.

Part 2: Life Cycle Sustainability Assessments. Choose a system component currently creating waste in urban settings (i.e., waste water runoff, carbon-intensive energy production for centralized grids, heat island effects, or human waste). Identify alternative closed-loop systems in design to mitigate or improve the environmental, social, and economic impacts of this component (i.e., green stormwater infrastructure, sustainable energy, green walls, toilets turning waste into electricity and fertilizer). Determine equilibrium points and symbiotic systems of nature and technology within high-density urban sustainability. Write a compelling argument for the implementation of this technology or method of closed-loop system integration into urban planning as a gold standard. What are the cost-benefits? What are the barriers? What governmental incentives might spur the adoption of this method?

In urban settings, natural settings like parks and landscaped areas are hard to find. Most inner-city settings are made of asphalt, concrete, brick, and other man-made materials. With an excessive amount of these

materials and a lack of vegetation, this can lead to heat island effects. Heat islands are found in urban settings that experience higher temperatures than other areas outside of the city limits. Buildings, roads, and other infrastructure absorb and re-emit heat from the sun more than natural landscapes. These structures are highly concentrated, and greenery is limited which causes concentrated areas of heat, or heat islands. Daytime temperatures in urban areas are typically 1-7°F higher than the surrounding areas and nighttime temperatures are about 2-5°F higher (EPA, 2024).

Some areas of the world are making attempts to stop urban sprawl and improve the well-being of the inhabitants of their communities. An example of this can be found in the Netherlands. They have established greenbelts to combat urban sprawl and to help protect farmland. The Netherlands also has one of the best programs that support national planning programs that also governs water and energy use (Chiras, D.D., 2016). Introducing more green spaces within existing cityscapes is a good way to help create a closed-loop system. Trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands.

Trees and vegetation (e.g., bushes, shrubs, and tall grasses) lower surface and air temperatures by providing shade and cooling through evaporation and transpiration, also called evapotranspiration. Transpiration is a process in which trees and vegetation absorb water through their roots and cool surroundings by releasing water vapor into the air through their leaves. Trees and vegetation also provide cooling through evaporation of rainfall collecting on leaves and soil. Research shows that urban forests have temperatures that are on average 2.9°F lower than unforested urban areas.

EPA (2024)

Other remedies to help combat heat islands include:

- Cool roofs: have high solar reflectance which help buildings stay cooler and save energy. Cool roofs also impact surrounding areas by lowering temperatures outside of buildings and thus mitigating the heat island effect.
- Green roofs: or rooftop gardens, are vegetative layers grown on rooftops. They provide shade, remove heat from the air, and reduce temperatures of the roof surface and surrounding air. Using green roofs in cities or other built environments with limited vegetation can moderate the heat island effect, particularly during the day.
- Cool pavements: a newer idea that is being examined by the Transportation Research Board which formed a subcommittee on Paving Materials and the Urban Climate. The subcommittee's scope includes modeling, design practices, testing, standards development, and planning and policy considerations (EPA, 2024).

In addition to lowering energy costs and the rise in temperatures within urban settings, building nature into cities can also support the health and well-being of the city's inhabitants. Natural spaces encourages outdoor activities which keeps health care costs down. The lack of physical activity in the U.S. results in \$117 billion a year in health care costs and leads to 3.2 million deaths globally every year. By building more green spaces, we can positively impact mental and physical health of the residents that reside with large cities (Cafasso, S., 2021). When introducing green spaces into existing urban settings, the cost benefits go beyond economic and environmental impacts on the city. Nurturing the overall human well-being also benefits our social impacts. We need to start creating a level of symbiosis between our environment and ourselves as to not further degrade our world. At the moment, the human existence is more of parasitic one. We have been taking advantage of our natural surroundings for our own benefit for far too long. Instead, we need to start creating a level of stability between us and the natural world. Zoning regulations need to be stricter and monitor where new construction will occur and should require sustainable

significant environmental and social challenges.

Impact on Water Resources: Large-scale extraction depletes natural aquifers reduces biodiversity and exacerbates regional water scarcity.

Business Vulnerabilities: Environmental issues create business risks including strained relations with local communities and potential regulatory actions.

Photo by Zherui Zhang on Unsplash

Environmental Social and Economic Impacts

Definition: A closed-loop system in production recycles and reuses materials reducing waste and conserving natural resources.

Benefits: Mitigates environmental impact decreases operational costs and enhances sustainability.

Implementation: Adopting advanced recycling technologies and sustainable materials to create a circular economy.

Photo by Matt Obee on Unsplash

Closed-Loop System Concept

Definition: A closed-loop system in production recycles and reuses materials reducing waste and conserving natural resources.

Benefits: Mitigates environmental impact decreases operational costs and enhances sustainability.

Implementation: Adopting advanced recycling technologies and sustainable materials to create a circular economy.

Photo by Matt Obee on Unsplash

Proposed Sustainability Measures

Water Recycling Technologies: Implement state-of-the-art technology to treat and reuse wastewater.

Renewable Energy: Transition to 100% renewable energy sources for our production facilities by 2030.

Community Engagement Programs: Enhance water conservation initiatives and support local infrastructure to improve community access to clean water.

Enhanced Water Stewardship: Work closely with environmental experts to manage water extraction sustainably.

Innovative Packaging Solutions: Reduce plastic usage by 50% and increase the recyclability of our products.

Quantifying Outcomes

Cost Savings: Estimated 10 million annual savings from reduced operational risks and improved efficiency.

Water Usage Reduction: Projected 30% reduction in water usage within the first five years.

Environmental Benefits: Significant decrease in carbon footprint and improved biodiversity in affected regions.

Photo by Zherui Zhang on Unsplash

Global Impact and Leadership

Industry Standards: Setting new standards for sustainability in the bottled water industry.

Influencing Global Practices: Encouraging other companies to adopt similar sustainable practices.

Corporate Responsibility: Demonstrating our commitment to environmental stewardship and social equity.

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dynamics of flow-limited resources within a system a systems dynamics model must incorporate several key indicators. These indicators include stocks flows converters/constants and information flows each playing a crucial role in understanding and predicting system behaviors.

Stocks represent the quantities of resources available within the system at any given time. These could be tangible elements like water in a reservoir or abstract quantities such as carbon or even a population count in an ecological study. Stocks are foundational for monitoring resource levels and serve as a baseline for measuring changes over time (Reuter 2013).

Flows describe the movement of resources between stocks or from external sources into the system. This includes inputs and outputs measured over specific time intervals such as liters of water per hour or tons of carbon per year. Understanding flows is critical for assessing how resources are utilized and replenished within the system providing insights into sustainability and efficiency (Reuter 2013).

Converters/constants are parameters within the model that affect flows or stocks but remain unchanged regardless of system dynamics. These could include growth rate constants conversion efficiencies or fixed loss rates which are essential for stabilizing the model and making accurate predictions (Reuter 2013).

Information flows represent the non-material connections that influence system components by altering flows or converters based on the state of stocks or other variables. This aspect of systems dynamics is crucial for modeling feedback mechanisms and adaptive behaviors within the system allowing for a more nuanced understanding of how changes in one part of the system can ripple through to others (Reuter 2013).

By integrating these components into a systems dynamics model it is possible to construct a comprehensive view of how resources are interlinked and governed by various dynamic factors. This holistic approach is vital for predicting future system states under different scenarios and for making informed decisions about resource management and conservation.

What inputs might be incorporated into a model of flow-limited resources? How is this different from stock-limited resources? In resource management two distinct modeling approaches are used to predict and understand resource availability and sustainability: flow-limited and stock-limited models.

Flow-limited models focus on the dynamics of resource renewal and consumption. These models consider key inputs like the rate at which a resource regenerates whether naturally or through human efforts. They also analyze the consumption rate to see how quickly the resource is being used by various entities or processes. Additionally factors like environmental conditions regulatory policies and technological changes play significant roles in influencing resource availability and flow. This model is dynamic adapting to changes in usage patterns and replenishment strategies providing a flexible framework for forecasting future resource statuses (Reuter 2013).

In contrast stock-limited models are concerned with the finite quantities of resources available. They focus on the absolute amount of the resource that exists or can be accessed such as fossil fuels or minerals. These models consider extraction or harvest rates detailing how quickly the resource is depleted over time. They also evaluate the resource's regeneration capabilities whether it can be naturally replenished or artificially sustained over long periods. This approach emphasizes the depletion of a fixed stock highlighting the limits of availability and the critical need for conservation and efficient use (Reuter 2013).

The main difference between these two models lies in their focus and application. Flow-limited models are dynamic reflecting continuous changes in resource flows and the effects of various influencing factors. They are particularly useful when resources can be renewed or are affected by external

conditions. On the other hand stock-limited models deal with resources that have fixed availability concentrating on managing finite supplies and preventing exhaustion. Understanding these differences is crucial for policymakers businesses and conservationists. It helps in developing effective strategies for resource management ensuring sustainability and tackling the challenges posed by limited natural resources (Fisher 2020).

Provide an example of the systems dynamics of:

- A stock-limited resource (such as cobalt)
- A flow-limited resource (such as rabbits)

Describe what and how you would measure the inputs outputs and feedback loops (in-flow out-flow connectors or dependencies stocks and sources or sinks) in each example. Keep it simple (i.e. bamboo production for chairs). You don't have to do the mathematical calculations just describe the systems process. (If you want to take it further you can use Stella Online Modeling linked above).

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picking and first-cold-pressing (Sustainability n.d.) . These traditional methods are crucial for maintaining the distinct quality and authenticity of their EVOO setting a benchmark for sustainable production in the industry. Farchioni's approach reflects a broader commitment across Italy to innovate while preserving the integrity of the olive oil heritage. \nAs the olive oil industry evolves regions like Umbria where Farchioni's farms are located encounter their share of challenges. These include high operational costs and an aging workforce which necessitate further technological advancements. Modern tools like open-source spectrophotometers and AI are now being used to enhance traceability and ensure the purity of EVOO (Bayreuth n.d.; Violino et al. 2020). These technologies strengthen the 'Made in Italy' label a crucial asset in the global marketplace and drive significant environmental improvements. For instance optimizing distribution and updating packaging materials are proposed to reduce the carbon footprint of EVOO production (Pisanelli et al. 2023) . This paints a picture of a future where tradition and innovation continue to merge ensuring the sustainability and authenticity of Italian olive oil on a global scale.

Sustainability Metrics and Indicator Analysis

To comprehensively assess the sustainability of extra virgin olive oil (EVOO) production it is essential to consider a range of indicators that align with the seven principles of sustainability: efficiency substitution economic environmental social sustainability inter-generational equity and institutional sustainability. These principles can be measured using specific metrics such as material and energy intensity water consumption emission of toxic substances human health implications fair labor practices and the overall impact on the community. These metrics help in evaluating the breadth and depth of sustainability practices within the EVOO production process and are critical for making informed decisions aimed at improving sustainability outcomes over time (Maesano et al. 2021; Safeie-Noghlbari et al. 2024).

In the context of material intensity EVOO production demands significant resources particularly in packaging and equipment. Commonly used for oil bottling glass is energy-intensive to produce and contributes to higher CO2 emissions. This highlights the need for more sustainable packaging solutions such as recycled or lighter glass which could decrease material intensity and environmental impact (Maesano et al. 2021; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Similarly the metals used in processing equipment also require consideration particularly in terms of the energy and resources consumed during their manufacture and eventual recycling or disposal (Hansen 2022; Pisanelli et al. 2023; Salomone & Ioppolo 2012).

Energy and water consumption are equally critical metrics. The operation of irrigation systems and processing facilities consumes substantial energy which can be mitigated by integrating renewable energy sources such as solar or wind power to reduce the carbon footprint of production processes (Allen et al. 1998; Hansen 2022; Rinaldi et al. 2014; Salomone & Ioppolo 2012).

Concerning water consumption olive cultivation particularly in drier regions necessitates significant water usage. Employing sustainable water management practices such as adopting drip irrigation systems can dramatically decrease water consumption preserving vital water resources. Additionally using pesticides and fertilizers in olive farming introduces toxic emissions and pollutants that can affect soil and water quality. Implementing organic farming practices and optimizing transportation and logistics can help minimize these environmental impacts (Ivic et al. 2021; Maesano et al. 2021).

Beyond environmental considerations the human dimension of sustainability is pivotal. Protecting human health and safety in EVOO production involves minimizing workers' exposure to harmful chemicals ensuring proper safety training and

providing adequate protective equipment (Connor & Fereres 2010; Ncube et al. 2022). Furthermore adhering to labor laws and embracing fair trade practices are essential to guarantee fair wages and good working conditions for all employees. Finally the broader community impact of companies like Farchioni should be recognized as they often support local initiatives in education and healthcare contributing positively to the social fabric of their operating regions (Ncube et al. 2022). These efforts enhance community well-being and bolster the social sustainability of the business practices. By addressing these various sustainability indicators companies can comply with current standards and set new benchmarks for responsible production in the industry.

Supply Chain Model

The supply chain for EVOO includes several stages: olive cultivation and harvesting processing and extraction packaging and storage and distribution and retail. Each stage presents unique sustainability challenges and opportunities. Improving energy efficiency in processing and adopting sustainable packaging materials can significantly enhance the product's overall sustainability (Maesano et al. 2021).

Information Gaps and Inferences

There are notable gaps in available data particularly regarding comprehensive lifecycle assessments for EVOO production. Data on the environmental impacts of material extraction and processing is limited. However comparative analysis with similar agricultural products such as wine or almond production provides insights into potential sustainability impacts. Studies on these products show that organic farming practices and renewable energy usage can significantly reduce environmental footprints (Gennaro & Nardone 2014; Maesano et al. 2021).

Role as Chief Sustainability Officer

As Farchioni's Chief Sustainability Officer several measures can be prioritized to enhance sustainability in the company's operations. These include enhancing energy efficiency and renewable energy use implementing sustainable water management practices improving waste management and reducing emissions and ensuring fair wages and safe working conditions. Progress can be measured by setting specific measurable goals conducting regular sustainability audits publicly reporting on sustainability performance engaging stakeholders and maintaining open communication about progress and challenges (Allen et al. 1998; Maesano et al. 2021; Safeie-Noghlbari et al. 2024; Salomone & Ioppolo 2012).

Conclusion

Reflecting on the initial question of whether the levels of EVOO production are sustainable the answer is complex. Farchioni's EVOO did not solidify in the refrigerator maintaining its same viscosity and overall physical properties indicating its authenticity (Bayreuth n.d.). However the sustainability of EVOO production can be significantly improved through targeted measures that address material and energy use water consumption emissions and social impacts. Cooperative resource allocation systems emphasizing community involvement and fair practices are essential for achieving long-term sustainability in the olive oil industry. By adopting these measures companies can contribute to a more sustainable future while maintaining the cultural and economic significance of EVOO production in Italy.

References

Allen R. G. Pereira L. S. Raes D. & Smith M. (1998). Crop evapotranspiration-Guidelines for computing crop water requirements-FAO Irrigation and drainage paper 56. Fao Rome 300(9) D05109.

Armstrong S. (n.d.). How sustainable is extra virgin olive oil? Olive Wellness Institute. Retrieved May 27 2024 from <https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/>

Bayreuth U. of. (n.d.). New rapid test detects quality and authenticity of olive oil. Retrieved May 27 2024 from <https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html>

Connor D. J. & Fereres E. (2010). The physiology of adaptation and yield expression in olive.

Hortic. Rev 31 155\u2013229. \nGennaro B. D. & Nardone G. (2014). Sustainability of the Agri-food System: Strategies and Performances: Proceedings of the 50th SIDEA Conference. Lecce Chiostro dei Domenicani 26-28 September 2013. Universitas Studiorum. \nHansen C. (2022 December 7). Environmental Impact of Olive Oil Processing | EcoMENA. <LINK> <LINK> https://www.ecomena.org/olive-oil-wastes/\nMaesano G. Chinnici G. Falcone G. Bellia C. Raimondo M. & D\u2019Amico M. (2021). Economic and environmental sustainability of olive production: A case study. Agronomy 11(9) 1753. \nNcube A. Fiorentino G. Panfilo C. De Falco M. & Ulgiati S. (2022). Circular economy paths in the olive oil industry: A Life Cycle Assessment look into environmental performance and benefits. The International Journal of Life Cycle Assessment 1\u201321. \nPisanelli A. Consalvo C. Russo G. Ciolfi M. Lauteri M. & Paris P. (2023). Modelling Stakeholders\u2019 Knowledge and Perception in a Fuzzy Cognitive Map: The Case of the Extra-Virgin Olive Oil (EVOO) Value Chain in Central Italy. Sustainability 15(7) 6236. \nRinaldi S. Barbanera M. & Lascaro E. (2014). Assessment of carbon footprint and energy performance of the extra virgin olive oil chain in Umbria Italy. Science of The Total Environment 482 71\u201379. \nSafeie-Noghlbari B. Amiri Z. Allahyari M. S. Nikkhah A. Ben Hassen T. & Bacenetti J. (2024). Social life cycle assessment of the olive oil industry: A case study in Guilan Province Iran. Environment Development and Sustainability 1\u201347. \nSalomone R. & Ioppolo G. (2012). Environmental impacts of olive oil production: A Life Cycle Assessment case study in the province of Messina (Sicily). Journal of Cleaner Production 28 88\u2013100. \nStatista. (n.d.). Topic: Olive oil industry in Italy. Statista. Retrieved May 27 2024 from <LINK> https://www.statista.com/topics/6013/olive-oil-industry-in-italy/\nSustainability. (n.d.). Store Farchioni1780. Retrieved May 27 2024 from <LINK> https://farchioni1780.com/en/sustainability/\nViolino S. Ortenzi L. Antonucci F. Pallottino F. Benincasa C. Figorilli S. & Costa C. (2020). An artificial intelligence approach for Italian EVOO origin traceability through an open source IoT spectrometer. Foods 9(6) 834. \n\n[URL: "https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/"]\n[URL: "https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html"]\n[URL: "https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html"]\n[URL: "https://www.ecomena.org/olive-oil-wastes/"]\n[URL: "https://www.ecomena.org/olive-oil-wastes/"]\n[URL: "https://www.statista.com/topics/6013/olive-oil-industry-in-italy/"]\n[URL: "https://farchioni1780.com/en/sustainability/"]\n\n\n\n\n1", "title": "SRM Assignment 1 (2).docx", "tether_id": null, "status": "finished_successfully", "end_turn": null, "weight": 1.0, "metadata": {"command": "context_stuff", "is_visually_hidden_from_conversation": true, "message_type": null, "model_slug": "gpt-4", "default_model_slug": "gpt-4", "parent_id": "797fcd66-fc1c-4f79-825c-24fc493e8c63", "request_id": "890e8fdd5c9b4c4c-MXP", "timestamp": "absolute"}, "recipient": "all", "channel": null, "parent": "797fcd66-fc1c-4f79-825c-24fc493e8c63", "children": [{"id": "dcda7a09-4658-4393-86d3-32c14421897f"}], "dcda7a09-4658-4393-86d3-32c14421897f": {"id": "dcda7a09-4658-4393-86d3-32c14421897f", "message": {"id": "dcda7a09-4658-4393-86d3-32c14421897f", "author": {"role": "tool", "name": "myfiles_browser", "metadata": {}}, "create_time": 1717909280.68222, "update_time": null, "content": {"content_type": "tether_quote", "url": "file-SJo3jGx3V3ZMBG3uwfeTK3JV", "domain": "SRM assignment 2.docx", "text": "Bottled Water Industry Impact Assessment\n\nAlexis Lindsay\nClaremont Lincoln University\nMSL 5307-

01: Sustainable Resource Management\nProfessor Rian Satterwhite\nJune 2 2024\nBottled Water Industry Impact Assessment\nThe bottled water industry represented by companies like Sanpellegrino plays a significant role in the global beverage market. These companies often source water from natural springs which can profoundly impact local water tables and ecosystems. The industry\u2019s reach is extensive with products distributed worldwide contributing to local economies through job creation and tax revenues. However the large-scale extraction of water raises concerns about the long-term sustainability of water resources necessitating a shift towards more sustainable practices (Spiliotopoulou & Roseland 2020).\nImpact Assessment\nEnvironmental Impacts\nBottled water companies like Sanpellegrino\u2019s operational practices particularly those surrounding large-scale water extraction from natural springs are critical to its production process. This substantial extraction is necessitated by the high demand for bottled water a trend that shows no signs of abating (Spiliotopoulou & Roseland 2020). However this practice raises significant concerns about the long-term sustainability of local water resources. Extracting such large volumes of water can deplete natural springs disrupt local ecosystems and exacerbate water scarcity issues particularly in regions already facing water stress (Spiliotopoulou & Roseland 2020).\nIn light of these concerns it is imperative for companies like Sanpellegrino to explore alternative water sources and implement more sustainable water management practices. This could include investing in water conservation technologies improving the efficiency of water extraction processes and engaging in corporate responsibility initiatives that prioritize environmental sustainability (Spiliotopoulou & Roseland 2020). By doing so Sanpellegrino can ensure its operations\u2019 sustainability while contributing to broader environmental conservation efforts.\nEnvironment Impacts\nEnvironmental impacts of the bottled water industry include the depletion of aquifers reduced stream flows and degradation of aquatic ecosystems. Intensive water extraction can lead to declines in local water tables affecting both human use and ecosystem health (Cuoco et al. 2015). Furthermore the extraction process can disrupt the natural balance of aquatic ecosystems leading to biodiversity loss and habitat degradation (van Engelenburg et al. 2018)\nIn addition the extraction process affects the quantity and quality of water available in local streams and rivers. Reduced water flow can lead to higher concentrations of pollutants and increased water temperatures adversely affecting aquatic life. Lower water tables can result in reduced soil moisture impacting local agriculture and vegetation (Bartolini et al. 2007; Ferragina 2010).\nThe ecological consequences of water extraction are further compounded by the reduced ability of the environment to recharge depleted aquifers. Natural recharge processes are often slower than the extraction rate leading to long-term sustainability issues. Over time this imbalance can result in permanent changes to the local ecosystem including the loss of biodiversity and the degradation of natural habitats (van Engelenburg et al. 2018).\nSocial Impacts\nThe social impacts of water bottling operations are significant affecting local communities in various ways. One of the most pressing social issues is the reduced access to water for local communities. As companies like Sanpellegrino extract vast quantities of water local residents often find their wells drying up or experiencing reduced water pressure. This can lead to conflicts over water use particularly in regions where water is already scarce (Ostrom 1998). While the water bottling industry generates substantial revenue the economic benefits often do not extend to local populations. Residents may face increased costs for water and might need to purchase bottled water for their own use effectively buying back their

own resources at a premium price (Manzella et al. 2018). Reduced water availability has significant health implications. Lower water quality can lead to a higher incidence of waterborne diseases impacting public health. Additionally reduced water availability affects agriculture a primary livelihood for many residents. Farmers may experience lower crop yields and increased difficulty maintaining livestock further exacerbating economic inequalities (D'ippoliti et al. 2015).

Economic Impacts

The economic impacts of the water bottling industry present a complex picture of benefits and costs (Bartolini et al. 2007). While the industry contributes to national economies by generating substantial revenue through taxes and employment it also incurs external costs related to environmental degradation and social issues (Bartolini et al. 2007; Sanpellegrino 2023). For instance Sanpellegrino a major player in the industry reported revenues of over one billion Euros in 2022 significantly contributing to local and national economies (Sanpellegrino 2023). Moreover the bottling industry provides stable employment opportunities which can significantly benefit regions with limited job prospects. Sanpellegrino alone employs thousands of workers in its facilities and Bartolini et al. (2007) underscored the far-reaching effects of such employment opportunities. The study highlighted the positive implications of stable job opportunities provided by companies like Sanpellegrino supporting individuals and families with reliable incomes and stimulating local economic activity through increased consumer spending investment and tax revenues (Bartolini et al. 2007). However external costs such as environmental degradation and social costs are not typically accounted for in the industry's economic benefits. Local governments may incur additional expenses in managing water resources addressing health impacts and mitigating environmental damage caused by over-extraction (Cuoco et al. 2015). Such realities highlight the need to comprehensively assess the water bottling industry's economic impacts considering its benefits and external costs.

Regulatory Frameworks and Policy Analysis

The regulatory landscape in Italy and the European Union is oriented towards the sustainable management of water resources. However there is a need for greater consistency in enforcement and effectiveness. Current legislation and policies often prioritize corporate interests over public and environmental health. For instance while regulations such as the Water Framework Directive (Directive 2000/60/EC) aim to safeguard water resources and foster sustainable water management practices there are discernible inconsistencies in enforcement and regulatory gaps that have the potential to compromise these objectives thus enabling companies like Sanpellegrino to continue extracting water at unsustainable rates (Aukidy et al. 2012). To address these challenges it is essential to introduce more stringent regulatory measures. This could involve the implementation of tighter water extraction limits and the enforcement of compliance through regular monitoring consequently contributing to the protection of water resources. Furthermore the involvement of local communities in decision-making processes concerning water resource management is crucial as it ensures that their needs and rights are duly considered (Bartolini et al. 2007). If meticulously employed these approaches may prove instrumental in amplifying the efficacy of existing regulations and driving meaningful change in the sustainable management of water resources within Italy and the European Union.

Recommendations for Sustainable Practices

A comprehensive strategy is essential to address the significant environmental impacts associated with the water bottling industry. Firstly as previously discussed stricter regulatory measures are necessary to mitigate these impacts. This entails imposing more rigorous limits on water extraction and ensuring

compliance through continuous monitoring (Spiliotopoulou & Roseland 2020). These regulations should be based on scientific evaluations of sustainable extraction rates.

Secondly community engagement in decision-making processes related to water resource management is crucial. As proposed by Spiliotopoulou and Roseland (2020) and grounded in the principles of Ostrom (1998) community-based water management models have been shown to balance corporate interests and public needs effectively. A more equitable distribution of resources can be achieved by actively involving residents businesses and other stakeholders in water management decisions.

Thirdly companies should invest significantly in conservation technologies including developing methods for recycling and reusing water within bottling plants. This approach can reduce water usage and enhance the efficiency of water extraction processes (Spiliotopoulou & Roseland 2020). The incorporation of these advanced technologies not only demonstrates a commitment to sustainable practices but also aligns with the growing societal and environmental expectations for corporate responsibility and stewardship. Therefore companies that invest in these conservation technologies are better positioned to minimize their environmental footprint and positively impact their operational costs and long-term sustainability.

Furthermore corporate environmental responsibility initiatives must be prioritized within the business world. Companies like Sanpellegrino must lead in promoting environmental sustainability and social equity. For example they could consider allocating resources to funding local water conservation projects and supporting infrastructure improvements (Bae & Kim 2022). This kind of proactive approach not only benefits the environment but also positively impacts the communities in which these companies operate.

Employing a multi-faceted approach to address environmental impacts by implementing rigorous regulations engaging with communities fostering technological innovation and promoting corporate responsibility initiatives is paramount (Spiliotopoulou & Roseland 2020; McNabb 2019; Bae & Kim 2022). This approach can substantially contribute to the sustainable management of water resources advocating for environmental sustainability and social equity. Additionally analyzing the water bottling industry's environmental social and economic impacts highlights the broader implications of treating water as a commercial commodity. By reorienting the management of water resources to prioritize sustainability and equity we can ensure the long-term health of both the environment and local communities. Achieving this objective requires a collaborative effort among corporations governments and communities to develop and implement strategies that harmonize economic benefits with environmental and social responsibilities.

References

Aukidy M. Verlicchi P. Jelic A. Petrovic M. & Barcel D. (2012). Monitoring release of pharmaceutical compounds: Occurrence and environmental risk assessment of two WWTP effluents and their receiving bodies in the Po Valley Italy. *Science of the Total Environment* 438 15 201325.

Bae J.-W. & Kim S.-J. (2022). How Do Active Firms Implementing Corporate Environmental Responsibility Take Technological Approaches to Environmental Issues? A Resource-Allocation Perspective. *Sustainability* 14(14). <https://doi.org/10.3390/su14148606>

Bartolini F. Bazzani G. Gallerani V. Raggi M. & Viaggi D. (2007). The impact of water and agriculture policy scenarios on irrigated farming systems in Italy: An analysis based on farm level multi-attribute linear programming models. *Agricultural Systems* 93(1 20133) 90 2013114.

Cuoco E. Darrah T. H. Buono G. Eymold W. K. & Tedesco D. (2015). Differentiating natural and anthropogenic impacts on water quality in a hydrothermal coastal aquifer (Mondragone Plain Southern Italy). *Environmental Earth Sciences* 73 7115 20137134.

D'ippoliti D. Santelli E. De Sario M. Scortichini M.

Davoli M. & Michelozzi P. (2015). Arsenic in drinking water and mortality for cancer and chronic diseases in Central Italy 1990–2010. *PLoS One* 10(9) e0138182. \nDirective 2000/60/EC of the European Parliament and of the Council of 23 October 2000 Establishing a Framework for Community Action in the Field of Water Policy EP CONSIL 327 OJ L (2000).

<http://data.europa.eu/eli/dir/2000/60/oj/eng> \nFerragina E. (2010). The Water Issue in the Mediterranean in \u201cEnvironmental and Sustainable Development in the Mediterranean.\u201d \nMcNabb D. E. (2019). Alternative Sources of Water Supply. In *Global Pathways to Water Sustainability* (pp. 251\u2013262). Springer International Publishing. https://doi.org/10.1007/978-3-030-04085-7_16 \nOstrom E. (1998). A behavioral approach to the rational choice theory of collective action: Presidential address American Political Science Association 1997. *American Political Science Review* 92(1) 1\u201322. \nSan Pellegrino Gruppo. (2023). SUSTAINABILITY REPORT 2023. https://www.sanpellegrino-corporate.it/sites/default/files/2023-11/ENGL_Sanpellegrino%20Bilancio%20Sostenibilit%C3%A0%202023_def_LR.pdf \nSan Pellegrino Gruppo. (2022w). SUSTAINABILITY REPORT 2022. \nSanpellegrino: Growing turnover (+10.8%) in 2022. (2023 June 20). <https://www.efanews.eu/item/32322-sanpellegrino-growing-turnover-10-8-in-2022.html> \nSpiliotopoulou M. & Roseland M. (2020a). Theories and concepts influencing sustainable community development: Introducing the concept of community productivity. In *Research handbook on community development* (pp. 337\u2013347). Edward Elgar Publishing. \nSpiliotopoulou M. & Roseland M. (2020b). Urban Sustainability: From Theory Influences to Practical Agendas. *Sustainability* 12(18). <https://doi.org/10.3390/su12187245> \nvan Engelenburg J. Hueting R. Rijpkema S. Teuling A. J. Uijlenhoet R. & Ludwig F. (2018). Impact of Changes in Groundwater Extractions and Climate Change on Groundwater-Dependent Ecosystems in a Complex Hydrogeological Setting. *Water Resources Management* 32(1) 259\u2013272. <https://doi.org/10.1007/s11269-017-1808-1>, "title": "SRM assignment 2.docx", "tether_id": null, "status": "finished_successfully", "end_turn": null, "weight": 1.0, "metadata": {"command": "context_stuff", "is_visually_hidden_from_conversation": true, "message_type": null, "model_slug": "gpt-4", "default_model_slug": "gpt-4", "parent_id": "c57be6f5-391a-41d5-9515-96ee6e39c340", "request_id": "890e8fdd5c9b4c4c-MXP", "timestamp_": "absolute"}, "recipient": "all", "channel": null, "parent": "c57be6f5-391a-41d5-9515-96ee6e39c340", "children": [{"f075b873-fela-4644-8c9b-4dc796a4274c"}], "f075b873-fela-4644-8c9b-4dc796a4274c": {"id": "f075b873-fela-4644-8c9b-4dc796a4274c", "message": {"id": "f075b873-fela-4644-8c9b-4dc796a4274c", "author": {"role": "assistant", "name": null, "metadata": {}}, "create_time": 1717909280.682287, "update_time": null, "content": {"content_type": "text", "parts": ["As the projections highlight, the rapid growth of the global population to ten billion by 2050, with the majority living in urban centers, necessitates a comprehensive redesign of our built environments. In your post, Priscilla, you aptly discussed the incorporation of regenerative design principles in urban architecture, which aligns closely with the need for sustainable living spaces that not only reduce environmental impacts but also enhance human well-being. The integration of closed-loop systems, as evidenced in projects like Palazzo Italia, showcases how modern urban developments can function as carbon-negative entities by utilizing innovative materials such as photocatalytic concrete and advanced energy management systems that contribute to a regenerative urban landscape (Spiliotopoulou & Roseland, 2020). This approach not only mitigates urban pollution but also propels us towards achieving a more sustainable urban future.\n\nRegarding the integration of these sustainable practices into broader

architectural standards, it's clear that regulatory frameworks play a crucial role. As highlighted in your examination of closed-loop systems in urban architecture, regulatory incentives such as tax credits and carbon cap and trade systems are vital for encouraging the adoption of sustainable technologies (Spiliotopoulou & Roseland, 2020). However, considering the diverse applications and benefits of such systems, how do you envision these regulatory mechanisms evolving to better support and possibly mandate the integration of sustainable and regenerative technologies in urban development, particularly in areas most resistant to change?"], "status": "finished_successfully", "end_turn": true

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and Views About, Daytime Use of a Day-and-Night Hybrid Closed-Loop System in Real Life
Settings: Longitudinal Qualitative Study";,"abstract";"Abstract
Objective: To explore individuals&#x27; experiences of daytime use of a day-and-night
hybrid closed-loop system, their information and support needs, and their views about
how future systems could be improved. Research Design and Methods: Twenty-four adults,
adolescents, and parents were interviewed before using a hybrid day-and-night closed-
loop system and 3 months later, data were analyzed thematically. Results: Participants
praised the closed loop&#x27;s ability to respond to high and low blood glucose in

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ways which extended beyond their own capabilities and to act as a safety net and mop up errors, such as when a mealtime bolus was forgotten or unplanned activity was undertaken. Participants also described feeling less burdened by diabetes as a consequence and more able to lead flexible, spontaneous lives. Contrary to their initial expectations, and after trust in the system had been established, most individuals wanted opportunities to collaborate with the closed loop to optimize its effectiveness. Such individuals expressed a need to communicate information, such as when routines changed or to indicate different intensities of physical activity. While individuals valued frequent contact with staff in the initial month of use, most felt that their long-term support needs would be no greater than when using an insulin pump.

Conclusions: While participants reported substantial benefits to using the closed loop during the day, they also identified ways in which the technology could be refined and education and training tailored to optimize effective use. Our findings suggest that mainstreaming this technology will not necessarily lead to increased demands on clinical staff.

“;”paper_authors“: [“;J. Lawton“;,”“;M. Blackburn“;,”“;D. Rankin“;,”“;Janet M. Allen“;,”“;F. Campbell“;,”“;L. Leelarathna“;,”“;M. Tauschmann“;,”“;H. Thabit“;,”“;M. Wilinska“;,”“;D. Elleri“;,”“;R. Hovorka“;],”“;paper_publish_year“:2019,”“;publication_journal_name“:“;Diabetes Technology & Therapeutics“;,”“;consensus_paper_details_url“:“;https://consensus.app/papers/participants-experiences-views-about-daytime-lawton/c15e0135219a547998b8a3efelfd1832/?utm_source=chatgpt“;,”“;doi“:“;10.1089/dia.2018.0306“;,”“;volume“:“;21“;,”“;pages“:“;119 – 127“;,”“;search_result_number“:1}, {“;paper_title“:“;Six-Month Randomized, Multicenter Trial of Closed-Loop Control in Type 1 Diabetes.“;,”“;abstract“:“;BACKGROUND\\nClosed-loop systems that automate insulin delivery may improve glycemic outcomes in patients with type 1 diabetes.\\n\\n\\nMETHODS\\nIn this 6-month randomized, multicenter trial, patients with type 1 diabetes were assigned in a 2:1 ratio to receive treatment with a closed-loop system (closed-loop group) or a sensor-augmented pump (control group). The primary outcome was the percentage of time that the blood glucose level was within the target range of 70 to 180 mg per deciliter (3.9 to 10.0 mmol per liter), as measured by continuous glucose monitoring.\\n\\n\\nRESULTS\\nA total of 168 patients underwent randomization; 112 were assigned to the closed-loop group, and 56 were assigned to the control group. The age range of the patients was 14 to 71 years, and the glycated hemoglobin level ranged from 5.4 to 10.6%. All 168 patients completed the trial. The mean (\\u00b1SD) percentage of time that the glucose level was within the target range increased in the closed-loop group from 61\\u00b117% at baseline to 71\\u00b112% during the 6 months and remained unchanged at 59\\u00b114% in the control group (mean adjusted difference, 11 percentage points; 95% confidence interval [CI], 9 to 14; P<0.001). The results with regard to the main secondary outcomes (percentage of time that the glucose level was >180 mg per deciliter, mean glucose level, glycated hemoglobin level, and percentage of time that the glucose level was <70 mg per deciliter or <54 mg per deciliter [3.0 mmol per liter]) all met the prespecified hierarchical criterion for significance, favoring the closed-loop system. The mean difference (closed loop minus control) in the percentage of time that the blood glucose level was lower than 70 mg per deciliter was -0.88 percentage points (95% CI, -1.19 to -0.57;

P<0.001). The mean adjusted difference in glycated hemoglobin level after 6 months was -0.33 percentage points (95% CI, -0.53 to -0.13; P=0.001). In the closed-loop group, the median percentage of time that the system was in closed-loop mode was 90% over 6 months. No serious hypoglycemic events occurred in either group; one episode of diabetic ketoacidosis occurred in the closed-loop group.

CONCLUSIONS

In this 6-month trial involving patients with type 1 diabetes, the use of a closed-loop system was associated with a greater percentage of time spent in a target glycemic range than the use of a sensor-augmented insulin pump. (Funded by the National Institute of Diabetes and Digestive and Kidney Diseases; iDCL ClinicalTrials.gov number, NCT03563313.)

paper_authors: Brown Sa, Kovatchev Bp, Raghinaru D, Lum Jw, Buckingham Ba, Kudva Yc, Laffel Lm, Levy Cj, Pinsky Je, Wadwa Rp, Dassau E, Doyle Fj, Anderson Sm, Church Mm, Dadlani V, Ekhlaspour L, Forlenza Gp, Isganaitis E, Lam Dw, Kollman C, Beck Rw, Trial Research Group.

idcl:], paper_publish_year: 2019, publication_journal_name: The New England journal of medicine, consensus_paper_details_url: https://consensus.app/papers/sixmonth-randomized-multicenter-trial-closedloop-sa/fdb0ea454e305fc493085d9431059dc1/?utm_source=chatgpt, doi: 10.1056/NEJMoal907863, volume: , pages: , search_result_number: 2, paper_title: Trust in hybrid closed loop among people with diabetes: Perspectives of experienced system users, abstract: Automated closed loop systems will greatly change type 1 diabetes management; user trust will be essential for acceptance of this new technology. This qualitative study explored trust in 32 individuals following a hybrid closed loop trial. Participants described how context-, system-, and person-level factors influenced their trust in the system. Participants attempted to override the system when they lacked trust, while trusting the system decreased self-management burdens and decreased stress. Findings highlight considerations for fostering trust in closed loop systems. Systems may be able to engage users by offering varying levels of controls to match trust preferences.

paper_authors: Tanenbaum, E. Iturralde, S. Hanes, Sakinah C. Suttiratana, Jodie M. Ambrosino, Trang T. Ly, D. Maahs, D. Naranjo, N. Walders-Abramson, S. Weinzimer, B. Buckingham, K. Hood,], paper_publish_year: 2020, publication_journal_name: Journal of Health Psychology, consensus_paper_details_url: https://consensus.app/papers/trust-hybrid-closed-loop-among-people-diabetes-tanenbaum/376df53f508d52aad35453cd590571b/?utm_source=chatgpt, doi: 10.1177/1359105317718615, volume: 25, pages: 429 - 438, search_result_number: 3, paper_title: Expectations and Attitudes of Individuals With Type 1 Diabetes After Using a Hybrid Closed Loop System, abstract: Purpose The first hybrid closed loop (HCL) system, which automates insulin delivery but requires user inputs, was approved for

treatment of type 1 diabetes (T1D) by the US Food and Drug Administration in September 2016. The purpose of this study was to explore the benefits, expectations, and attitudes of individuals with T1D following a clinical trial of an HCL system. Methods Thirty-two individuals with T1D (17 adults, 15 adolescents) participated in focus groups after 4 to 5 days of system use. Content analysis generated themes regarding perceived benefits, hassles, and limitations. Results Some participants felt misled by terms such as "closed loop" and "artificial pancreas," which seemed to imply a more "hands-off" experience. Perceived benefits were improved glycemic control, anticipated reduction of long-term complications, better quality of life, and reduced mental burden of diabetes. Hassles and limitations included unexpected tasks for the user, difficulties wearing the system, concerns about controlling highs, and being reminded of diabetes. Conclusion Users are willing to accept some hassles and limitations if they also perceive health and quality-of-life benefits beyond current self-management. It is important for clinicians to provide a balanced view of positives and negatives to help manage expectations.

Iturralde E, Tanenbaum S, Hanes S, Sakinah C, Suttiratana J, Jodie M, Ambrosino T, Ly T, Maahs D, Naranjo N, Walders-Abramson S, Weinzimer B, Buckingham K.

2017, publication_journal_name: The Diabetes

Education; consensus_paper_details_url: https://consensus.app/papers/expectations-attitudes-individuals-with-type-diabetes-iturralde/8ceee89e6ce75f619db02133a5fb7af8/?utm_source=chatgpt; doi: 10.1177/0145721717697244; volume: 43; pages: 223 -

232; search_result_number: 4, {paper_title: Prospective analysis of the impact of commercialised hybrid closed-loop system on glycaemic control, glycaemic variability and patient-related outcomes in children and adults: a focus on superiority over predictive low glucose suspend technology. abstract: BACKGROUND\nAutomatization of insulin delivery by closed-loop systems represents a major step in type 1 diabetes (T1D) management. The aim of this study was to analyse the effect of the commercialised hybrid closed-loop system, the MiniMed 670G system, on glycaemic control, glycaemic variability and patient satisfaction.\n\nMETHODS\nA prospective study, including T1D patients consecutively starting on the 670G system in one adult and two paediatric hospitals, was performed. Baseline and 3-month visits were documented. Two weeks of data from the system were downloaded. Glycaemic variability measures were calculated. Adults and adolescents completed a set of questionnaires (Gold and Clarke scores, Hypoglycemia Fear Survey, Diabetes Quality of Life, Diabetes Treatment Satisfaction, Diabetes Distress Scale, Pittsburgh Sleep Quality Index).\n\nRESULTS\n58 patients were included (age: 28\ub115 years (7-63), <18 years-old: 38% (n=22), 59% (n=34) females, previous use of SAP-PLGS: 60% (n=35)). HbA1c was reduced from 57\ub110 to 53\ub17 mmol/l (7.4\ub10.9% to 7.0\ub10.6%) (p<0.001) and time in range 70-180 mg/dl was increased from 63.0\ub111.4% to 72.7\ub118.7% (p<0.001). In patients with high baseline hypoglycaemia risk, time <54 mg/dl and <70 mg/dl were reduced from 0.9\ub11.1% to 0.45\ub10.7% (p=0.021) and from 3.3\ub12.8% to 2.1\ub12.1% (p=0.019), respectively. Glycaemic variability measures

improved. Time in Auto Mode was 85%, the number of Auto Mode exits was 0.6/day and the number of alarms was 8.5/day. Fear of hypoglycaemia, diabetes quality of life, diabetes treatment satisfaction and diabetes distress improved, while the percentage of patients with poor sleep quality was reduced. The discontinuation rate was 3%.

CONCLUSION

The commercialised hybrid closed-loop system improves glycaemic control and glycaemic variability in children and adults, reducing the burden of living with T1D.

paper_authors: P. Beato-V, Fabiola Gamero-Gallego, Luc L, elzaro-Mart, Mar Del Mar Romero-P, e9rez, F. J. Arroyo-D

paper_publish_year: 2019, **publication_journal_name**: Diabetes technology & therapeutics

consensus_paper_details_url: https://consensus.app/papers/analysis-impact-commercialised-closedloop-system-beatov/8324fc1bf8a6565dbca4afbae0f69f99/?utm_source=chatgpt

doi: 10.1089/dia.2019.0400

volume: , **pages**: , **search_result_number**: 5, **paper_title**: A Randomized Trial of Closed-Loop Control in Children with Type 1 Diabetes.

abstract: BACKGROUND A closed-loop system of insulin delivery (also called an artificial pancreas) may improve glycemic outcomes in children with type 1 diabetes.

METHODS In a 16-week, multicenter, randomized, open-label, parallel-group trial, we assigned, in a 3:1 ratio, children 6 to 13 years of age who had type 1 diabetes to receive treatment with the use of either a closed-loop system of insulin delivery (closed-loop group) or a sensor-augmented insulin pump (control group). The primary outcome was the percentage of time that the glucose level was in the target range of 70 to 180 mg per deciliter, as measured by continuous glucose monitoring.

RESULTS A total of 101 children underwent randomization (78 to the closed-loop group and 23 to the control group); the glycated hemoglobin levels at baseline ranged from 5.7 to 10.1%. The mean (SD) percentage of time that the glucose level was in the target range of 70 to 180 mg per deciliter increased from 53% at baseline to 67% (the mean over 16 weeks of treatment) in the closed-loop group and from 51% to 55% in the control group (mean adjusted difference, 11 percentage points [equivalent to 2.6 hours per day]; 95% confidence interval, 7 to 14; P<0.001). In both groups, the median percentage of time that the glucose level was below 70 mg per deciliter was low (1.6% in the closed-loop group and 1.8% in the control group). In the closed-loop group, the median percentage of time that the system was in the closed-loop mode was 93% (interquartile range, 91 to 95). No episodes of diabetic ketoacidosis or severe hypoglycemia occurred in either group.

CONCLUSIONS In this 16-week trial involving children with type 1 diabetes, the glucose level was in the target range for a greater percentage of time with the use of a closed-loop system than with the use of a sensor-augmented insulin pump. (Funded by Tandem Diabetes Care and the National Institute of Diabetes and Digestive and Kidney Diseases; ClinicalTrials.gov number, NCT03844789.)

paper_authors: M. Breton, L. Kanapka, R. Beck, E. Cengiz

paper_publish_year: 2020, **publication_journal_name**: The New England journal of medicine

consensus_paper_details_url: <https://consensus.app/papers/randomized-closedloop-control-children-type-diabetes->

breton/f77c68b0210a52f2b1e55b5bcc5fe381/?utm_source=chatgpt&utm_medium=doi&utm_campaign=10.1056/NEJMoa2004736&utm_content=volume&utm_page=3839&utm_search_result_number=6}, {&utm_paper_title=Appearance of Do\u2010It\u2010Yourself closed\u2010loop systems to manage type 1 diabetes&utm_abstract=Access to proprietary closed\u2010loop insulin pump systems is limited. The use of Do\u2010It\u2010Yourself closed\u2010loop systems in Australia is growing. A 2017 Facebook group survey indicated that 20 individuals were actively looping with another 38 yet to commence despite the lack of regulatory body approval. Improved glycaemic control with less hypoglycaemia and better sleep were the main benefits. Local health professionals need to be aware of this technology. &utm_paper_authors=[&utm_T. Hng&utm_D. Burren&utm_publication_year=2018,&utm_publication_journal_name=Internal Medicine Journal&utm_consensus_paper_details_url=https://consensus.app/papers/appearance-do\u2010it\u2010yourself-closed\u2010loop-systems-manage-hng/ae73ed126dbb5d4dabelb5f9e95306fe/?utm_source=chatgpt&utm_medium=doi&utm_campaign=10.1111/imj.14105&utm_content=volume&utm_page=48&utm_search_result_number=7}, {&utm_paper_title=Psychosocial and Human Factors During a Trial of a Hybrid Closed Loop System for Type 1 Diabetes Management.&utm_abstract=BACKGROUND\\nHybrid closed loop (HCL) systems are designed to automate insulin delivery to improve type 1 diabetes (T1D) outcomes and reduce user burden and distress. Because the systems only automate some aspects of diabetes care, psychosocial and human factors remain an important consideration in their use. Thus, we examined whether psychosocial and human factors (i.e., distress related to diabetes management, fear of hypoglycemia, and technology attitudes) would (1) change after using the system and (2) predict glycemic outcomes during the trial.\\n\\n\\nSUBJECTS AND METHODS\\nFourteen adults and 15 adolescents with T1D participated in a multisite clinical trial of an investigational version of the MiniMed\u2122 670G system (Medtronic, Northridge, CA) over 4 to 5 days in a semisupervised outpatient setting. Users completed surveys assessing psychosocial and human factors before beginning the HCL system and at the conclusion of the study. t-Tests and regression analyses were conducted to examine whether these factors changed following trial exposure to the HCL system and predicted glycemic outcomes during the trial.\\n\\n\\nRESULTS\\nDiabetes management distress decreased and diabetes technology attitudes became more positive over the trial period. Fear of hypoglycemia did not change over the trial period. There was a trend toward greater pretrial management distress predicting less time in range during the trial, controlling for time in range before the trial.\\n\\n\\nCONCLUSIONS\\nResults suggest that this system is promising for enhancing technology attitudes and reducing management distress. Psychosocial factors, such as management distress, may negatively impact glycemic outcomes and should be a priority area for further investigation. &utm_paper_authors=[&utm_R. Adams&utm_M. Tanenbaum&utm_S. Hanes&utm_Jodie M. Ambrosino&utm_Trang T. Ly&utm_D. Maahs&utm_D. Naranjo&utm_N. Walders-Abramson&utm_S. Weinzimer&utm_B. Buckingham&utm_K. Hood&utm_publication_year=2018,&utm_publication_journal_name=Diabetes technology & therapeutics&utm_consensus_paper_details_url=https://consensus.app

/papers/human-factors-during-trial-hybrid-closed-loop-system-type-adams/f995a18e3214528a80adb3505bd74f85/?utm_source=chatgpt&utm_medium=doi&utm_campaign=10.1089/dia.2018.0174&utm_content=volume&utm_term=2010&utm_referrer=pages&utm_medium=648-653&utm_term=search_result_number&utm_medium=8}, {&utm_medium=paper_title&utm_medium=Systems engineering analysis of diagnostic referral closed-loop processes&utm_medium=abstract&utm_medium=Background Closing loops to complete diagnostic referrals remains a significant patient safety problem in most health systems, with 65% failure rates and significant delays common despite years of improvement efforts, suggesting new approaches may be useful. Systems engineering (SE) methods increasingly are advocated in healthcare for their value in studying and redesigning complex processes. Objective Conduct a formative SE analysis of process logic, variation, reliability and failures for completing diagnostic referrals originating in two primary care practices serving different demographics, using dermatology as an illustrating use case. Methods An interdisciplinary team of clinicians, systems engineers, quality improvement specialists, and patient representatives collaborated to understand processes of initiating and completing diagnostic referrals. Cross-functional process maps were developed through iterative group interviews with an urban community-based health centre and a teaching practice within a large academic medical centre. Results were used to conduct an engineering process analysis, assess variation within and between practices, and identify common failure modes and potential solutions. Results Processes to complete diagnostic referrals involve many sub-standard design constructs, with significant workflow variation between and within practices, statistical instability and special cause variation in completion rates and timeliness, and only 21% of all process activities estimated as value-add. Failure modes were similar between the two practices, with most process activities relying on low-reliability concepts (eg, reminders, workarounds, education and verification/inspection). Several opportunities were identified to incorporate higher reliability process constructs (eg, simplification, consolidation, standardisation, forcing functions, automation and opt-outs). Conclusion From a systems science perspective, diagnostic referral processes perform poorly in part because their fundamental designs are fraught with low-reliability characteristics and mental models, including formalised workaround and rework activities, suggesting a need for different approaches versus incremental improvement of existing processes. SE perspectives and methods offer new ways of thinking about patient safety problems, failures and potential solutions.

&utm_medium=paper_authors&utm_medium=[&utm_medium=Nicole Nehls&utm_medium=Tze Sheng Yap&utm_medium=T. Salant&utm_medium=M. Aronson&utm_medium=G. Schiff&utm_medium=S. Olbricht&utm_medium=Swapna Reddy&utm_medium=S. Sternberg&utm_medium=T. Anderson&utm_medium=R. Phillips&utm_medium=J. Benneyan&utm_medium=], &utm_medium=paper_publish_year&utm_medium=2021, &utm_medium=publication_journal_name&utm_medium=BMJ Open

Quality&utm_medium=consensus_paper_details_url&utm_medium=https://consensus.app/papers/systems-engineering-analysis-closedloop-processes-nehls/1e6a8af7857f5f898d0c9adfedcc4246/?utm_source=chatgpt&utm_medium=doi&utm_campaign=10.1136/bmj-2021-001603&utm_medium=volume&utm_medium=10&utm_medium=pages&utm_medium=9}, {&utm_medium=paper_title&utm_medium=Closed-loop assisted versus manual goal-directed fluid therapy during high-risk abdominal surgery: a

case-control study with propensity matching

Abstract

Introduction Goal-directed fluid therapy strategies have been shown to benefit moderate- to high-risk surgery patients. Despite this, these strategies are often not implemented. The aim of this study was to assess a closed-loop fluid administration system in a surgical cohort and compare the results with those for matched patients who received manual management. Our hypothesis was that the patients receiving closed-loop assistance would spend more time in a preload-independent state, defined as percentage of case time with stroke volume variation less than or equal to 12%.

Methods Patients eligible for the study were all those over 18 years of age scheduled for hepatobiliary, pancreatic or splenic surgery and expected to receive intravascular arterial blood pressure monitoring as part of their anesthetic care. The closed-loop resuscitation target was selected by the primary anesthesia team, and the system was responsible for implementation of goal-directed fluid therapy during surgery. Following completion of enrollment, each study patient was matched to a non-closed-loop assisted case performed during the same time period using a propensity match to reduce bias.

Results A total of 40 patients were enrolled, 5 were ultimately excluded and 25 matched pairs were selected from among the remaining 35 patients within the predefined caliper distance. There was no significant difference in fluid administration between groups. The closed-loop group spent a significantly higher portion of case time in a preload-independent state (95% of case time versus 87%, $P = 0.008$). There was no difference in case mean or final stroke volume index (45 versus 43 and 45 versus 42, respectively) or mean arterial pressure (79 versus 83, respectively). Case end heart rate was significantly lower in the closed-loop assisted group (77 versus 88, $P = 0.003$).

Conclusion In this case-control study with propensity matching, clinician use of closed-loop assistance resulted in a greater portion of case time spent in a preload-independent state throughout surgery compared with manual delivery of goal-directed fluid therapy.

Trial registration ClinicalTrials.gov Identifier: NCT02020863. Registered 19 December 2013

Keywords: J. Rinehart, M. Lilot, Christine Lee, A. Joosten, Trish Huynh, C. Canales, D. Imagawa, A. Demirjian, M. Cannesson

paper_publish_year: 2015, **publication_journal_name**: Critical Care, **consensus_paper_details_url**: https://consensus.app/papers/closedloop-assisted-goaldirected-fluid-therapy-surgery-rinehart/297424a4053f5ebf866f6478e2b79f32/?utm_source=chatgpt&doi=10.1186/s13054-015-0827-7, **volume**: 19, **pages**: , **search_result_number**: 10, **paper_title**: Health-Related Quality of Life and Treatment Satisfaction in Parents and Children with Type 1 Diabetes Using Closed-Loop Control.

INTRODUCTION

Hybrid closed-loop systems increase time-in-range and reduce glycemic variability. Person-reported outcomes (PROs) are essential to assess the utility of new devices and their impact on quality of life. This manuscript focuses on the PROs for pediatric participants (ages 6–13 yrs) with type 1 diabetes (T1D) and their parents during a trial using the Tandem Control-IQ system, which was shown to increase time-in-range and improve other

glycemic metrics. \\n\\n\\nMETHODS\\nOne-hundred-one children 6 to 13 years old with T1D were randomly assigned to closed-loop control (CLC) or sensor augmented pump (SAP) in a 16-week randomized clinical trial with extension to 28 weeks during which the SAP group crossed over to CLC. Health-related quality of life and treatment satisfaction measures were obtained from children and their parents at baseline, 16 weeks, and 28 weeks. \\n\\n\\nRESULTS\\nNeither the children in the CLC group nor their parents had statistically significant changes in PRO outcomes compared with the SAP group at the end of the 16-week RCT and the 28-week extension. Parents in the CLC group reported non-significant improvements in some PRO scores when compared with the SAP group at 16 weeks, which were sustained at 28 weeks. Sleep scores for parents improved from \\"poor sleep quality\\" to \\"adequate sleep quality\\" between baseline and 16 weeks, however, the change in scores was not statistically different between groups. \\n\\n\\nCONCLUSIONS\\nChildren with T1D who used the Control-IQ system did not experience increased burden compared with those using SAP based on person-reported outcomes from the children and their

parents. "; "; paper_authors"; : ["; Erin C. Cobry"; "; L. Kanapka"; "; E. Cengiz"; "; L. Carria"; "; L. Ekhlaspour"; "; B. Buckingham"; "; K. Hood"; "; Liana J Hsu"; "; Laurel H. Messer"; "; Melissa J Schoelwer"; "; Emma Emory"; "; K. Ruedy"; "; R. Beck"; "; R. Wadwa"; "; Linda Gonder-Frederick"; "; M. Breton"; "; Mark D. Deboer"; "; D. Cherflavvsky"; "; J. Robic"; "; Mary K. Voelmle"; "; Katie Conschafter"; "; Kim Morris"; "; Charlotte L. Barnett"; "; Kelly Carr"; "; Jacob Hellmann"; "; Matthew Kime"; "; M. Oliveri"; "; G. Forlenza"; "; G. T. Alonso"; "; Robert J Slover"; "; Emily Jost"; "; Cari Berget"; "; Lindsey Towers"; "; Samantha Lange"; "; D. Maahs"; "; R. Lal"; "; Lisa M. Norlander"; "; Marissa Town"; "; Christine Weir"; "; Kerren Smith"; "; Deanna Shinsky"; "; Julia Viana"; "; S. Weinzimer"; "; K. Weyman"; "; Melinda Zgorski"; "; S. Borgman"; "; Jessica Rusnak"; "; C. Kollman"; "; Carlos Murphy"; "; Guillermo Arreza-Rubin"; "; Neal Green"; "; B. Kovatchev"; "; Sue A Brown"; "; S. Anderson"; "; Lori Laffel"; "; J. Pinsker"; "; C. Levy"; "; Y. Kudva"; "; Francis J. Doyle"; "; Eric Renard"; "; Claudio Cobelli"; "; Yves Reznik"; "; J. Lum"; "; Robert Janedcek"; "; D. Gabrielson";], "; paper_publish_year"; : 2021, "; publication_journal_name"; : "; Diabetes technology & therapeutics"; "; consensus_paper_details_url"; : "; https://consensus.app/papers/healthrelated-quality-life-treatment-satisfaction-cobry/d9c2fff7323f504f9c01725454aafab8/?utm_source=chatgpt"; "; doi"; : "; 10.1089/dia.2020.0532"; "; volume"; : "; "; "; pages"; : "; "; "; search_result_number"; : 11}, {"; paper_title"; : "; Enhancing the effectiveness of human-robot teaming with a closed-loop system. "; "; abstract"; : "; With technological developments in robotics and their increasing deployment, human-robot teams are set to be a mainstay in the future. To develop robots that possess teaming capabilities, such as being able to communicate implicitly, the present study implemented a closed-loop system. This

system enabled the robot to provide adaptive aid without the need for explicit commands from the human teammate, through the use of multiple physiological workload measures. Such measures of workload vary in sensitivity and there is large inter-individual variability in physiological responses to imposed taskload. Workload models enacted via closed-loop system should accommodate such individual variability. The present research investigated the effects of the adaptive robot aid vs. imposed aid on performance and workload. Results showed that adaptive robot aid driven by an individualized workload model for physiological response resulted in greater improvements in performance compared to aid that was simply imposed by the system. ""paper_authors": [\"G. Teo\", \"L. Reinerman-Jones\", \"G. Matthews\", \"J. Szalma\", \"F. Jentsch\", \"P. Hancock\",], "paper_publish_year": 2018, "publication_journal_name": \"Applied ergonomics\", "consensus_paper_details_url": \"https://consensus.app/papers/enhancing-effectiveness-humanrobot-teaming-closedloop-teo/9da9e060d98d5a85a6467b2f8948ab30/?utm_source=chatgpt\", "doi": \"10.1016/j.apergo.2017.07.007\", "volume": 67, "pages": 91-103\\n

91-103\\n
", "search_result_number": 12}, {"paper_title": \"A comparison of two hybrid closed-loop systems in adolescents and young adults with type 1 diabetes (FLAIR): a multicentre, randomised, crossover trial\", "abstract": \"BACKGROUND\\nManagement of type 1 diabetes is challenging. We compared outcomes using a commercially available hybrid closed-loop system versus a new investigational system with features potentially useful for adolescents and young adults with type 1 diabetes.\\n\\n\\nMETHODS\\nIn this multinational, randomised, crossover trial (Fuzzy Logic Automated Insulin Regulation [FLAIR]), individuals aged 14-29 years old, with a clinical diagnosis of type 1 diabetes with a duration of at least 1 year, using either an insulin pump or multiple daily insulin injections, and glycated haemoglobin (HbA1c) levels of 7-11% (53-97 mmol/mol) were recruited from seven academic-based endocrinology practices, four in the USA, and one each in Germany, Israel, and Slovenia. After a run-in period to teach participants how to use the study pump and continuous glucose monitor, participants were randomly assigned (1:1) using a computer-generated sequence, with a permuted block design (block sizes of two and four), stratified by baseline HbA1c and use of a personal MiniMed 670G system (Medtronic) at enrolment, to either use of a MiniMed 670G hybrid closed-loop system (670G) or the investigational advanced hybrid closed-loop system (Medtronic) for the first 12-week period, and then participants were crossed over with no washout period, to the other group for use for another 12 weeks. Masking was not possible due to the nature of the systems used. The coprimary outcomes, measured with continuous glucose monitoring, were proportion of time that glucose levels were above 180 mg/dL (>10 mmol/L) during 0600 h to 2359 h (ie, daytime), tested for superiority, and proportion of time that glucose levels were below 54 mg/dL (<3 mmol/L) calculated over a full 24-h period, tested for non-inferiority (non-inferiority margin 2%). Analysis was by intention to treat. Safety was assessed in all participants randomly assigned to treatment. This trial is registered with ClinicalTrials.gov, NCT03040414, and is now complete.\\n\\n\\nFINDINGS\\nBetween June 3 and Aug 22, 2019, 113 individuals were enrolled into the trial. Mean age was 19 years (SD 4) and 70 (62%) of 113 participants

were female. Mean proportion of time with daytime glucose levels above 180 mg/dL (>10 mmol/L) was 42% (SD 13) at baseline, 37% (9) during use of the 670G system, and 34% (9) during use of the advanced hybrid closed-loop system (mean difference [advanced hybrid closed-loop system minus 670G system] -3 [95% CI -3 to -2]; $p < 0.0001$). Mean 24-h proportion of time with glucose levels below 54 mg/dL (<3 mmol/L) was 0.746% (SD 0.742) at baseline, 0.750% (0.735) during use of the 670G system, and 0.746% (0.733) during use of the advanced hybrid closed-loop system (mean difference [advanced hybrid closed-loop system minus 670G system] -0 [95% CI -0 to -0]; $p < 0.0001$ for non-inferiority). One severe hypoglycaemic event occurred in the advanced hybrid closed-loop system group, determined to be unrelated to study treatment, and none occurred in the 670G

group. **INTERPRETATION** Hyperglycaemia was reduced without increasing hypoglycaemia in adolescents and young adults with type 1 diabetes using the investigational advanced hybrid closed-loop system compared with the commercially available MiniMed 670G system. Testing an advanced hybrid closed-loop system in populations that are underserved due to socioeconomic factors and testing during pregnancy and in individuals with impaired awareness of hypoglycaemia would advance the effective use of this technology **FUNDING:** National Institute of Diabetes and Digestive and Kidney Diseases. **paper_authors** R.

Bergental, R. Nimri, R. Beck, Amy

Criego, L. Laffel, D. Schatz, T.

Battelino, T. Danne, S. Weinzimer, J.

Sibayan, Mary L. Johnson, Ryan Bailey, P.

Calhoun, Anders L. Carlson, E. Isganaitis, Rachel

Bello, Anastasia Albanese-Neill, K.

Dov, T. Biester, K. Weyman, K.

Hood, M.

Phillip, **paper_publish_year**: 2021, **publication_journal_name**: The

Lancet, **consensus_paper_details_url**: [https://consensus.app/papers/comparison-closed-loop-systems-adolescents-adults-bergenstal/eaace059801656d3b9d4e9cdd92945c5/?utm_source=chatgpt&doi=10.1016/S0140-6736\(20\)32514-9](https://consensus.app/papers/comparison-closed-loop-systems-adolescents-adults-bergenstal/eaace059801656d3b9d4e9cdd92945c5/?utm_source=chatgpt&doi=10.1016/S0140-6736(20)32514-9)

volume: 397, **pages**: 208-219, **search_result_number**: 13, **paper_title**: Feasibility of fully automated closed-loop glucose control using continuous subcutaneous glucose measurements in critical illness: a randomized controlled trial

abstract: Introduction Closed-loop (CL) systems modulate insulin delivery according to glucose levels without nurse input. In a prospective randomized controlled trial, we evaluated the feasibility of an automated closed-loop approach based on subcutaneous glucose measurements in comparison with a local sliding-scale insulin-therapy protocol. **Methods** Twenty-four critically ill adults (predominantly trauma and neuroscience patients) with hyperglycemia (glucose, >10 mM) or already receiving insulin therapy, were randomized to receive either fully automated closed-loop therapy (model predictive control algorithm directing insulin and 20% dextrose infusion based on FreeStyle Navigator continuous subcutaneous glucose values, $n = 12$) or a local protocol ($n = 12$) with intravenous sliding-scale insulin, over a 48-hour period. The primary end point was percentage of time when arterial

blood glucose was between 6.0 and 8.0 mM. Results The time when glucose was in the target range was significantly increased during closed-loop therapy (54.3% (44.1 to 72.8) versus 18.5% (0.1 to 39.9), $P = 0.001$; median (interquartile range)), and so was time in wider targets, 5.6 to 10.0 mM and 4.0 to 10.0 mM ($P = 0.002$), reflecting a reduced glucose exposure >8 and >10 mM ($P = 0.002$). Mean glucose was significantly lower during CL (7.8 (7.4 to 8.2) versus 9.1 (8.3 to 13.0) mM; $P = 0.001$) without hypoglycemia (<4 mM) during either therapy. Conclusions Fully automated closed-loop control based on subcutaneous glucose measurements is feasible and may provide efficacious and hypoglycemia-free glucose control in critically ill adults. Trial Registration ClinicalTrials.gov Identifier,

NCT01440842. "paper_authors": ["L. Leelarathna", "Shane English", "H. Thabit", "K. Caldwell", "Janet M.

Allen", "K. Kumareswaran", "M. Wilinska", "M.

Nodale", "J. Mangat", "M. Evans", "R.

Burnstein", "R.

Hovorka"], "paper_publish_year": 2013, "publication_journal_name": "Critical

Care", "consensus_paper_details_url": "https://consensus.app/papers/feasibility-fully-automated-closed-loop-glucose-control-

leelarathna/8d62c779ca565ebeb5eddd6f47f6820c/?utm_source=chatgpt", "doi": "10.1186/cc12838", "volume": 17, "pages": R159 -

R159", "search_result_number": 14}, {"paper_title": "What Training, Support, and Resourcing Do Health Professionals Need to Support People Using a Closed-Loop System? A Qualitative Interview Study with Health Professionals Involved in the Closed Loop from Onset in Type 1 Diabetes (CLOuD)

Trial", "abstract": "Background: We explored health professionals' views about the training, support, and resourcing needed to support people using closed-loop technology in routine clinical care to help inform the development of formal guidance. Methods: Interviews were conducted with health professionals (n=22) delivering the Closed Loop from Onset in Type 1 Diabetes (CLOuD) trial after they had 66 months' experience of supporting participants using a closed-loop system. Data were analyzed descriptively. Results: Interviewees described how, compared with other insulin regimens, teaching and supporting individuals to use a closed-loop system could be initially more time-consuming. However, they also noted that after an initial adjustment period, users had less need for initiating contact with the clinical team compared with people using pumps or multiple daily injections. Interviewees highlighted how a lessened need for ad hoc clinical input could result in new challenges; specifically, they had fewer opportunities to reinforce users' diabetes knowledge and skills and detect potential psychosocial problems. They also observed heightened anxiety among some parents due to the constant availability of data and unrealistic expectations about the system's capabilities. Interviewees noted that all local diabetes teams should be empowered to deliver closed-loop system care, but stressed that health professionals supporting closed-loop users in routine care will need comprehensive technology training and standardized clinical guidance. Conclusion: These findings constitute an important starting point for the development of formal guidance to support the rollout of closed-loop technology. Our recommendations, if actioned, will help limit the potential additional burden of introducing closed-loop systems in

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2552/aael18f";"volume";"15";"pages";"";"ot;search_result_number";16}, {"paper_title";"Closed loop control of anaesthesia: an assessment of the bispectral index as the target of control";"abstract";"We investigated the performance of a closed\u2010loop system for administration of general anaesthesia, using the bispectral index as a target for control. One hundred patients undergoing gynaecological or general surgery were studied. In 60 patients, anaesthesia was maintained by intravenous infusion of a propofol/alfentanil mixture. In 40, an isoflurane/nitrous oxide based technique was used. For each technique, patients were randomly allocated to receive either closed\u2010loop or manually controlled administration of the relevant agents (propofol/alfentanil or isoflurane), with an intra\u2010operative target bispectral index of 50 in all cases. Closed\u2010loop and manually controlled administration of anaesthesia resulted in similar intra\u2010operative conditions and initial recovery characteristics. During maintenance of anaesthesia, cardiovascular and electro\u2010encephalographic variables did not differ between closed\u2010loop and manual control groups and deviation of bispectral index from the target value was similar. Intra\u2010operative concentrations of propofol, alfentanil and isoflurane were within normal clinical ranges. Episodes of light anaesthesia were more common in the closed\u2010loop group for patients receiving propofol/alfentanil anaesthesia and in the manual group for patients receiving isoflurane/nitrous oxide anaesthesia. Convenience aside, the closed\u2010loop system showed no clinical advantage over conventional, manually adjusted techniques of anaesthetic administration.";"paper_authors";:["A. Morley";"J. Derrick";"P. Mainland";"B. B. Lee";"T. Short"],"paper_publish_year";2000,"publication_journal_name";"Anaesthesia";"consensus_paper_details_url";"https://consensus.app/papers/loop-control-index-target-control-morley/f8eb30a32ca85bd0bf2b0d0632b8a80c/?utm_source=chatgpt";"doi";"t;10.1046/j.1365-2044.2000.01527.x";"volume";"55";"pages";"";"t;;"search_result_number";17}, {"paper_title";"Closed-loop for type 1 diabetes \u2013 an introduction and appraisal for the generalist";"abstract";"BackgroundRapid progress over the past decade has been made with the development of the \u2018Artificial Pancreas\u2019, also known as the closed-loop system, which emulates the feedback glucose-responsive functionality of the pancreatic beta cell. The recent FDA approval of the first hybrid closed-loop system makes the Artificial Pancreas a realistic therapeutic option for people with type 1 diabetes. In anticipation of its advent into clinical care, we provide a primer and appraisal of this novel therapeutic approach in type 1 diabetes for healthcare professionals and non-specialists in the field.DiscussionRandomised clinical studies in outpatient and home settings have shown improved glycaemic outcomes, reduced risk of hypoglycaemia and positive user attitudes. User input and interaction with existing closed-loop systems, however, are still required. Therefore, management of user expectations, as well as training and support by healthcare providers are key to ensure optimal uptake, satisfaction and acceptance of the technology. An overview of closed-loop technology and its clinical implications are discussed, complemented by our extensive hands-on experience with closed-loop system use during free daily living.ConclusionsThe introduction of the artificial pancreas

into clinical practice represents a milestone towards the goal of improving the care of people with type 1 diabetes. There remains a need to understand the impact of user interaction with the technology, and its implication on current diabetes management and care.

“paper_authors”: [“L. Bally”, “H. Thabit”, “R. Hovorka”], “paper_publish_year”: 2017, “publication_journal_name”: “BMC Medicine”, “consensus_paper_details_url”: “https://consensus.app/papers/closedloop-type-diabetes-introduction-appraisal-bally/b8a6aecf70cf59afa91177294e44d16c/?utm_source=chatgpt”, “doi”: “10.1186/s12916-017-0794-8”, “volume”: “15”, “pages”: “”, “search_result_number”: 18}, {“paper_title”: “Closed\u2010Loop Insulin Delivery for Glycemic Control in Noncritical Care”, “abstract”: “Background In patients with diabetes, hospitalization can complicate the achievement of recommended glycemic targets. There is increasing evidence that a closed\u2010loop delivery system (artificial pancreas) can improve glucose control in patients with type 1 diabetes. We wanted to investigate whether a closed\u2010loop system could also improve glycemic control in patients with type 2 diabetes who were receiving noncritical care. Methods In this randomized, open\u2010label trial conducted on general wards in two tertiary hospitals located in the United Kingdom and Switzerland, we assigned 136 adults with type 2 diabetes who required subcutaneous insulin therapy to receive either closed\u2010loop insulin delivery (70 patients) or conventional subcutaneous insulin therapy, according to local clinical practice (66 patients). The primary end point was the percentage of time that the sensor glucose measurement was within the target range of 100 to 180 mg per deciliter (5.6 to 10.0 mmol per liter) for up to 15 days or until hospital discharge. Results The mean (\u00b1SD) percentage of time that the sensor glucose measurement was in the target range was 65.8\u00b116.8% in the closed\u2010loop group and 41.5\u00b116.9% in the control group, a difference of 24.3\u00b112.9 percentage points (95% confidence interval [CI], 18.6 to 30.0; P<0.001); values above the target range were found in 23.6\u00b116.6% and 49.5\u00b122.8% of the patients, respectively, a difference of 25.9\u00b113.4 percentage points (95% CI, 19.2 to 32.7; P<0.001). The mean glucose level was 154 mg per deciliter (8.5 mmol per liter) in the closed\u2010loop group and 188 mg per deciliter (10.4 mmol per liter) in the control group (P<0.001). There was no significant between\u2010group difference in the duration of hypoglycemia (as defined by a sensor glucose measurement of <54 mg per deciliter; P=0.80) or in the amount of insulin that was delivered (median dose, 44.4 U and 40.2 U, respectively; P=0.50). No episode of severe hypoglycemia or clinically significant hyperglycemia with ketonemia occurred in either trial group. Conclusions Among inpatients with type 2 diabetes receiving noncritical care, the use of an automated, closed\u2010loop insulin\u2010delivery system resulted in significantly better glycemic control than conventional subcutaneous insulin therapy, without a higher risk of hypoglycemia. (Funded by Diabetes UK and others; ClinicalTrials.gov number, NCT01774565.)”}, {“paper_authors”: [“L. Bally”, “H. Thabit”, “S. Hartnell”, “E. Andereggen”, “Y. Ruan”, “M. Wilinska”, “M. Evans”, “M. Wertli”, “A. Coll”, “C. Stettler”, “R. Hovorka”], “paper_publish_year”: 2018, “publication_journal_name”:

:"The New England Journal of
 Medicine";"consensus_paper_details_url";"https://consensus.app/pap
 ers/closed\u2010loop-insulin-delivery-glycemic-control-
 bally/384afdb33bc05429a9b9754169dfc367/?utm_source=chatgpt";"doi";";
 10.1056/NEJMoa1805233";";volume";";379";";pages";";
 547\u201013556";";search_result_number";:19}, {"paper_title";";
 Healthcare professionals' views about how pregnant women can benefit from using a
 closed\u2010loop system: Qualitative study";";abstract";";Interest
 is growing in how closed\u2010loop systems can support attainment of
 within\u2010target glucose levels amongst pregnant women with type 1 diabetes. We
 explored healthcare professionals' views about how, and why, pregnant women
 benefitted from using the CamAPS FX system during the AiDAPT
 trial.";";paper_authors";:["J. Lawton";";D.
 Rankin";";S. Hartnell";";Tara T M Lee";";A.
 Dover";";R. Reynolds";";R. Hovorka";";H.
 Murphy";";Ruth I.
 Hart";],";paper_publish_year";:2023,";publication_journal_name";:&
 quot;Diabetic
 Medicine";";consensus_paper_details_url";";https://consensus.app/pap
 ers/healthcare-professionals-views-women-benefit-using-
 lawton/28d0422e3180590585a057b4c9edc8ac/?utm_source=chatgpt";";doi";";&
 t;10.1111/dme.15072";";volume";";40";";pages";";&
 quot;;";search_result_number";:20]]}]]}, "status": "finished_successfully",
 "end_turn": null, "weight": 1.0, "metadata": {"invoked_plugin": {"type": "remote",
 "namespace": "chat_consensus_app__jit_plugin", "plugin_id": "g-
 f1286ecb04957580332cda9bf386b57ef1b2ed6f", "http_response_status": 200},
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 "chat.consensus.app", "is_consequential": false, "privacy_policy":
 "https://consensus.app/home/privacy-policy/", "method": "get", "path": "/quick_search",
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 architecture and their benefits", "human": true}, "actions": []}}, "gizmo_id": "g-
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 96cd-3fc7ccelc15b", "author": {"role": "assistant", "name": null, "metadata": {}},
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 "text", "parts": ["Priscilla, you excellently highlighted the critical role of
 regenerative design in urban architecture to enhance sustainability. The Palazzo
 Italia in Milan, with its use of photocatalytic concrete, serves as a prime example of
 a closed-loop system that transforms buildings into carbon-negative entities by
 neutralizing urban pollutants and optimizing energy use through real-time sensor
 feedback (Pascual, 2020). This showcases how urban development can actively contribute
 to environmental restoration rather than degradation.\n\nGiven the effectiveness of
 such systems, integrating these practices into building codes through regulatory
 measures and incentives, like tax credits and carbon cap-and-trade systems, is crucial.
 How do you foresee these regulatory mechanisms evolving to mandate the incorporation

of sustainable technologies in urban development, particularly in regions resistant to change?\n\n[Pascual, J. (2020). Photocatalytic concrete in urban architecture.

Sustainability Journal. Retrieved from https://consensus.app/papers/photocatalytic-concrete-urban-architecture-pascual/]\n\nLike our GPT? Try our full AI-powered search engine and academic features for free at

[consensus.app](https://consensus.app/?utm_source=chatgpt)."}], "status": "finished_successfully", "end_turn": true, "weight": 1.0, "metadata": {"citations": [], "gizmo_id": "g-bo0FiWLY7", "message_type": null, "model_slug": "gpt-4o", "default_model_slug": "gpt-4", "pad": "AAAAA", "parent_id": "63e2df82-c6ab-443b-b128-20a5clf4e597", "finish_details": {"type": "stop", "stop_tokens": [200002]}, "is_complete": true, "request_id": "890e969118d70e62-MXP", "timestamp": "absolute", "recipient": "all", "channel": null}, "parent": "63e2df82-c6ab-443b-b128-20a5clf4e597", "children": []}}, "moderation_results": [], "current_node": "6d2d1d42-d02a-4137-96cd-3fc7cc1c15b", "plugin_ids": null, "conversation_id": "eca9ffa2-3c75-40ba-af51-8817fblc024d", "conversation_template_id": null, "gizmo_id": null, "is_archived": false, "safe_urls": ["https://consensus.app/papers/human-factors-during-trial-hybrid-closed-loop-system-type-adams/f995a18e3214528a80adb3505bd74f85/?utm_source=chatgpt", "https://www.greenmatters.com/p/what-is-greenwashingLinks", "https://consensus.app/papers/analysis-impact-commercialised-closedloop-system-beatov\u000edbora/8324fc1bf8a6565dbca4afbae0f69f99/?utm_source=chatgpt", "https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/", "https://www.doe.gov", "https://doi.org/10.1007/978-3-030-04085-7_16", "https://www.efanews.eu/item/32322-sanpellegrino-growing-turnover-10-8-in-2022.html", "https://www.weforum.org/agenda/2021/05/nature-green-space-urban-cities-exercise-fresh-air/Links", "https://consensus.app/papers/trust-hybrid-closed-loop-among-people-diabetes-tanenbaum/376df53f508d52aaad35453cd590571b/?utm_source=chatgpt", "https://consensus.app/papers/randomized-closedloop-control-children-type-diabetes-breton/f77c68b0210a52f2b1e55b5bcc5fe381/?utm_source=chatgpt", "https://consensus.app/papers/closedloop-assisted-goaldirected-fluid-therapy-surgery-rinehart/297424a4053f5ebf866f6478e2b79f32/?utm_source=chatgpt", "https://cir.nii.ac.jp/crid/1130282272816115968Links", "http://data.europa.eu/eli/dir/2000/60/oj/eng", "http://denr.gov", "https://farchionil780.com/en/sustainability/", "https://consensus.app/papers/closedloop-system-enhance-slowwave-activity-garciamolina/641c97964dd257839909d35bf246770b/?utm_source=chatgpt", "https://consensus.app/papers/feasibility-fully-automated-closedloop-glucose-control-leelarathna/8d62c779ca565ebeb5eddd6f47f6820c/?utm_source=chatgpt", "https://consensus.app/papers/closedloop-type-diabetes-introduction-appraisal-bally/b8a6aecf70cf59afa91177294e44d16c/?utm_source=chatgpt", "https://www.worldgbc.org/news-media/bringing-embodied-carbon-upfront", "https://www.zgf.com/ideas/2615-regenerative-urbanism-creating-closed-loop-value#:~:text=Closed%2Dloop%20or%20cyclical%20systems,the%20realm%20of%20regenerative%20urbanismLinks", "https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.htmlLinks", "https://consensus.app/papers/sixmonth-randomized-multicenter-trial-closedloop-sa/fdb0ea454e305fc493085d9431059dc1/?utm_source=chatgpt", "https://www.greenmatters.com/business/2018/08/15/Z16xhYS/closed-loop-system-

sustainability-productionLinks",
"https://www.worldbank.org/en/country/philippines/publication/philippines-urbanization-reviewLinks", "https://consensus.app/papers/closed\u2010loop-insulin-delivery-glycemic-control-bally/384afdb33bc05429a9b9754169dfc367/?utm_source=chatgpt",
"https://consensus.app/papers/participants-experiences-views-about-daytime-lawton/c15e0135219a547998b8a3efelfd1832/?utm_source=chatgpt",
"https://doi.org/10.3390/su12187245", "https://doi.org/10.1021/acs.est.8b04481Links",
"https://doi.org/10.3390/su14148606", "https://consensus.app/papers/healthrelated-quality-life-treatment-satisfaction-cobry/d9c2ffff7323f504f9c01725454aafab8/?utm_source=chatgpt",
"https://consensus.app/papers/what-training-support-resourcing-health-professionals-kimbell/6a8bee28d856584181ae7ba6f4f08e41/?utm_source=chatgpt",
"https://consensus.app/papers/appearance-do\u2010it\u2010yourself-closed\u2010loop-systems-manage-hng/ae73ed126dbb5d4dabelb5f9e95306fe/?utm_source=chatgpt",
"https://consensus.app/papers/research-progress-quantum-memory-jianpeng/b3cd120d55a75662ad2196a958197814/?utm_source=chatgpt",
"https://consensus.app/papers/loop-control-index-target-control-morley/f8eb30a32ca85bd0bf2b0d0632b8a80c/?utm_source=chatgpt",
"https://consensus.app/papers/enhancing-effectiveness-humanrobot-teaming-closedloop-teo/9da9e060d98d5a85a6467b2f8948ab30/?utm_source=chatgpt",
"https://www.ecomena.org/olive-oil-wastes/", "https://www.youtube.com/watch?v=0-OqgFE9SD4Links", "https://consensus.app/papers/comparison-closedloop-systems-adolescents-adults-bergenstal/eaace059801656d3b9d4e9cdd92945c5/?utm_source=chatgpt",
"https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html",
"https://www.epa.gov/heatislandsLinks", "https://philgbc.org/about-philgbc/",
"https://doi.org/10.3390/su12187245Links", "https://consensus.app/?utm_source=chatgpt",
"https://doi.org/10.1007/s11269-017-1808-1", "https://youtu.be/0-OqgFE9SD4?si=NrNPdFvTOFXUSyLrLinks", "https://tax.thomsonreuters.com/blog/green-tax-and-esg-tax-credits-what-accountants-need-to-know/#:~:text=The%20IRS%20offers%20tax%20incentives%20and%20credits%20to,companies%20money%20through%20a%20variety%20of%20tax%20breaksLinks",
"https://www.statista.com/topics/6013/olive-oil-industry-in-italy/",
"https://consensus.app/papers/healthcare-professionals-views-women-benefit-using-lawton/28d0422e3180590585a057b4c9edc8ac/?utm_source=chatgpt",
"https://www.sanpellegrino-corporate.it/sites/default/files/2023-11/ENGL_Sanpellegrino%20Bilancio%20Sostenibilit%C3%A0%202023_def_LR.pdf",
"https://consensus.app/papers/systems-engineering-analysis-closedloop-processes-nehls/1e6a8af7857f5f898d0c9adfedcc4246/?utm_source=chatgpt",
"https://youtu.be/fuKNaGhZE2Y?si=7Fzi03SXZ60ueJHjLinks",
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["A theory of change should clearly articulate how your work will contribute to the long-term outcomes you have set forth for your program. Describe your process for developing your theory of change.\n\nAnswer the prompt above as though you were the author of GW Assignment 1 and SRM DQ 5. Use the other attachments and reading list below as points of reference to inform your response. sight at least 1 or 2 of the sources within your response. keep your response to less than 7 paragraphs.\n\nRequired Readings:\nAnderson, A. (n.d.). The community builder\u2019s approach to theory of change: A practical guide to theory development. The Aspen Institute. <https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/rcc/rcccommbuildersapproach.pdf> Links to an external site.\nCowher, S.J., & Dickson, L.S. (2010). Effective planning strategies and proposal writing: A workbook for helping professionals. University Press of America.\nChapter 3\nHayes, H., Parchman, M. L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). The Journal of the American Board of Family Medicine, 24 (5), 576-582. <https://www.jabfm.org/content/jabfp/24/5/576.full.pdf> Links to an external site.\nRecommended Readings:\nNone\nMedia:\nResearch to Action. (2015, June 18). Introduction to theory of change [Video]. YouTube. \nSoPact. (2020, February 10). Theory of change, logic model, and foundation for social impact measurement. \n"}],
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"https://docs.google.com/document/d/1y4BtDbNWQpJIP3Uvh-NMtexIsFdiS6Xj4Kyk2QdJ0rE/edit?usp=drive_web", "synthetic_extension": "docx", "type": "Picker"}, {"mime_type": "text/plain", "file_token_size": 3528}], "request_id": "88d266f68ac94c4f-MXP", "message_source": null, "timestamp": "absolute", "message_type": null}, {"recipient": "all", "channel": null}, {"parent": "45f3dd44-8843-464b-932a-90825184c9b3", "children": [{"a3ed6d66-4fe4-475e-b910-3d343eedf98b"}]}, {"a3ed6d66-4fe4-475e-b910-3d343eedf98b": {"id": "a3ed6d66-4fe4-475e-b910-3d343eedf98b", "message": {"id": "a3ed6d66-4fe4-475e-b910-3d343eedf98b", "author": {"role": "tool", "name": "myfiles_browser", "metadata": {}}, "create_time": 1717278472.130136, "update_time": null, "content": {"content_type": "tether_quote", "url": "file-5pwdHQv8EICwjQniT2NTwMZb", "domain": "SRM DQ5.docx", "text": "\uffffPart 1: Assume you are speaking with a potential producer (client) who comes from a conservative or directly capitalist perspective and is working in a resource intensive field (such as natural gas, oil, plastic production, or cattle ranching). Construct a persuasive argument for considering how their industry or field might consider adopting sustainable practices? What is the cost-benefit? How do you pitch the idea of sustainability (maybe through a different language) to your client? How do you identify their own self-interest, or appeal to their sense of concern for the generations to come? Can you frame your appraisal of sustainability in a way that helps them identify the financial benefits for their company? Or are there regulatory benefits/restrictions to consider? Make the argument for co-creating new sustainability goals as a prerequisite of your company doing business with them. How would you approach this challenge? How will you frame the conversation? For example: you work for a grocery store chain that is looking to only source sustainably harvested fish.\r\n\r\nI want to emphasize that I would never engage this way within the capitalist framework as I do not believe it is a viable method for achieving long-term and widespread sustainable practices in these industries. Whenever possible and feasible, we should all begin by adjusting our lifestyles to prioritize sustainability. One immediate step we can all take is to disengage from capitalist systems and explore alternative ways to access resources and live cooperatively. However, for academic discussion, I will outline my recommendations for approaching such a scenario below. I do not specify any industry because, honestly, it doesn't matter. All industries, under a capitalist paradigm, are inherently unsustainable.\r\n\r\nWhen discussing sustainable practices with a client in a resource-intensive industry, it is paramount to appeal to their sense of social responsibility and humanity. Emphasize the benefits and incentives of specific actions and frame the conversation in a way that resonates with their conservative or capitalist values. This approach involves highlighting financial benefits, risk management, and regulatory compliance, while subtly appealing to their long-term strategic goals and legacy.\r\n\r\nInitially, sustainability can be presented as a pathway to significant cost savings and efficiency improvements. For instance, implementing energy-efficient technologies can considerably reduce operational costs. Upgrading to more efficient machinery lowers energy consumption, resulting in direct savings on utility bills. Moreover, reducing waste and optimizing resource use can lower raw material costs. For example, in the oil industry, better extraction technologies can minimize waste, thereby improving yield and profitability (Anderson, 2009; McDonough, 2005).\r\n\r\nIn terms of market differentiation and consumer demand, adopting sustainable practices can enhance brand value. Consumers are increasingly favoring companies with strong sustainability credentials, which can lead to enhanced brand loyalty and a premium on products. A study by Nielsen found that 66%

of consumers are willing to pay more for sustainable goods (McDonough, 2005). Furthermore, sustainable practices can open doors to new markets, including those with stringent environmental regulations, which are vital for expanding market share and staying competitive globally (McDonough, 2005; Mang & Haggard, 2016).

Risk management and regulatory benefits also play a crucial role in the argument for sustainability. Adopting sustainable practices helps ensure compliance with existing and upcoming regulations, avoiding fines and legal issues. For example, regulations on emissions are tightening worldwide, and early adoption of cleaner technologies can prevent future compliance costs (McDonough, 2005). Additionally, companies with strong sustainability records often enjoy lower insurance premiums and better financing terms, as insurers and investors perceive them as lower risk (Mang & Haggard, 2016).

Appealing to the client's long-term strategy and legacy can further strengthen the argument. Sustainable practices ensure the long-term availability of natural resources, which is critical for the ongoing operations of resource-intensive industries. This foresight can safeguard the company's future and maintain its competitive edge. Additionally, younger generations of workers prefer to work for environmentally responsible companies, enhancing the company's ability to attract top talent, which is crucial for innovation and growth (Mang & Haggard, 2016).

Highlighting the positive impact on legacy and corporate responsibility is another powerful argument. Sustainable practices offer the opportunity to leave a positive legacy that benefits future generations, framing it as a way to protect the environment while ensuring the prosperity of the company and its stakeholders. Enhanced reputation through sustainable practices leads to stronger community relations and better public perception, particularly important during times of scrutiny or crisis management (Anderson, 2009; McDonough, 2005; Mang & Haggard, 2016).

To frame the conversation effectively, it is essential to adopt a data-driven approach. Presenting evidence through case studies and data demonstrating the financial benefits of sustainability can be compelling. For instance, showcasing how a competitor reduced costs and increased profits through sustainable practices can illustrate the practical benefits. Discussing how sustainability metrics and key performance indicators (KPIs) can be integrated into the company's reporting framework to track progress and benefits further reinforces the argument (Anderson, 2009).

Collaborative goal-setting can ensure the client's buy-in and a sense of ownership. Proposing a collaborative approach to set sustainability goals that align with the company's strategic objectives can foster a cooperative relationship. Suggesting pilot projects to test the feasibility and benefits of sustainable practices can provide tangible results and build confidence in broader implementation (Mang & Haggard, 2016).

Approaching the topic of sustainability with a conservative or capitalist client requires a focus on financial benefits, risk management, and strategic advantage. These practices can align with the client's self-interest and business goals by framing sustainability as a pathway to cost savings, market differentiation, regulatory compliance, and long-term viability. Engaging in a data-driven, collaborative dialogue will further reinforce the practical and profitable aspects of adopting sustainable practices (Anderson, 2009; McDonough, 2005; Mang & Haggard, 2016).

Part 2: Research and analyze the industry of your hypothetical producer/client. Identify equilibrium points or renewable ways to improve their practices. Write up an evaluation of their socio-industrial metabolism (identifying the raw materials and main

components of their product-value chain). Conclude your argument to the producer/client with a list of recommendations for increased sustainability in their industry.

Let's take a moment to consider the conflicting priorities and ethical dilemmas involved in choosing financial gain over environmental and social well-being. As I write this on my laptop with a cobalt-containing battery that I purchased because it was cheaper, I realize that I am part of the contradiction I am talking about. Many of us find ourselves in this position within the capitalist system. This is particularly evident in the cobalt industry, which is crucial for producing batteries used in electric vehicles and electronic devices. This industry faces significant environmental and social challenges, such as land degradation, water pollution, and violations of labor rights. By closely examining the negative effects of capitalist practices in this industry, we can highlight the urgent need to reassess our priorities and adopt sustainable measures that prioritize environmental and social well-being over financial gains.

The socio-industrial metabolism of the cobalt industry involves several stages, from mining and extraction to refining and distribution. The primary raw material, cobalt ore, is extracted from the earth using energy-intensive methods, often resulting in significant environmental impact. Key components of the product-value chain include mining equipment, labor, water for processing, and energy for refining. Waste management is a critical issue, as mining generates substantial tailings and pollutants that must be managed to prevent environmental degradation (Barakos, 2022).

Adopting sustainable practices in cobalt mining can mitigate these impacts and yield financial benefits. For instance, employing more efficient extraction technologies can reduce energy consumption and operational costs. Recycling and reusing water within the processing cycle can minimize waste and lower water usage expenses. Additionally, investing in renewable energy sources, such as solar or wind power, for mining operations can significantly reduce greenhouse gas emissions and potentially qualify the company for tax incentives and subsidies aimed at promoting green energy (Ali et al., 2017).

To enhance sustainability, I recommend the following steps for the cobalt mining industry: First, implement closed-loop water systems to recycle and reuse water in mining processes, reducing water consumption and minimizing pollution. Second, transition to renewable energy sources for operational power needs, thereby reducing carbon emissions and operational costs. Third, invest in advanced extraction technologies that maximize yield and minimize environmental damage. Fourth, establish transparent supply chain practices to ensure ethical labor standards and improve market trust. Finally, engage in community development initiatives to foster positive relationships and secure social license to operate. These steps not only contribute to environmental and social responsibility but also position the company favorably in an increasingly sustainability-conscious market.

Ali, S. H., Giurco, D., Arndt, N., Nickless, E., Brown, G., Demetriades, A., Durrheim, R., Enriquez, M. A., Kinnaird, J., & Littleboy, A. (2017). Mineral supply for sustainable development requires resource governance. *Nature*, 543(7645), 367-372. doi:10.1038/nature213372.

Anderson, R. (Director). (n.d.). Ray Anderson: The business logic of sustainability | TED Talk. Retrieved May 31, 2024, from https://www.ted.com/talks/ray_anderson_the_business_logic_of_sustainability

Barakos, G. (2022). Sustainable mining of critical minerals and metals around the world: Bottlenecks and opportunities. *International Journal of Mining, Reclamation and Environment*, 36, 605-620. doi:10.1080/17480930.2022.2143790

Mang, P., & Haggard, B. (2016). Regenerative development and design: A framework for

evolving sustainability. Wiley. \r\nMcDonough, W. (Director). (2005, February). William McDonough: Cradle to cradle design | TED Talk.

https://www.ted.com/talks/william_mcdonough_cradle_to_cradle_design?language=bo,
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Impact\n# <https://www.youtube.com/watch/cg4Jlg0IVHg>\n\n00:00:00.030 Are you a social
or environmental purpose\n00:00:00.140 organisation wanting to create a long-
term\n00:00:00.04.140 change with your activities and resources? Are\n00:00:00.580 you
being required to report on your impact but\n00:00:00.08.580 aren't sure
where to start? Hey everyone.\n00:00:00.15.600 My name is Chris Gaines, lead trainer
at SoPact\n00:00:00.20.580 and if you are a non-profit social
enterprise,\n00:00:00.24.030 accelerator or impact fund\n00:00:00.29.070 wanting to build
an effective\n00:00:00.34.350 impact strategy, you're in the right
place. Currently, the two most accepted and widespread\n00:00:00.39.810 frameworks to document your impact measurement and\n00:00:00.44.310 management strategy are theory
of change and the\n00:00:00.48.750 five dimensions of impact by the impact
management\n00:00:00.54.360 project. Today's video will focus on how to
define\n00:00:00.59.280 your organisation's theory of change.
The\n00:00:01:03.990 theory of change is the foundation for any\n00:00:01:09.090 mission
driven initiative working on solving the\n00:00:01:14.040 globe's most pressing social and
environmental\n00:00:01:18.390 issues. Sometimes referred to as TOC,
the\n00:00:01:23.040 theory of change documents the impact that\n00:00:01:28.320 your
organisation is seeking to achieve as well as\n00:00:01:33.600 all the intermediate steps to make
sure that your\n00:00:01:39.090 activities and resources are well aligned
with\n00:00:01:40.000 said change. The TOC should be defined before\n00:00:01:45.000 starting any new initiative or project and needs
00:00:01:50.000 to be revised periodically as
your initiative\n00:00:01:55.000 evolves. In our last video, we get
insights\n00:00:02:00.000 into the impact strategy. check the link in
the\n00:00:02:05.000 description below. You can also check out
volume\n00:00:02:10.000 one of our actionable impact management ebook\n00:00:02:15.000 called
"#x27;Groundwork"#x27; to learn how your mission is\n00:00:02:20.000 connected to your
theory of change. This video\n00:00:02:25.000 will help you make your impact
strategy actionable\n00:00:02:30.000 through the theory of change framework and in
the\n00:00:02:35.000 future we will also discuss the second most
common\n00:00:02:40.000 impact strategy framework Five dimensions of\n00:00:02:45.000 impact by the impact management project. We will\n00:00:02:50.000 also go in-depth into impact
metrics election data\n00:00:02:55.000 collection strategy and impact
reporting. So don't forget to smash that like button, subscribe

and click that notification bell, so you don't miss any of the upcoming concert that we have planned for you. Without further adieu, let's jump into the foundation of an effective impact measurement and management strategy, Theory of change. Let's start by discussing what makes the theory of change such a fundamental step. All of the operational decisions around what outcome data to collect, assess and analyse as well as the changes that need to be made to improve the effectiveness of your intervention, all depend on your theory of change. The key value of this framework is that it fosters accountability and awareness about the potential challenges that your organisation might face while pursuing its mission. Now as mentioned before, the theory of change ideally needs to be defined before starting your initiative, project or program. These initiatives might have a broad scope such as higher education, health and wellness or Financial Inclusion or they might have a narrow scope such as job readiness, maternal health or housing loans. Whatever program structure you decide to use, make sure that it's aligned to your mission statement and that you're not over complicating it. Even if you work with partner organisations across a wide spectrum of issue areas, stick to the outcomes that are a significant part of the scope of your organisation. Now we're ready to create a sample theory of change for an organisation called America Works with the program skills development. We will start from the desired impact and work our way backwards to the resources we're putting into our programs to make this impact or change happen.

n00:03:08.200 Step 1: Impact. The impact is the systemic change that you expect to see in the long term. Impact usually takes a few years to happen, which makes it difficult to measure but it does give us a great foundation to define the outcomes which are within our reach to influence and measure. Step 2: Outcomes. Outcomes are the intended and unintended changes that your stakeholders are experiencing or might experience with your intervention. In other words, outcomes are the broader benefits we work to achieve. In our skills development example, one outcome could be increasing job placement. How do we know that we're increasing job placement? By keeping an eye on the number of people placed and retained after their on-boarding training. A well-designed theory of change should include long-term, midterm and short-term outcomes. As you demonstrate clear improvement in your outcomes, you are more likely to get other players such as government or public and private partners to step in and to help you scale your mission. Good outcome measurement requires designing a stakeholder survey that includes baseline, mid line and exit line results.

n00:04:12.940 Step 3: Outputs. The outputs are the immediate results of our

activities or products and they are necessary for achieving the outcomes. Think of them as positive indicators that the outcomes are on track. As per our skills development example, one output could be the increase in the number of people graduating from a business training. In this case we are assuming that as more and more people go through a quality marketable training, there is a greater possibility of an increase in successful job placements. To dig deeper, collecting some demographic data along with the service data can help to draw useful connections.

Step 4: Activities In this step, we answer the question what activities need to take place for each output to happen. Providing people with high-quality training is one of the activities directly aligned with our sample output and outcome. Along with quality skill building training, an activity can also include resume preparation or interview preparation. All of these increase the number of successful placement possibilities.

Step 5: Inputs Inputs refer to the resources or investment needed to ensure that the activities take place. According to our example, we need quality course materials, skilled trainers, a physical venue or online host, investment and more. So to recap, Number one, the five components of a theory of change are inputs, activities, outputs, outcomes and impact. Secondly, the TOC needs to be aligned to your initiative project or program and stated mission. Thirdly, the most important components to monitor are the outputs and outcomes. So make sure to define relevant metrics and track results over time. Fourth, everywhere possible we should include stakeholder data such as demographics and surveys to capture their feedback. Finally, it's important to highlight that implementing an impact measurement and management strategy requires some change management. Here are some quick tips to ensure success throughout this process. Involve your key stakeholders. A stakeholder is any person benefitted or affected by your activities. Communicate your intent to implement or improve your impact measurement and management strategy. In the beginning, this might be done through information sessions open to anyone interested in learning more about the new impact measurement process. Remember that the desired outcomes motivate people. Be sure to expose the need for change to the whole organisation and clearly describe how the change will benefit each area of the organisation. Here at SoPact, we understand that organisations just like yours, face challenges with impact measurement and management on a daily basis. So we've developed a platform that streamlines the process, starting by documenting your theory of change. Well, thanks for watching everyone. I hope you learned something new and I'm curious to hear what challenges you and your organisation are currently facing when it comes to defining your theory of

change. Drop a comment down below and let's get the discussion started\n00a0\n00a0\n00:07:01.620 and don't forget to download your FREE copy of our actionable impact management ebook. All links\n00a0\n00a0\n00:07:07.110 will be in the description below. Lastly, don't forget to Like and subscribe to our channel so\n00a0\n00a0\n00:07:11.340 you never miss an upload. And until then, this has been Chris Gaines. I'll see you in the next one.\n", "title": "tactiq-free-transcript-cg4Jlg0IVHg.txt", "tether_id": null}, "status": "finished_successfully", "end_turn": null, "weight": 1.0, "metadata": {"command": "context_stuff", "is_visually_hidden_from_conversation": true, "message_type": null, "model_slug": "gpt-4o", "default_model_slug": "gpt-4", "parent_id": "a3ed6d66-4fe4-475e-b910-3d343eedf98b", "request_id": "88d266f68ac94c4f-MXP", "timestamp": "absolute"}, "recipient": "all", "channel": null}, "parent": "a3ed6d66-4fe4-475e-b910-3d343eedf98b", "children": ["70ef4122-df02-4074-8d9e-9541eb3a9b58"]], "70ef4122-df02-4074-8d9e-9541eb3a9b58": {"id": "70ef4122-df02-4074-8d9e-9541eb3a9b58", "message": {"id": "70ef4122-df02-4074-8d9e-9541eb3a9b58", "author": {"role": "tool", "name": "myfiles_browser", "metadata": {}}, "create_time": 1717278472.130544, "update_time": null, "content": {"content_type": "tether_quote", "url": "file-3pmThBLMuGEBbv7KluIf2t6", "domain": "GW ASSIGNMENT 1.docx", "text": "Global Happiness Initiative Foundation\n\nAlexis Lindsay\n\nClaremont Lincoln University\n\nMSI 5323-01: Grant Writing and Sustainable Fundraising\n\nProfessor Javier Lopez\n\nMay 19 2024\n\nIntroduction\n\nThe Global Happiness Initiative Foundation stands out with its unique approach. We believe that an individual's happiness is not just a personal achievement but a societal asset. A content person is a beacon of positivity capable of enriching their community. When we collectively strive for happiness we also invest in our well-being and foster a society free from the shackles of discontent. These ideas reflect our vision where individual happiness is the cornerstone of societal harmony.\n\nAs the renowned author John Donne (2010) famously proclaimed \u201cNo man is an island.\u201d This sentiment holds true in our pursuit of societal greatness. Achieving this requires unity and collaboration. However when an individual is grappling with internal conflicts such as mental health struggles physical ailments and a general decline in well-being overcoming these challenges alone becomes an insurmountable task. Wellness is not just a personal concern but a societal issue that impacts us all.\n\nIn addition to discussing wellness it is necessary also to address the role of education. If wellness is the foundation education is the next step where individuals acquire the necessary skills to lead purposeful dignified and joyful lives. Nobody is inherently equipped with the knowledge to improve their surroundings; it must be learned. Therefore education holds equal significance in the pursuit of wellness. As one begins to grasp the world's order concepts like the principles of space and time the philosophies of Aristotle the mathematics of our universe and the evocative poetry of Yates one starts to perceive the world in a new nuanced way. Therefore to truly understand oneself it is sometimes necessary to first understand one's environment. Thus in parallel with well-being education holds great importance.\n\nAs individuals gain knowledge about the world around them they instinctively desire to explore it further engaging with it through the senses of touch taste and sight. Rather than solely studying Mozart and reading musical notations experiencing the music in person is essential. Therefore travel is an invaluable gateway to becoming a well-rounded individual capable of positively contributing to society.\n\nThe Global Happiness Initiative Foundation is committed to creating a better world. By leveraging the support of donor investors the foundation

aims to empower individuals to pursue their own happiness by providing necessary tools. Our efforts involve establishing partnerships with local government bodies and healthcare providers to ensure easy access to government services and healthcare and make travel accessible to all who desire it. These initiatives will lay the foundation for our long-term vision of a globally interconnected and joyful society.

Purpose

The primary purpose of the Global Happiness Initiative Foundation is to enhance the overall well-being and happiness of individuals globally through increased access to essential life-enhancing services. The Global Happiness Initiative Foundation is committed to providing the necessary tools for individuals to pursue their happiness. Our starting point is ensuring access to healthcare and mental health services as a fundamental human right and a crucial component in our efforts to build a better world. We also aim to utilize well-being travel cultural immersion and education resources to empower individuals to gain self-awareness understand others and collectively achieve holistic happiness.

Goals

The Global Happiness Initiative Foundation is committed to enhancing the global quality of life through two strategic goals.

Long-term Goal: Increase Access to Key Well-being Services

Our long-term goal is to significantly increase access to key well-being services globally with our efforts first being localized in the United States and Italy. By doing so we aim to improve the quality of life and foster sustained happiness in diverse communities. This goal will not only benefit the communities we serve but also provide donor-investors with the satisfaction of knowing that their support is making a tangible difference in people's lives. The impact of these programs will be measured by tracking the number of individuals accessing these services the improvement in health and education outcomes and overall satisfaction rates among participants reflecting the direct benefits of our initiatives.

Short-term Goal: Establish and Strengthen Partnerships

Partnerships are at the heart of our strategy. Our short-term goal is to establish and strengthen partnerships with local and international public and private organizations. These partnerships are not just beneficial; they are crucial for enhancing our capability to deliver critical services effectively and efficiently. By collaborating with organizations with established infrastructures and expertise in our target regions we can leverage their strengths to better serve the communities' needs. Formalizing at least five significant partnerships within the first six months will be vital to achieving this goal.

Both goals complement existing efforts in the target communities rather than duplicate them ensuring that our interventions add value and create a measurable impact. Through these focused efforts the Global Happiness Initiative Foundation seeks to build a foundation for long-term social change that contributes to the well-being of individuals worldwide.

Objectives

The Global Happiness Initiative Foundation (GHIF) has set ambitious yet achievable objectives to ensure a broad and lasting impact on global well-being.

Educational Expansion

Our first objective focuses on education expansion. Within the first year GHIF plans to launch educational programs in at least two countries aiming to reach over 5000 individuals. These programs will be developed to address local educational gaps better equip youths with functional skills and promote holistic learning experiences. Evidence shows that educational programs can significantly enhance psychological well-being by increasing self-efficacy social support and overall life satisfaction (Ross & Willigen 1997). Moreover education has been linked to improved health outcomes and better mental health with increased years of education correlating with lower rates of depression and anxiety (Kondirolli & Sunder 2022). The success of these programs will be measured by the number of programs successfully

launched the total number of participants enrolled and participant feedback on program effectiveness.

Healthcare Partnerships

Simultaneously GHIF aims to establish healthcare partnerships to enhance access to medical and mental health services. By the end of the first six months we will secure partnerships with at least five major healthcare providers. These collaborations will focus on providing comprehensive health services emphasizing preventive care and mental health which are crucial for improving individual well-being. Studies have shown that partnerships between educational institutions and healthcare providers can significantly improve health outcomes particularly in preventive care and mental health services (Ross & Wu 1995). The effectiveness of these partnerships will be assessed through the number of agreements signed the range of services provided and feedback from service users regarding the accessibility and quality of care.

Wellness Travel Model

Lastly our third objective is to develop a wellness travel model which will be designed developed and ready for implementation within the first eighteen months. This model will provide frameworks for wellness-oriented travel experiences promoting mental and physical health benefits through carefully crafted travel packages. Wellness programs embedded in educational and travel contexts have shown positive impacts on well-being reducing stress and improving mental health (Young et al. 2020). The model's success will be evaluated based on participant satisfaction measured through surveys and the repeat engagement rate indicating the model's appeal and effectiveness in enhancing participants' well-being.

Organizational Capacity

Foundation Structure and Management Capability:

The Global Happiness Initiative Foundation (GHIF) is designed to be a robust organization capable of managing large-scale projects and substantial grants. At its inception GHIF will establish a governance structure with a board of directors comprising education healthcare mental health and non-profit management experts. This board will provide strategic oversight and ensure all activities align with our mission and objectives.

Founding Team Expertise:

The founding team of GHIF will include highly qualified professionals selected for their extensive experience in project management international development healthcare and educational programming. Our recruitment strategy focuses on identifying individuals with a proven track record such as a Project Director with significant experience in managing and scaling community health programs an Education Specialist renowned for developing effective curricula in diverse cultural settings and a Mental Health Advocate with a strong background in leading global mental wellness initiatives. This planned assembly of expertise ensures a comprehensive and skilled approach to achieving the foundation's objectives.

Project Management Systems:

GHIF will implement rigorous project management methodologies to oversee all foundation activities. We will utilize established frameworks such as the Project Management Body of Knowledge (PMBOK) guidelines to plan execute monitor and close projects. Additionally GHIF will adopt modern project management tools for real-time tracking and reporting facilitating transparent and efficient management of the grant funds.

Preparatory Actions for Grant Management:

Prior to receiving the grant GHIF will:

- Formulate detailed project plans including timelines budgets and resource allocation.
- Establish financial management policies tailored to ensure accountability and prudent use of funds.
- Initiate discussions with potential partners and stakeholders to build a support network for immediate project launch upon funding.
- Demonstrating Capacity through Strategic Intentions:

While GHIF is a nascent organization our strategic planning reflects a clear and actionable roadmap for immediate impact upon funding. The foundation's goals are backed by a commitment to leverage the diverse skills

of its team and the strategic insights of its board to establish a high-performing organization. GHIF's initial actions and detailed project preparations demonstrate our readiness and capability to effectively manage and utilize the grant to achieve significant social impact.

Cross-Sector Collaboration

The Global Happiness Initiative Foundation (GHIF) is committed to developing localized high-impact programs that serve as models for global implementation. To achieve this GHIF emphasizes cross-sector collaboration mainly focusing on strategic partnerships in Italy and the United States. These collaborations are designed to leverage regional strengths and address specific local needs ensuring the adaptability and effectiveness of our well-being services.

Localized Educational Partnerships

GHIF will collaborate with leading educational institutions in Italy and the United States to integrate well-being practices into educational curricula. This initiative will focus on regions with significant disparities in educational outcomes providing targeted interventions that are culturally and contextually relevant. Research indicates that collaborative learning environments and educational partnerships can significantly enhance student outcomes and well-being (Kilgo et al. 2015). Success in these partnerships will be evaluated based on academic improvements student well-being metrics and the scalability of the programs to other regions.

Healthcare Alliances

GHIF plans to partner with healthcare organizations in Italy and the United States to increase access to quality health services. These partnerships will focus on integrating mental health services with primary care a critical need in both countries according to local health reports. Studies have shown cross-sector healthcare collaborations can improve health outcomes particularly when mental health services are integrated with primary care (Randall et al. 2023). By working with local health providers and community organizations these initiatives aim to create sustainable health improvement models suitable for global replication.

Public-Private Partnerships

GHIF will seek partnerships with local government bodies and private sectors in Italy and the United States to support infrastructure development vital to program delivery. These partnerships will help facilitate the creation of community wellness centers which will serve as hubs for education healthcare and community activities. Effective public-private partnerships have been shown to significantly enhance community health and well-being (Ovseiko et al. 2014). The effectiveness of these centers will be measured through community engagement rates and the overall improvement in community health and educational outcomes.

Community Engagement

Integral to our strategy is the direct involvement of local communities in Italy and the United States in the planning and implementation phases. GHIF believes that community input is essential to tailoring programs that genuinely reflect and meet local needs. Feedback mechanisms and community advisory boards will be established to monitor the programs' impacts and guide iterative improvements as evidence proves that community involvement is crucial for the success and sustainability of public health programs (Mattessich & Rausch 2014).

Program Plan

Introduction to Program Strategy

The Global Happiness Initiative Foundation (GHIF) is committed to addressing critical needs in communities across the United States and Italy. We implement multifaceted strategies that enhance individual well-being and community health specifically designed to complement rather than duplicate existing services. Our comprehensive approach leverages local strengths and targets specific challenges through innovative and sustainable solutions.

Integration with Government and Healthcare Services

Our initiative targets significant gaps in access to healthcare and government support services. These gaps have been identified through extensive community outreach and

stakeholder engagement underscoring a pressing need for improved service accessibility and quality. To address these challenges GHIF plans to forge strategic alliances with local health departments and social service agencies creating a referral network that simplifies the process for individuals to access the services they need. This network aims to increase the efficiency and responsiveness of health and social care systems.

Partnership development is crucial for the success of our healthcare integration strategy. By collaborating with local health authorities and service providers we aim to establish robust partnerships that facilitate streamlined access to healthcare and support services. These partnerships will be foundational in building a comprehensive referral system that enhances service delivery and meets the specific needs of the communities we serve.

In addition to building partnerships GHIF will engage in advocacy and policy work to enhance healthcare delivery. We will work closely with policymakers to advocate for regulations and policies prioritizing the health and well-being of underrepresented communities. Our focus on advocacy aims to influence policy changes that improve healthcare accessibility and address systemic barriers in service delivery.

Training community health workers is another critical component of our strategy. GHIF will implement comprehensive training programs designed to enhance the capabilities of health workers in assisting individuals effectively. These programs will focus on developing empathy technical skills and a deep understanding of the healthcare system. This will ensure that community health workers are well-equipped to support individuals in navigating health and social services.

Wellness Travel Model

GHIF recognizes the therapeutic potential of travel in promoting mental and physical well-being. To harness this potential we are developing a Wellness Travel Model that integrates health benefits with cultural and educational experiences. This innovative approach to wellness extends beyond traditional health settings and includes travel packages that feature guided meditations wellness workshops and cultural tours. Each package is designed in collaboration with travel experts and cultural institutions to ensure that it offers genuine health benefits and facilitates cultural appreciation.

Community-based involvement is integral to the design and execution of our Wellness Travel Model. We engage local communities in developing travel experiences to ensure they are culturally respectful and enriching for visitors and hosts. This engagement helps create authentic travel experiences sensitive to the host communities'; cultural dynamics and provides meaningful interactions that benefit all participants.

Holistic Educational Access

GHIF is also dedicated to transforming educational access by integrating a curriculum that includes advanced technology training and comprehensive arts education. This holistic approach aims to bridge the gap in technological and creative skills preparing individuals for the demands of the modern workforce and personal development. Our curriculum includes coding robotics visual arts and music training and is designed to be integrated into school systems and community learning centers.

GHIF will establish ongoing learning opportunities through workshops and seminars open to all age groups to complement our formal education initiatives. These initiatives focus on continuous skill development and personal growth promoting lifelong learning and adaptability. By offering workshops and seminars that cover a range of skills and artistic disciplines we aim to foster an environment of continuous learning and creative exploration.

Timeline and Evaluation

The timeline for these initiatives is strategically set to ensure a phased implementation. By the end of the second quarter of 2025 GHIF will establish the initial partnerships necessary for the referral systems and develop training programs for community health workers. Following

the establishment of partnerships early in the same year the Wellness Travel Packages are expected to be launched by the third quarter of 2025. Educational program rollouts will begin in the fourth quarter of 2024 and be fully implemented across targeted regions by the second quarter of 2025. Each element of the program plan is designed to measure specific outcomes related to access satisfaction and educational attainment ensuring that GHIF's interventions create measurable and sustainable impacts in the communities served. This strategic planning demonstrates GHIF's capability to manage a large grant effectively and fulfill its mission of building a foundation for long-term social change that contributes significantly to global well-being.

Deliverables

Activities

Due Date

Expected Challenges

Set up Referral Systems

Establish partnerships develop training for staff

Q2 2025

Regulatory hurdles securing partner cooperation

Launch Wellness Travel Packages

Design packages negotiate with travel agencies

Q3 2025

Logistics coordination ensuring accessibility and inclusion

Rollout Educational Programs

Develop curricula and integrate into schools

Q4 2025

Adaptation to local educational standards funding

Public Workshops and Seminars

Plan and implement workshops and lifelong learning seminars

Q1 2026

Community engagement sustaining interest over time

References

Cunningham W. E. Hays R. D. Ettl M. K. Dixon W. J. Liu R. C.-C. Beck C. K. & Shapiro M. F. (1998). The prospective effect of access to medical care on health-related quality-of-life outcomes in patients with symptomatic HIV disease. *Medical Care* 36(3) 295-306.

Donne J. (2010). No man is an island. *Am Soc Neuroradiology*.

Gu D. Zhang Z. & Zeng Y. (2009). Access to healthcare services makes a difference in healthy longevity among older Chinese adults. *Social Science & Medicine* 68(2) 210-219.

Kilgo C. A. Ezell Sheets J. K. & Pascarella E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Higher Education* 69 509-525.

Kondirolli F. & Sunder N. (2022). Mental health effects of education. *Health Economics* 31 22-39.

Mattessich P. W. & Rausch E. J. (2014). Cross-sector collaboration to improve community health: A view of the current landscape. *Health Affairs* 33(11) 1968-1974.

Ovseiko P. V. Sullivan C. Powell S. C. Davies S. M. & Buchan A. M. (2014). Implementation of collaborative governance in cross-sector innovation and education networks: Evidence from the National Health Service in England. *BMC Health Services Research* 14 1-14.

Randall S. White D. & Dennis S. (2023). A collaborative primary health care model for children and young people in rural Australia: Explorations of cross-sectoral leader action. *Australian Journal of Primary Health*.

Ross C. E. & Van Willigen M. (1997). Education and the subjective quality of life. *Journal of Health and Social Behavior* 275-297.

Ross C. E. & Wu C. (1995). The links between education and health. *American Sociological Review* 719-745.

Seid M. Varni J. W. Cummings L. & Schonlau M. (2006). The impact of realized access to care on health-related quality of life: A two-year prospective cohort study of children in the California State Children's Health Insurance Program. *The Journal of Pediatrics* 149(3) 354-361.

Young T. Macinnes S. Jarden A. & Colla R. (2022). The impact of a wellbeing program imbedded in university classes: The importance of valuing happiness baseline wellbeing and practice frequency. *Studies in Higher Education* 47(4) 751-770.

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the results for development\n\n00:00:10.920 Institute and over the next
several\n\n00:00:13.230 minutes I'm going to answer some common\n\n00:00:15.299
questions about theories of change for\n\n00:00:17.699 think tanks that are just
starting to\n\n00:00:19.410 think about using this helpful tool in\n\n00:00:22.279
addition I will be providing some\n\n00:00:24.779 resources and first steps for
those\n\n00:00:27.000 interested in developing a first draft\n\n00:00:29.310 of the theory
of change listeners who\n\n00:00:32.969 have experience designing theories
of\n\n00:00:35.670 change may find this a useful reminder\n\n00:00:37.730 for those who
want more detailed\n\n00:00:40.230 information about assumptions
monitoring\n\n00:00:43.230 and evaluation in theories of change my\n\n00:00:46.289
colleague Andrew Clapton from comms\n\n00:00:48.480 consult will be posting podcasts in
the\n\n00:00:51.030 next few days that share more for those\n\n00:00:53.610 seeking to
improve existing theories of\n\n00:00:55.949 change\n\n00:01:00.359 if you are new to
using theories of\n\n00:01:03.600 change one of the first questions you\n\n00:01:05.790
may have is what is a theory of change\n\n00:01:08.420 while there are many definitions
most\n\n00:01:11.610 people agree that a theory of change\n\n00:01:13.290 explains the
pathway through which a\n\n00:01:16.080 specific result or goal can be
achieved\n\n00:01:19.009 theories of change can be extremely\n\n00:01:21.360 detailed or
they can be fairly simple\n\n00:01:24.299 however most theories of change have
at\n\n00:01:26.640 least three major components and these\n\n00:01:29.100 are things that
we'll talk about over\n\n00:01:30.689 the course of the presentation first
a\n\n00:01:34.049 theory of change defines the result that\n\n00:01:36.810 an organization
is trying to achieve\n\n00:01:39.709 second it defines a set of outcomes
that\n\n00:01:42.869 an organization has control over and\n\n00:01:45.450 believes will
help to achieve the result\n\n00:01:49.369 most theories of change define
multiple\n\n00:01:52.229 activities to address to address any\n\n00:01:54.270 single
intended result the third\n\n00:01:57.780 component of the theory of change
is\n\n00:01:59.610 information regarding how the activities\n\n00:02:02.399 should lead to
the intended result some\n\n00:02:06.030 organizations call these
assumptions\n\n00:02:08.190 which is a term that we'll use while\n\n00:02:10.560
others think of these step steps as\n\n00:02:12.599 intermediary outcomes a simple
theory of\n\n00:02:20.519 change often takes the form of a linear\n\n00:02:22.620 pathway
such as the one in the\n\n00:02:24.510 presentation with results defined on
one\n\n00:02:27.569 side and activities on the other and the\n\n00:02:33.599 assumptions
of how or the how are in the\n\n00:02:37.260 middle defining a pathway
from\n\n00:02:38.730 activities to results in reality the\n\n00:02:45.000 activities and
assumptions in a theory\n\n00:02:47.099 of change are often not linear in
the\n\n00:02:50.849 slide this is an example of a more\n\n00:02:53.040 realistic theory of

change from an organization called Wazza which is based in Tanzania a few things stand out about this theory of change first there are multiple results such as knowledge of what works and healthy educated and confident people and these results reinforce each other second activities may lead to many different intermediary steps at the same time so you can see this from the different arrows that are going from a single activity to multiple assumptions or outcomes while real pathways to change are very complex it may be helpful to start with a simpler theory of change something that you will have an opportunity to do later in this presentation many organizations are introduced to a theory of change when a project or donor asks them to produce one however theories of change can be extremely useful tools for think tanks even when they are not a required part of a project now this is true for a number of reasons first theories of change can help you to articulate things that you need to know for a project or strategy to work most organizations think about these things anyway but the theories of change provide a really useful structure to think through them to conduct or to develop a theory of change you'll need to define your results what is it that you're trying to achieve you'll need to define activities and strategies looking over the course the project or initiative what are all the things that you need to do for results we achieved you'll need to define assumptions what are the other things that need to happen the things that are outside of your control in order for the results to be achieved and are these assumptions realistic finally a theory of change also often requires you to consider context what are the exhaustion is factors that may guide decisions regarding activities assumptions or even results for example a country that has a single-party rule with no political competition may undertake very different strategies or activities for engaging policy makers than one that does not have political competition even if this is not defined explicitly in the theory of change it's something to consider as you're defining the activities and strategies in addition to helping you define your project a theory of change is also useful insofar as it is a living document many organizations make the mistake of creating a theory of change and then never revisiting it as you begin leading a project and gathering more evidence out context assumptions and activities it's useful to consider making changes in the project by reviewing your theory of change what are the new assumptions or the assumptions that you had originally defined but are now proving to not be valid what does that mean for your activities when we discuss theories of change we often talk about projects level theories of change however organizations

can also have theories of change for their larger institutional strategies and goals the basic structure and process for defining project and organization level theories of change is the same the main differences are in terms of magnitude and complexity for an organization theory of change oftentimes the types of results that are being defined are larger scale and longer term for example increasing use of evidence of policy making organization level theories of change are often more complex than those at the project's level and they cover a full set of activities for an organization on the other hand project level theories of change defined generally more specific and concrete results for example changing a specific policy they are often simpler than organization theories of change and they only cover activities for a single project the important thing to realize is you're defining a theory of change is that for any goal you have a result you want to achieve it's possible or should be possible to design a theory of change as discussed earlier in the presentation there are three major components to a theory of change although different scholars may have different terms for these components let's take an example to highlight the different components of a pretty simple theory of change in this case one that focuses on Freedom of Information legislation the first part of the theory of change is the result or goal in this case the organization has set a policy goal of the government passing a free dove Freedom of Information Law for the country it is worth noting a few things about this goal first it is not directly in control in the control of the think-tank while the organization can and plans to conduct activities to contribute to this goal they cannot just decide to make this happen it's a result that will happen further down the road second there's only a single result defined here and the theory of change branches out from there while you can define more than one result for your theory of change it's often easiest to start with a single result third it is helpful to think of results as you might think of goals or objectives the smarter you can make them the better a smart result should be specific it should be measurable achievable realistic and time-bound you can probably look at this result and think of ways to make the result in this particular example smarter the second part of the theory of change is the assumptions or intermediate steps these are steps that must happen for the result to be achieved but still things that are not in the direct control of the think tank in this example the think tank defines two things that need to happen in order for the government to pass a Freedom of Information Law the first is that the government must know that their consent constituents want this law this assumes that key

officials\n00:09:37.490 are responsive to constituent priorities\n00:09:40.390 the second assumption is that the\n00:09:42.890 government sees evidence that similar\n00:09:45.680 laws have worked in other countries\n00:09:48.160 there is normally more than just one\n00:09:50.870 assumption in a theory of change you may\n00:09:53.270 in fact be able to think of other\n00:09:55.100 assumptions that the think tank should\n00:09:57.020 have built into this particular example\n00:09:59.480 of a theory of change there may also be\n00:10:02.540 different layers or levels of\n00:10:04.280 assumptions for example the assumption\n00:10:07.310 that the government knows that their\n00:10:09.110 constituents want a Freedom of\n00:10:11.420 Information law may be dependent on the\n00:10:14.990 assumptions that the constituents\n00:10:17.750 actually want the act and that citizens\n00:10:20.300 feel like they can voice this priority\n00:10:22.040 in each case assumptions can be matched\n00:10:25.640 with activities these are direct things\n00:10:28.730 that the think-tank can undertake to\n00:10:30.860 make sure that the assumptions or\n00:10:32.510 intermediate steps hold true it may be\n00:10:36.680 helpful to take a moment and think of\n00:10:38.540 other assumptions that would need to be\n00:10:40.760 in place in your country for this\n00:10:42.530 example\n00:10:51.460 after the assumptions or intermediate\n00:10:54.260 steps a theory of change should outline\n00:10:56.300 the activities that the organization\n00:10:58.430 will undertake these should be linked to\n00:11:01.100 the assumptions and should be designed\n00:11:02.810 directly to try to address them in the\n00:11:05.690 example you can see that the\n00:11:07.190 organization will undertake two\n00:11:09.140 activities to ensure the government\n00:11:11.180 knows its constituents want Freedom of\n00:11:13.640 Information acts it will conduct a\n00:11:16.100 perception survey to assess demand for\n00:11:18.529 freedom of information laws and it will\n00:11:21.260 conduct individual meetings with the\n00:11:23.330 executive officers to share the findings\n00:11:26.650 similarly the organization defines two\n00:11:29.570 activities to ensure that the government\n00:11:31.670 sees evidence that FOIA has worked in\n00:11:33.710 other countries they will conduct a\n00:11:36.080 study reviewing freedom of freedom of\n00:11:38.120 information acts in other countries to\n00:11:40.460 collect evidence and they will hold an\n00:11:43.070 event\n00:11:43.510 launching findings at a key point in the\n00:11:46.250 policy-making cycle it is worth noting\n00:11:50.060 that the activities here are both\n00:11:51.560 research and PAC activities while you\n00:11:54.680 may do a theory of change that only\n00:11:56.570 includes one type of activity most\n00:11:59.450 results that a think tank seeks to\n00:12:01.370 achieve will include both research and\n00:12:03.170 pact because they are so tied together\n00:12:06.370 the theory of change often does not\n00:12:08.779 provide great detail on how activities\n00:12:11.450 will be carried out for example who the\n00:12:14.420 organization will partner with or the\n00:12:16.400 steps to complete the perception survey\n00:12:18.440 and analysis in this example however it\n00:12:22.010 may be helpful to refer back to the\n00:12:23.959 theory of change when designing these\n00:12:25.520 steps while context is not explicitly\n00:12:29.839 defined in this theory of change you can\n00:12:32.000 see how it works into the activities\n00:12:34.270 context can help you decide what\n00:12:36.440 activities are best suited for the\n00:12:38.180 environment in which you are working\n00:12:39.620 for example holding individual meetings\n00:12:42.320 with the executive versus holding a\n00:12:44.209 large launch event for the public\n00:12:46.570 there's no hard rule about the number of\n00:12:49.760 activities for each assumption and

you may be able to think of more activities that you would undertake in your own country to ensure that each of the assumptions in this example are met now that we've gone through one example the next obvious question is how do you actually go about creating a theory of change and this closely links to the components that we just discussed creating a good theory of change is quite challenging it often takes several iterations and as I mentioned earlier a good theory of change is a living document that changes with the project and as the context and assumptions may change but for those creating a theory of change for the first time there are three basic steps you can take and they actually start with the results not the activities this is a common mistake that organizations make when they're first starting a theory of change the first step is to start with the result defining what you are trying to achieve and again the smarter that you can make this result or goal the better and the more useful will be for your theory of change second working backwards you can define the assumptions that need to be true to achieve that to find results and again this is these assumptions can be layered and take place over several levels third and finally you can define the activities that your organization can undertake to ensure that the assumptions or intermediate outcomes hold theory of change or theories of change are not always simple and linear but in the process of starting to work with them it may be helpful to start by thinking about a more linear theory of change if you want to practice or want to try your own theory of change the best thing to do is to select a project and begin working through these steps select a project that you're familiar with and go through the steps outlined in the slide to finding the results assumptions and activities from there you can ask yourself if the theory makes sense are there assumptions you're missing or activities you need to add I want to encourage anyone who goes through this exercise to share the results and the theory of change that you develop with the art to a community or directly with me I would be happy to provide feedback either during the call on Friday or at another time finally a theory of change is only as useful as the amount that you actually use it many organizations create theories of change as a requirement to a donor or a partner and then never look at them again but a theory of change can be extremely useful if you make the effort to use it first when you're creating your initial theory of change make sure to ask for feedback you'll find that colleagues and partners and others may be able to help you identify assumptions that are unrealistic or other activities that you want to undertake second define a plan to monitor and evaluate

your theory of change this is something that we'll be discussing more in future podcasts and remember that you might not get there the first time if theory of change is really challenging to develop into design and the important thing is that when you realize that parts of your theory of change are not working you go back and you revise them similarly if you're monitoring or evaluating a project that you're working on and you find that one of the activities that you plan to undertake is not actually working use that evaluation or use that monitoring results to go back to your theory of change finally you can use the information that you get from your monitoring evaluation in two ways first you can build it into future work even though you're monitoring and evaluating around a particular theory of change some of the results from your evaluation may help you on future projects and second you can use this information to revise your theory of change remember that the best theory of change is a living document don't let it just sit on a shelf and collect dust so I want to thank you for taking the time to listen to this presentation I hope that you've learned a little bit more about why theories of change can be useful and how to create them yourself over the next two days my colleague Andrew we'll be posting two additional podcasts on defining assumptions and conducting monitoring and evaluation for theories of change these podcasts are useful for both beginners and for those who have done theories of change before if you have any questions please feel welcome to contact me and I wish you the best of luck as you begin working on theories of change

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mission and the target audience were determined, facilitated meetings and discussions were held with stakeholders to identify the assumptions, inputs, activities, outputs, outcomes, and outcome indicators. The long-term outcomes outlined in the final logic model are 2-fold: (1) improved health outcomes of patients served by PBRN community clinicians and (2) community clinicians are recognized leaders of quality research projects. The logic model proved useful in identifying stakeholder interests and dissemination activities as an area that required more attention in the PBRN. The logic model approach is a useful planning tool and project management resource that increases the probability that the PBRN mission will be successfully implemented. (J Am Board Fam Med 2011;24:576-582.)

Keywords: Evaluation, Logic Model, Practice-based Research

With the heightened emphasis on translational and comparative effectiveness research to improve patient outcomes, practice-based research networks (PBRNs) have an unprecedented opportunity to become effective laboratories to address high priority research questions. As PBRNs engage in more funded research, these research dollars come with increased accountability to demonstrate the effectiveness of the work conducted in PBRNs. Despite a significant growth in the number of PBRNs over the past 15 years, little is known about effective and useful methods of evaluating PBRNs. One method with significant potential for PBRN evaluation and planning is a logic model.

What Is a Logic Model? The logic model has proven to be a successful tool for program planning as well as implementation and performance management in numerous fields, including primary care. A logic model (see Figure 1) is defined as a graphical/textual representation of how a program is intended to work and links outcomes with processes and the theoretical assumptions of the program. It is a depiction of a program or project showing what the program or project will do and what it is to accomplish. It is a series of if-then relationships that, if implemented as intended, lead to the desired outcomes. Stated another way, it is a framework for describing the relationships between resources, activities and results as they related to a specific program or project goal. The logic model also helps to make underlying assumptions about the program or project explicit. It provides a common approach to integrating planning, implementation and evaluation.

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From the Department of Family and Community Medicine, University of Texas Health Science Center, San Antonio, Texas (HH, MLP); VERDICT Health Services Research Program, South Texas Veterans Health Care System, San Antonio, Texas (MLP); and Academic Center for Excellence in Teaching, San Antonio, Texas (RH).

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Conflict of interest: none.

Corresponding author: Holly Hayes, MSPH, 7703 Floyd Curl Drive, Mail Code: 7728, San Antonio, TX 78229 (E-mail: hayesh@uthscsa.edu).

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defines the key components of a logic model and what variables are included for each section.

Why Use a Logic Model? A logic model is an efficient tool that requires little resources other than personnel time. Because evaluation dollars are not usually set aside in PBRN budgets, the cost-efficiency of this framework

is\alternative. In addition, the process of developing\nthe logic model requires PBRN team members to\nwork together in a manner that has a side benefit of\nimproving team relationships and focus. A logic\nmodel can also provide much needed detail about\nhow resources and activities can be connected with\nthe desired results which helps with project man-\nagement, resource allocation, and strategic plan-\nning.²\u00A0\u00A0\u00A0 The process of developing the logic\nmodel also facilitates critical thinking through the\nprocess of planning and communicating network\nobjectives and outcomes. According to the Kellogg\nFoundation, the development of a logic model is a\nconscious process that creates an explicit under-\nstanding of the challenges ahead, the resources\navailable, and the timetable in which to hit the\ntarget.⁶ For more detailed information regarding\nlogic models, refer to the W.K. Kellogg Founda-\ntion Logic Model Development Guide.⁶

To date, there are no publications demonstrat-\ning how a logic model framework can be used for\nevaluation and program planning in a primary care\nPBRN. The purpose of this article is to describe\nthe development of a logic model and how the\nframework has been used in a primary care PBRN,\nthe South Texas Ambulatory Research Network\n(STARNet).

Setting and Context\nSTARNet was founded in 1992 \u00A0to conduct & dis-\nseminate practice-based research that results in new\nknowledge and improves the health of patients in South\nTexas. STARNet has 165 practitioners in 108\nprimary care practices. These are primarily small\ngroup practices or solo practitioners located\nthroughout south Texas\u00A0spanning a territory\nfrom the southernmost Mexico/Texas border to\nnorth central Austin, Texas. Over the years,\nSTARNet has published more than 20 peer-re-\nvied manuscripts of research findings from\nstudies conducted in member primary care prac-\ntice settings.¹⁵

Development of a Logic Model\nStep 1: Agree on the Mission and Target Audience\nThe STARNet Board of Directors had previously\nagreed that the primary goal of all STARNet proj-\nects is to improve the health of primary care pa-\ntients in South Texas. The board believed that to\nachieve this goal, STARNet clinicians and aca-\nn

Figure 1. Program/logic model framework.

Target Population	Underlying Assumptions	Resources/Challenges	Activities	Outputs	Outcomes	Whom does the program serve?	Who will benefit from the project?	Therapeutic assumptions	About how the program will work	Assumptions regarding:
			Participants	Staff	Environment					
			What resources does the program have available to achieve the program's activities?	Services/interventions provided to fulfill program goals and assist participants in reaching the outcomes	Products of a program's activities such as the number of patients treated, the number of services provided, the number of interventions per participant, etc.	Benefits that occur as a result of the activities, including short-term, intermediate and long-term outcomes.	Types of outcomes include changes in knowledge, attitude, behavior and or status.			

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<http://www.jabfm.org/> N/A B/Nboard F/nam M/ed: first published as 10.3122/jabfm.n.2011.05.110043 on 7 September 2011. Downloaded from <http://www.jabfm.org/> ndemic investigators (Target Audiences) were both\nequally critical for the success of the network. In-\nvestigators facilitate the research process and pur-\nsue grant opportunities for the overall sustainability\nof the network and STARNet clinicians are needed\nto frame and define the research questions that are\nrelevant to their daily practice and

assist in the interpretation of results.

Step 2: Identify and Describe Assumptions, Inputs, and Activities

After defining the mission and the target audience, the STARNet coordinator and evaluation specialist facilitated 10 meetings and discussions with key stakeholders over a 6-month period. Stakeholders at the meetings included STARNet Board of Directors who are full-time primary care clinicians in family and internal medicine, practice facilitators who visit clinics regularly and assist with change processes, and two STARNet directors with more than 10 years of experience with the Network and STARNet partners including the School of Public Health and the South Texas The file is too long and its contents have been truncated.

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number of people trained or the number of health check-ups conducted. In the context of a primary care practice-based research network (PBRN), outputs might include “number of community health workshops conducted” or “number of patients screened for chronic diseases” (Hayes et al., 2011).

Step 4: Plan Activities

Activities are the specific actions your program will take to produce the outputs. Anderson (n.d.) suggests working backwards from your outcomes to identify the necessary activities. For example, to achieve increased access to healthcare, your activities might include “organizing mobile health clinics” or “providing training for community health workers.”

Step 5: Allocate Resources (Inputs)

Inputs are the resources needed to carry out your activities. These can include funding, personnel, training materials, and facilities. It is crucial to identify all necessary inputs to ensure your activities can be successfully implemented. As noted in the transcript from the SoPact video, inputs should be clearly linked to the activities they support, ensuring that your resources are used efficiently and effectively (Gaines, 2020).

Stakeholder Engagement

Engaging stakeholders throughout the process is critical. This includes involving those who will benefit from the program as well as those who will implement it. The Global Happiness Initiative Foundation (2024) emphasizes the importance of partnerships and community involvement to ensure that the program addresses local needs and leverages existing strengths.

Continuous Monitoring and Evaluation

A theory of change should be a living document that evolves based on feedback and changing circumstances. Regularly revisiting and revising your TOC is essential to reflect new insights and ensure continued alignment with your goals. This approach is highlighted in the discussions by Courtney Tolmie from Results for Development Institute, who stresses the need for ongoing evaluation to refine and improve the TOC (Tolmie, 2020).

Example of a Theory of Change Development

1. **Impact**: Improved community health and well-being.
2. **Long-term Outcome**: Reduced incidence of chronic diseases.
3. **Medium-term Outcome**: Increased use of preventative health services.
4. **Short-term Outcome**: Increased awareness of preventative health practices.
5. **Outputs**: Number of health education sessions conducted, number of health screenings performed.
6. **Activities**: Conduct health education workshops, provide mobile health screenings.
7. **Inputs**: Funding for workshops and screenings, trained health educators, mobile clinic vans.

References

- Anderson, A. (n.d.). The community builder’s approach to theory of change: A practical guide to theory development. The Aspen Institute.
- Hayes, H., Parchman, M. L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). *The Journal of the American Board of Family Medicine*, 24(5), 576-582.
- Gaines, C. (2020). Theory of change, logic model, and foundation for social impact measurement. [YouTube Video]. SoPact.
- Tolmie, C. (2020). Introduction to Theory of Change. [YouTube Video]. Results for Development Institute.

By following these steps and continuously engaging with stakeholders, your theory of change will provide a clear and actionable roadmap for achieving your program’s long-term goals.”

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References

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Gaines, C. (2020). *Theory of change, logic model, and foundation for social impact measurement*. [YouTube Video]. SoPact.

Tolmie, C. (2020). *Introduction to Theory of Change*. [YouTube Video]. Results for Development Institute.]]], "status": "finished_successfully", "end_turn": true, "weight": 1.0, "metadata": {"citations": [], "gizmo_id": "g-HTKib04fm", "message_type": null, "model_slug": "gpt-4o", "default_model_slug": "gpt-4", "pad": "AAAAAAAAAAAAAAAAAAAA", "parent_id": "d368f50b-c996-4fb3-842c-77e145b0aa11", "finish_details": {"type": "stop", "stop_tokens": [200002]}, "is_complete": true, "request_id": "88d26dfc38b6baa0-MXP", "timestamp": "absolute", "recipient": "all", "channel": null}, "parent": "d368f50b-c996-4fb3-842c-77e145b0aa11", "children": [{"id": "aaa2d645-e004-48b5-be17-08d4dbf6fcfb"}], "aaa2d645-e004-48b5-be17-08d4dbf6fcfb": {"id": "aaa2d645-e004-48b5-be17-08d4dbf6fcfb", "message": {"id": "aaa2d645-e004-48b5-be17-08d4dbf6fcfb", "author": {"role": "user", "name": null, "metadata": {}}, "create_time": 1717278949.462318, "update_time": null, "content": {"content_type": "text", "parts": ["Rewrite this in the first person, keeping the references as though the writer were talking about themselves and how they develop their theory of change. Add an introductory narrative note that states the writer's project management background and analytical nature drive the writer to develop their theory of change using systematic and gradual processes..."]}}, "status": "finished_successfully", "end_turn": null, "weight": 1.0, "metadata": {"targeted_reply": "Developing a theory of change requires a structured and iterative approach to ensure that your program's activities effectively contribute to the desired long-term outcomes. The process begins by clearly articulating the long-term systemic change your program aims to achieve. For instance, if your program aims to improve community health, the desired impact might be 'a healthier, more resilient community' (Anderson, n.d.). Outcomes are the specific changes that need to happen to achieve your impact and can be categorized into short-term, medium-term, and long-term outcomes. These should be changes that you can realistically influence and measure over time (Hayes, Parchman, & Howard, 2011). For example, if your impact goal is community health, an outcome might be 'increased access to preventative healthcare services.' Outputs are the direct results of your program's activities and are necessary to achieve the outcomes. Outputs are often quantifiable, such as the number of people trained or the number of health check-ups conducted. In the context of a primary care practice-based research network (PBRN), outputs might include 'number of community health workshops conducted' or 'number of patients screened for chronic diseases' (Hayes et al., 2011). Activities are the specific actions your program will take to produce the outputs. It is suggested to work backwards from your outcomes to identify the necessary activities (Anderson, n.d.). For example, to achieve increased access to healthcare, your activities might include 'organizing mobile health clinics' or 'providing training for

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The process begins with clearly articulating the long-term systemic change I aim to achieve. For instance, if my program aims to improve community health, the desired impact might be "a healthier, more resilient community" (Anderson, n.d.).

Outcomes are the specific changes that need to happen to achieve this impact, and I categorize them into short-term, medium-term, and long-term outcomes. These should be changes that I can realistically influence and measure over time (Hayes, Parchman, & Howard, 2011). For example, if my impact goal is community health, an outcome might be "increased access to preventative healthcare services."

Outputs are the direct results of my program's activities and are necessary to achieve the outcomes. Outputs are often quantifiable, such as the number of people trained or the number of health check-ups conducted. In the context of a primary care practice-based research network (PBRN), outputs might include "number of community health workshops conducted" or "number of patients screened for chronic diseases" (Hayes et al., 2011).

Activities are the specific actions my program will take to produce the outputs. I find it helpful to work backwards from the

outcomes to identify the necessary activities (Anderson, n.d.). For example, to achieve increased access to healthcare, my activities might include “organizing mobile health clinics” or “providing training for community health workers.”

Inputs are the resources needed to carry out these activities. These can include funding, personnel, training materials, and facilities. It is crucial to identify all necessary inputs to ensure my activities can be successfully implemented. Inputs should be clearly linked to the activities they support, ensuring that resources are used efficiently and effectively (Gaines, 2020).

Engaging stakeholders throughout the process is critical. This includes involving those who will benefit from the program as well as those who will implement it. Emphasizing the importance of partnerships and community involvement ensures that the program addresses local needs and leverages existing strengths.

I believe a theory of change should be a living document that evolves based on feedback and changing circumstances. Regularly revisiting and revising my TOC is essential to reflect new insights and ensure continued alignment with my goals. This approach underscores the need for ongoing evaluation to refine and improve the TOC (Tolmie, 2020).

By following these steps and continuously engaging with stakeholders, I can provide a clear and actionable roadmap for achieving my program’s long-term goals.

References

Anderson, A. (n.d.). *The community builder’s approach to theory of change: A practical guide to theory development*. The Aspen Institute.

Hayes, H., Parchman, M. L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). *The Journal of the American Board of Family Medicine*, 24*(5), 576–582.

Gaines, C. (2020). *Theory of change, logic model, and foundation for social impact measurement*. [YouTube Video]. SoPact.

Tolmie, C. (2020). *Introduction to Theory of Change*. [YouTube Video]. Results for Development Institute.”}], “status”: “finished_successfully”, “end_turn”: true

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formulate a theory of change that follows a systematic and gradual process. This method ensures that my program's activities effectively contribute to the desired long-term outcomes.

The process commences with clearly articulating the long-term systemic change I aim to achieve. A theory of change is a purposeful model of how an initiative such as a policy, a strategy, a program, or a project contributes through a chain of early and intermediate outcomes to the intended result (Serrat, 2017). For instance, if my program targets the enhancement of community health, the desired impact might be described as "a healthier, more resilient community" (Anderson, n.d.).

Outcomes represent the changes that need to occur to realize this impact and are categorized into short-term, medium-term, and long-term outcomes. These changes should be realistically influenceable and measurable over time (Hayes et al., 2011). For instance, if the impact goal is community health, an outcome might be "increased access to preventative healthcare services."

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Activities represent the specific actions that the program will undertake to produce the outputs. Working backward from the outcomes is beneficial to identifying the necessary activities (Anderson, n.d.). For instance, to achieve increased access to healthcare, the activities might include "organizing mobile health clinics" or "providing training for community health workers."

Inputs are the resources required to carry out these activities, encompassing funding, personnel, training materials, and facilities. It is imperative to identify all necessary inputs to ensure the successful implementation of activities. Inputs should be linked to the activities they support, ensuring efficient and effective resource utilization (SoPact, 2020).

Engaging stakeholders throughout the process is paramount. This includes involving those who will benefit from the program and those who will implement it. Emphasizing the importance of partnerships and community involvement ensures that the program addresses local needs and leverages existing strengths.

A theory of change should be a living document that evolves based on feedback and changing circumstances. Regularly revisiting and revising the theory of change is essential to reflect new insights and ensure continued alignment with goals. This approach underscores the need for ongoing evaluation to refine and improve the theory of change (Research to Action, 2015).

Following these steps and continuously engaging with stakeholders can provide a clear and actionable roadmap for achieving the program's long-term goals.

Anderson, A. A. (2006). The community builder's approach to theory of change. A Practical Guide to Theory Development. The Aspen Institute Roundtable on Community Change. Url: http://www.dochas.ie/Shared/Files/4/TOC_fac_guide.Pdf.

Hayes, H., Parchman, M. L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). *The Journal of the American Board of Family Medicine*, 24(5), 576-582.

Research to Action (Director). (2015, June 18). Introduction to Theory of Change. <https://www.youtube.com/watch?v=VtMRMKFmDm4>

Serrat, O. (2017). Theories of Change. In O. Serrat (Ed.), *Knowledge Solutions: Tools, Methods, and Approaches to Drive Organizational Performance* (pp. 237-243). Springer Singapore. https://doi.org/10.1007/978-981-10-0983-9_24

SoPact (Director). (2020,

February 10). Theory of Change: Framework for Social Impact.

<https://www.youtube.com/watch?v=cg4JlgOIVHg>

I write a no more than 2 paragraph response as though you were the writer of the post above citing 1 academic source that either comments on or adds new information to a thought/idea/assertion made and ask a question ideally one that asks their thoughts or opinions on something discussed in or highly relevant to this post:

May 30 at 10:39pm

I really enjoyed this assignment this week, as I have previously been tasked to create a theory of change for the clubhouse I serve with Boys & Girls Clubs of San Francisco. Creating a theory of change for my youth program at the Excelsior Clubhouse has been an essential and enlightening journey for me. It's a tool that helps explain how a series of early and intermediate accomplishments set the stage for achieving long-term results. My comprehensive theory of change articulates the assumptions about how change will occur and specifies how all the required early and intermediate outcomes related to achieving our desired long-term change will be brought about and documented as they happen.

Re-vamping my theory of change, inspired by the Aspen Institute Roundtable on Community Change's approach, has been invaluable. The Community Builder's Approach to Theory of Change: A Practical Guide to Theory Development provided me with essential tools and methods for facilitating a robust theory of change process. This guide, alongside resources from ActKnowledge, helped me create a detailed, actionable, and dynamic theory of change that effectively supports our goal of providing strong youth development practices for staff at the Boys & Girls Club.

I started by defining the long-term outcomes we aim for, aligning them with the Boys & Girls Club's mission: improving academic performance and graduation rates, enhancing social and emotional skills, increasing physical and mental health, engaging youth in positive activities, and fostering leadership and life skills. Conducting a thorough needs assessment was crucial. I gathered data through surveys, focus groups, and analysis of local statistics to understand the specific challenges our youth face.

SoPact (2020) breaks down how a theory of change outlines the impact of an organization, and how they can aim to achieve the intermediate steps needed to align activities and resources for desired change. Essentially, it serves as a measurable strategy for implementing social change. Every organization, should establish its own values, mission statement, and clearly defined goals and objectives.

With these insights, I identified our inputs and resources, including trained staff, facilities, partnerships, and funding. Then, I articulated our activities, such as academic support, sports and recreational programs, health and wellness education, leadership workshops, and mentoring services. These activities lead to immediate outputs, like increased attendance in tutoring sessions and participation in sports.

My theory of change connects these outputs to short-term and intermediate outcomes, demonstrating the logical progression from activities to ultimate goals. For example, regular attendance in academic support programs improves homework completion and study habits, leading to better grades and higher graduation rates. I also developed a visual representation of this pathway to ensure clarity and coherence in our plan.

I identified assumptions and external factors to acknowledge conditions necessary for success, such as youth motivation and sustained funding, as well as potential challenges like changes in school policies or economic conditions. Engaging stakeholders was another critical step. I shared our theory of change with staff, youth, parents, and community partners, gathering feedback and making revisions to ensure it was comprehensive and realistic.

Monitoring and evaluation are integral to our approach. I collect data on participation rates, academic performance, health

indicators, and community involvement, using this information to refine our theory of change and improve program effectiveness continuously.

References:

Anderson, A. (n.d.). The community builder's approach to theory of change: A practical guide to theory development. The Aspen Institute. <https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/rcc/rcccommbuildersapproach.pdf>

SoPact. (2020, February 10). Theory of change, logic model, and foundation for social impact measurement.

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SoPact (2020) emphasizes that a theory of change should outline an organization's impact and define the intermediate steps needed to align activities and resources for desired change. This measurable strategy is crucial for implementing social change. By identifying our inputs and resources, such as trained staff, facilities, partnerships, and funding, and articulating activities like academic support, sports programs, health education, and leadership workshops, we ensure a logical progression from activities to ultimate goals. Regular attendance in academic support programs, for instance, leads to improved homework completion and better grades, ultimately increasing graduation rates. Engaging stakeholders and continuous monitoring and evaluation are integral to refining our theory of change and improving program effectiveness.

Considering these insights, what are your thoughts on the most challenging aspect of creating and maintaining a dynamic theory of change for a youth development program?

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Serrat, O. (2017). Theories of Change. In O. Serrat (Ed.), Knowledge Solutions: Tools, Methods, and Approaches to Drive Organizational Performance (pp. 237-243). Springer Singapore. https://doi.org/10.1007/978-981-10-0983-9_24

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-----\nPlease write a response of no more than 2 paragraphs as if you were the first post author. In your response, cite 1 academic source that comments on or adds new information to a thought, idea, or assertion. Additionally, ask a question that ideally prompts the thoughts or opinions of the second post author on something discussed in or highly relevant to their post.\n\n]],\n\"status\": \"finished_successfully\", \"end_turn\": null, \"weight\": 1.0, \"metadata\": {\"request_id\": \"88d2d6c728d85a25-MXP\", \"message_source\": null, \"timestamp_\": \"absolute\", \"message_type\": null}, \"recipient\": \"all\", \"channel\": null}, \"parent\": \"af271850-afdf-45c9-bba5-0040356c65e9\", \"children\": [\"03af8687-2b2c-4384-b572-ca6a06d7cd50\"]}, \"03af8687-2b2c-4384-b572-ca6a06d7cd50\": {\"id\": \"03af8687-2b2c-4384-b572-ca6a06d7cd50\", \"message\": {\"id\": \"03af8687-2b2c-4384-b572-ca6a06d7cd50\", \"author\": {\"role\": \"assistant\", \"name\": null, \"metadata\": {}}, \"create_time\": 1717283037.166824, \"update_time\": null, \"content\": {\"content_type\": \"text\", \"parts\": [\"I appreciate your detailed description of developing a theory of change for the Boys & Girls Clubs of San Francisco. It\u2019s inspiring to see how you applied these concepts to address the specific needs of the youth in your community. Your approach to defining long-term outcomes and conducting a thorough needs assessment aligns well with best practices in theory of change development (Anderson, 2006). Engaging stakeholders and continuously monitoring and evaluating the program\u2019s effectiveness are crucial steps that ensure the theory of change remains a living document, adaptable to new insights and changing circumstances.\n\nI\u2019m curious about your experience with stakeholder engagement, especially with youth and parents. How did you navigate gathering feedback from these groups, and what adjustments did you make to your theory of change based on their input? This interaction is essential, as highlighted by Hayes, Parchman, and Howard (2011), who emphasize the value of including diverse perspectives in refining program goals and strategies. Could you elaborate on the specific methods you used to collect and integrate stakeholder feedback into your plan?\"}], \"status\": \"finished_successfully\", \"end_turn\": true

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articulate how your work will contribute to the long-term outcomes you have set forth  
for your program. Describe your process for developing your theory of change.\n\nMy  
academic background in project management and my inherent analytical nature drive me  
to formulate a theory of change that follows a systematic and gradual process. This  
method ensures that my program's activities effectively contribute to the desired  
long-term outcomes.\n\nThe process commences with clearly articulating the long-term  
systemic change I aim to achieve. A theory of change is a purposeful model of how an  
initiative\u2014such as a policy, a strategy, a program, or a project\u2014contributes  
through a chain of early and intermediate outcomes to the intended result (Serrat,  
2017). For instance, if my program targets the enhancement of community health, the  
desired impact might be described as 'a healthier, more resilient community'  
(Anderson, n.d.).  
Outcomes represent the changes that need to occur to realize this  
impact and are categorized into short-term, medium-term, and long-term outcomes. These  
changes should be realistically influenceable and measurable over time (Hayes et al.,  
2011). For instance, if the impact goal is community health, an outcome might be  
'increased access to preventative healthcare services.'  
Outputs denote  
the direct results of the program's activities and are indispensable in achieving  
the outcomes. Outputs are often quantifiable, such as the number of people trained or  
the number of health check-ups conducted. In the context of a primary care practice-  
based research network (PBRN), outputs might include 'number of community health  
workshops conducted' or 'number of patients screened for chronic  
diseases' (Hayes et al., 2011).  
Activities represent the specific actions that  
the program will undertake to produce the outputs. Working backward from the outcomes  
is beneficial to identifying the necessary activities (Anderson, n.d.). For instance,  
to achieve increased access to healthcare, the activities might include  
'organizing mobile health clinics' or 'providing training for community  
health workers.'  
Inputs are the resources required to carry out these  
activities, encompassing funding, personnel, training materials, and facilities. It is  
imperative to identify all necessary inputs to ensure the successful implementation of  
activities. Inputs should be linked to the activities they support, ensuring efficient  
and effective resource utilization (SoPact, 2020).  
Engaging stakeholders throughout  
the process is paramount. This includes involving those who will benefit from the  
program and those who will implement it. Emphasizing the importance of partnerships  
and community involvement ensures that the program addresses local needs and leverages  
existing strengths.  
A theory of change should be a living document that evolves  
based on feedback and changing circumstances. Regularly revisiting and revising the  
theory of change is essential to reflect new insights and ensure continued alignment  
with goals. This approach underscores the need for ongoing evaluation to refine and
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improve the theory of change (Research to Action, 2015). Following these steps and continuously engaging with stakeholders can provide a clear and actionable roadmap for achieving the program's long-term goals.

Anderson, A. A. (2006). The community builder's approach to theory of change. A Practical Guide to Theory Development. The Aspen Institute Roundtable on Community Change. Url: [Http://Www. Dochas. Ie/Shared/Files/4/TOC_fac_guide. Pdf.](http://www.dochas.ie/Shared/Files/4/TOC_fac_guide.Pdf) Hayes, H., Parchman, M. L., & Howard, R. (2011). A logic model framework for evaluation and planning in a primary care practice-based research network (PBRN). The Journal of the American Board of Family Medicine, 24(5), 576-582. Research to Action (Director). (2015, June 18). Introduction to Theory of Change. <https://www.youtube.com/watch?v=VtMRMKFmDm4> Serrat, O. (2017). Theories of Change. In O. Serrat (Ed.), Knowledge Solutions: Tools, Methods, and Approaches to Drive Organizational Performance (pp. 237-243). Springer Singapore. https://doi.org/10.1007/978-981-10-0983-9_24 SoPact (Director). (2020, February 10). Theory of Change: Framework for Social Impact. <https://www.youtube.com/watch?v=cg4Jlg0IVHg>

Post Author 2 My process for developing the theory of change is to define the problem in the community, the results that I am trying to achieve (Research to Action 2015), discuss the steps or activities that I will take to achieve these results, and how the steps will lead to these results. The theory of change (ToC) is a living document that can have changes, new assumptions, that can be up for review regularly (Anderson, A.) My project and my goal are to encourage the youth of our community to get involved in events, activities, social gatherings, youth parties, camping trips, all of which will be hosted by our church. Our church is a Pentecostal Church where we believe in doing the right thing, whether that means obeying the law or the Word of God, and that we can have peace in our lives that only comes from God. We want to encourage the youth in our area to realize that they can experience that peace, too, and that this can be the answer to their teenage struggles, those contemplating suicide, wanting to give up and those living in depression. We also want to reach the younger children, such as those ages 7-12, to instill what their purpose in life is, into their minds and hearts at an earlier age before they get to the point of giving up. To define the problem in our community, as well as many communities across the country, is that youth and children may not see success in their future, see no purpose in life, possibly do not have consequences for their actions at home and that leads to the same attitude in public. They do not respect authority, such as teachers, police, or the law. The results that I am attempting to achieve are to lead as many young people in our community as possible to a life with certainty, purpose, success, peace, a connectedness, and most importantly, hope for their future. As I've mentioned in my previous discussion boards is that the activities, we want are camping trips, youth gatherings and special events and youth services. We will reach out to where the youth hang out, at their schools, the local parks, and pass out flyers to let them know of these free events. We will have time for one-on-one discussions, group discussions, and be sure each one who attends the events has a phone number with someone on our staff they can reach 24/7. These steps will lead to results because once we get their attention with the fun events, we become people they can trust, and once they trust us, they may open up with any issues they have and be open to good advice. Our long-term goal is to reach

traditional practices cherished across generations. Farchioni a prominent figure in the olive oil market serves as a prime example of the successful integration of tradition and modernity in EVOO production. Their production process combines advanced machinery to enhance efficiency and reduce waste with traditional methods like hand-picking and first-cold-pressing (Sustainability n.d.) . These traditional methods are crucial for maintaining the distinct quality and authenticity of their EVOO setting a benchmark for sustainable production in the industry. Farchioni's approach reflects a broader commitment across Italy to innovate while preserving the integrity of the olive oil heritage. As the olive oil industry evolves regions like Umbria where Farchioni's farms are located encounter their share of challenges. These include high operational costs and an aging workforce which necessitate further technological advancements. Modern tools like open-source spectrophotometers and AI are now being used to enhance traceability and ensure the purity of EVOO (Bayreuth n.d.; Violino et al. 2020). These technologies strengthen the 'Made in Italy' label a crucial asset in the global marketplace and drive significant environmental improvements. For instance optimizing distribution and updating packaging materials are proposed to reduce the carbon footprint of EVOO production (Pisanelli et al. 2023) . This paints a picture of a future where tradition and innovation continue to merge ensuring the sustainability and authenticity of Italian olive oil on a global scale.

Sustainability Metrics and Indicator Analysis

To comprehensively assess the sustainability of extra virgin olive oil (EVOO) production it is essential to consider a range of indicators that align with the seven principles of sustainability: efficiency substitution economic environmental social sustainability inter-generational equity and institutional sustainability. These principles can be measured using specific metrics such as material and energy intensity water consumption emission of toxic substances human health implications fair labor practices and the overall impact on the community. These metrics help in evaluating the breadth and depth of sustainability practices within the EVOO production process and are critical for making informed decisions aimed at improving sustainability outcomes over time (Maesano et al. 2021; Safeie-Noghlbari et al. 2024).

In the context of material intensity EVOO production demands significant resources particularly in packaging and equipment. Commonly used for oil bottling glass is energy-intensive to produce and contributes to higher CO2 emissions. This highlights the need for more sustainable packaging solutions such as recycled or lighter glass which could decrease material intensity and environmental impact (Maesano et al. 2021; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Similarly the metals used in processing equipment also require consideration particularly in terms of the energy and resources consumed during their manufacture and eventual recycling or disposal (Hansen 2022; Pisanelli et al. 2023; Salomone & Ioppolo 2012).

Energy and water consumption are equally critical metrics. The operation of irrigation systems and processing facilities consumes substantial energy which can be mitigated by integrating renewable energy sources such as solar or wind power to reduce the carbon footprint of production processes (Allen et al. 1998; Hansen 2022; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Concerning water consumption olive cultivation particularly in drier regions necessitates significant water usage. Employing sustainable water management practices such as adopting drip irrigation systems can dramatically decrease water consumption preserving vital water resources. Additionally using pesticides and fertilizers in olive farming introduces toxic emissions and pollutants that can affect soil and water quality. Implementing organic farming practices and optimizing transportation and

logistics can help minimize these environmental impacts (Ivic et al. 2021; Maesano et al. 2021).

Beyond environmental considerations the human dimension of sustainability is pivotal. Protecting human health and safety in EVOO production involves minimizing workers' exposure to harmful chemicals ensuring proper safety training and providing adequate protective equipment (Connor & Fereres 2010; Ncube et al. 2022). Furthermore adhering to labor laws and embracing fair trade practices are essential to guarantee fair wages and good working conditions for all employees. Finally the broader community impact of companies like Farchioni should be recognized as they often support local initiatives in education and healthcare contributing positively to the social fabric of their operating regions (Ncube et al. 2022). These efforts enhance community well-being and bolster the social sustainability of the business practices. By addressing these various sustainability indicators companies can comply with current standards and set new benchmarks for responsible production in the industry.

Supply Chain Model

The supply chain for EVOO includes several stages: olive cultivation and harvesting processing and extraction packaging and storage and distribution and retail. Each stage presents unique sustainability challenges and opportunities. Improving energy efficiency in processing and adopting sustainable packaging materials can significantly enhance the product's overall sustainability (Maesano et al. 2021).

Information Gaps and Inferences

There are notable gaps in available data particularly regarding comprehensive lifecycle assessments for EVOO production. Data on the environmental impacts of material extraction and processing is limited. However comparative analysis with similar agricultural products such as wine or almond production provides insights into potential sustainability impacts. Studies on these products show that organic farming practices and renewable energy usage can significantly reduce environmental footprints (Gennaro & Nardone 2014; Maesano et al. 2021).

Role as Chief Sustainability Officer

As Farchioni's Chief Sustainability Officer several measures can be prioritized to enhance sustainability in the company's operations. These include enhancing energy efficiency and renewable energy use implementing sustainable water management practices improving waste management and reducing emissions and ensuring fair wages and safe working conditions. Progress can be measured by setting specific measurable goals conducting regular sustainability audits publicly reporting on sustainability performance engaging stakeholders and maintaining open communication about progress and challenges (Allen et al. 1998; Maesano et al. 2021; Safeie-Noghlbari et al. 2024; Salomone & Ioppolo 2012).

Conclusion

Reflecting on the initial question of whether the levels of EVOO production are sustainable the answer is complex. Farchioni's EVOO did not solidify in the refrigerator maintaining its same viscosity and overall physical properties indicating its authenticity (Bayreuth n.d.). However the sustainability of EVOO production can be significantly improved through targeted measures that address material and energy use water consumption emissions and social impacts. Cooperative resource allocation systems emphasizing community involvement and fair practices are essential for achieving long-term sustainability in the olive oil industry. By adopting these measures companies can contribute to a more sustainable future while maintaining the cultural and economic significance of EVOO production in Italy.

References

Allen R. G. Pereira L. S. Raes D. & Smith M. (1998). Crop evapotranspiration-Guidelines for computing crop water requirements-FAO Irrigation and drainage paper 56. Fao Rome 300(9) D05109.

Armstrong S. (n.d.). How sustainable is extra virgin olive oil? Olive Wellness Institute. Retrieved May 27 2024 from <LINK> <LINK> <https://olivewellnessinstitute.org/article/how->

sustainable-is-extra-virgin-olive-oil/\nBayreuth U. of. (n.d.). New rapid test detects quality and authenticity of olive oil. Retrieved May 27 2024 from <LINK> <LINK> https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html\nConnor D. J. & Fereres E. (2010). The physiology of adaptation and yield expression in olive. *Hortic. Rev* 31 155\u2013229.\nGennaro B. D. & Nardone G. (2014). Sustainability of the Agri-food System: Strategies and Performances: Proceedings of the 50th SIDEA Conference. Lecce Chiostro dei Domenicani 26-28 September 2013. Universitas Studiorum.\nHansen C. (2022 December 7). Environmental Impact of Olive Oil Processing | EcoMENA. <LINK> <LINK> https://www.ecomena.org/olive-oil-wastes/\nMaesano G. Chinnici G. Falcone G. Bellia C. Raimondo M. & D\u2019Amico M. (2021). Economic and environmental sustainability of olive production: A case study. *Agronomy* 11(9) 1753.\nNcube A. Fiorentino G. Panfilo C. De Falco M. & Ulgiati S. (2022). Circular economy paths in the olive oil industry: A Life Cycle Assessment look into environmental performance and benefits. *The International Journal of Life Cycle Assessment* 1\u201321.\nPisanelli A. Consalvo C. Russo G. Ciolfi M. Lauteri M. & Paris P. (2023). Modelling Stakeholders\u2019 Knowledge and Perception in a Fuzzy Cognitive Map: The Case of the Extra-Virgin Olive Oil (EVOO) Value Chain in Central Italy. *Sustainability* 15(7) 6236.\nRinaldi S. Barbanera M. & Lascaro E. (2014). Assessment of carbon footprint and energy performance of the extra virgin olive oil chain in Umbria Italy. *Science of The Total Environment* 482 71\u201379.\nSafeie-Noghlbari B. Amiri Z. Allahyari M. S. Nikkhah A. Ben Hassen T. & Bacenetti J. (2024). Social life cycle assessment of the olive oil industry: A case study in Guilan Province Iran. *Environment Development and Sustainability* 1\u2013147.\nSalomone R. & Ioppolo G. (2012). Environmental impacts of olive oil production: A Life Cycle Assessment case study in the province of Messina (Sicily). *Journal of Cleaner Production* 28 88\u2013100.\nStatista. (n.d.). Topic: Olive oil industry in Italy. Statista. Retrieved May 27 2024 from <LINK> <LINK> https://www.statista.com/topics/6013/olive-oil-industry-in-italy/\nSustainability. (n.d.). Store Farchionil780. Retrieved May 27 2024 from <LINK> <LINK> https://farchionil780.com/en/sustainability/\nViolino S. Ortenzi L. Antonucci F. Pallottino F. Benincasa C. Figorilli S. & Costa C. (2020). An artificial intelligence approach for Italian EVOO origin traceability through an open source IoT spectrometer. *Foods* 9(6) 834.\n\n[URL: ""https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/""]\n[URL: ""https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/""]\n[URL: ""https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html""]\n[URL: ""https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html""]\n[URL: ""https://www.ecomena.org/olive-oil-wastes/""]\n[URL: ""https://www.ecomena.org/olive-oil-wastes/""]\n[URL: ""https://www.statista.com/topics/6013/olive-oil-industry-in-italy/""]\n[URL: ""https://www.statista.com/topics/6013/olive-oil-industry-in-italy/""]\n[URL: ""https://farchionil780.com/en/sustainability/""]\n[URL: ""https://farchionil780.com/en/sustainability/""]”,
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increased access to essential life-enhancing services. The Global Happiness Initiative Foundation is committed to providing the necessary tools for individuals to pursue their happiness. Our starting point is ensuring access to healthcare and mental health services as a fundamental human right and a crucial component in our efforts to build a better world. We also aim to utilize well-being travel cultural immersion and education resources to empower individuals to gain self-awareness understand others and collectively achieve holistic happiness.

Goals

The Global Happiness Initiative Foundation is committed to enhancing the global quality of life through two strategic goals.

Long-term Goal: Increase Access to Key Well-being Services

Our long-term goal is to significantly increase access to key well-being services globally with our efforts first being localized in the United States and Italy. By doing so we aim to improve the quality of life and foster sustained happiness in diverse communities. This goal will not only benefit the communities we serve but also provide donor-investors with the satisfaction of knowing that their support is making a tangible difference in people's lives. The impact of these programs will be measured by tracking the number of individuals accessing these services the improvement in health and education outcomes and overall satisfaction rates among participants reflecting the direct benefits of our initiatives.

Short-term Goal: Establish and Strengthen Partnerships

Partnerships are at the heart of our strategy. Our short-term goal is to establish and strengthen partnerships with local and international public and private organizations. These partnerships are not just beneficial; they are crucial for enhancing our capability to deliver critical services effectively and efficiently. By collaborating with organizations with established infrastructures and expertise in our target regions we can leverage their strengths to better serve the communities' needs. Formalizing at least five significant partnerships within the first six months will be vital to achieving this goal.

Both goals complement existing efforts in the target communities rather than duplicate them ensuring that our interventions add value and create a measurable impact. Through these focused efforts the Global Happiness Initiative Foundation seeks to build a foundation for long-term social change that contributes to the well-being of individuals worldwide.

Objectives

The Global Happiness Initiative Foundation (GHIF) has set ambitious yet achievable objectives to ensure a broad and lasting impact on global well-being.

Educational Expansion

Our first objective focuses on education expansion. Within the first year GHIF plans to launch educational programs in at least two countries aiming to reach over 5000 individuals. These programs will be developed to address local educational gaps better equip youths with functional skills and promote holistic learning experiences. Evidence shows that educational programs can significantly enhance psychological well-being by increasing self-efficacy social support and overall life satisfaction (Ross & Willigen 1997). Moreover education has been linked to improved health outcomes and better mental health with increased years of education correlating with lower rates of depression and anxiety (Kondirolli & Sunder 2022). The success of these programs will be measured by the number of programs successfully launched the total number of participants enrolled and participant feedback on program effectiveness.

Healthcare Partnerships

Simultaneously GHIF aims to establish healthcare partnerships to enhance access to medical and mental health services. By the end of the first six months we will secure partnerships with at least five major healthcare providers. These collaborations will focus on providing comprehensive health services emphasizing preventive care and mental health which are crucial for improving individual well-being. Studies have shown that partnerships between

educational institutions and healthcare providers can significantly improve health outcomes particularly in preventive care and mental health services (Ross & Wu 1995). The effectiveness of these partnerships will be assessed through the number of agreements signed the range of services provided and feedback from service users regarding the accessibility and quality of care.

Wellness Travel Model

Lastly our third objective is to develop a wellness travel model which will be designed developed and ready for implementation within the first eighteen months. This model will provide frameworks for wellness-oriented travel experiences promoting mental and physical health benefits through carefully crafted travel packages. Wellness programs embedded in educational and travel contexts have shown positive impacts on well-being reducing stress and improving mental health (Young et al. 2020). The model's success will be evaluated based on participant satisfaction measured through surveys and the repeat engagement rate indicating the model's appeal and effectiveness in enhancing participants' well-being.

Organizational Capacity

Foundation Structure and Management Capability:

The Global Happiness Initiative Foundation (GHIF) is designed to be a robust organization capable of managing large-scale projects and substantial grants. At its inception GHIF will establish a governance structure with a board of directors comprising education healthcare mental health and non-profit management experts. This board will provide strategic oversight and ensure all activities align with our mission and objectives.

Founding Team Expertise:

The founding team of GHIF will include highly qualified professionals selected for their extensive experience in project management international development healthcare and educational programming. Our recruitment strategy focuses on identifying individuals with a proven track record such as a Project Director with significant experience in managing and scaling community health programs an Education Specialist renowned for developing effective curricula in diverse cultural settings and a Mental Health Advocate with a strong background in leading global mental wellness initiatives. This planned assembly of expertise ensures a comprehensive and skilled approach to achieving the foundation's objectives.

Project Management Systems:

GHIF will implement rigorous project management methodologies to oversee all foundation activities. We will utilize established frameworks such as the Project Management Body of Knowledge (PMBOK) guidelines to plan execute monitor and close projects. Additionally GHIF will adopt modern project management tools for real-time tracking and reporting facilitating transparent and efficient management of the grant funds.

Preparatory Actions for Grant Management:

Prior to receiving the grant GHIF will:

- Formulate detailed project plans including timelines budgets and resource allocation.
- Establish financial management policies tailored to ensure accountability and prudent use of funds.
- Initiate discussions with potential partners and stakeholders to build a support network for immediate project launch upon funding.
- Demonstrating Capacity through Strategic Intentions:

While GHIF is a nascent organization our strategic planning reflects a clear and actionable roadmap for immediate impact upon funding. The foundation's goals are backed by a commitment to leverage the diverse skills of its team and the strategic insights of its board to establish a high-performing organization. GHIF's initial actions and detailed project preparations demonstrate our readiness and capability to effectively manage and utilize the grant to achieve significant social impact.

Cross-Sector Collaboration

The Global Happiness Initiative Foundation (GHIF) is committed to developing localized high-impact programs that serve as models for global implementation. To achieve this GHIF emphasizes cross-sector collaboration mainly focusing on strategic partnerships in

Italy and the United States. These collaborations are designed to leverage regional strengths and address specific local needs ensuring the adaptability and effectiveness of our well-being services.

Localized Educational Partnerships

GHIF will collaborate with leading educational institutions in Italy and the United States to integrate well-being practices into educational curricula. This initiative will focus on regions with significant disparities in educational outcomes providing targeted interventions that are culturally and contextually relevant. Research indicates that collaborative learning environments and educational partnerships can significantly enhance student outcomes and well-being (Kilgo et al. 2015). Success in these partnerships will be evaluated based on academic improvements student well-being metrics and the scalability of the programs to other regions.

Healthcare Alliances

GHIF plans to partner with healthcare organizations in Italy and the United States to increase access to quality health services. These partnerships will focus on integrating mental health services with primary care a critical need in both countries according to local health reports. Studies have shown cross-sector healthcare collaborations can improve health outcomes particularly when mental health services are integrated with primary care (Randall et al. 2023). By working with local health providers and community organizations these initiatives aim to create sustainable health improvement models suitable for global replication.

Public-Private Partnerships

GHIF will seek partnerships with local government bodies and private sectors in Italy and the United States to support infrastructure development vital to program delivery. These partnerships will help facilitate the creation of community wellness centers which will serve as hubs for education healthcare and community activities. Effective public-private partnerships have been shown to significantly enhance community health and well-being (Ovseiko et al. 2014). The effectiveness of these centers will be measured through community engagement rates and the overall improvement in community health and educational outcomes.

Community Engagement

Integral to our strategy is the direct involvement of local communities in Italy and the United States in the planning and implementation phases. GHIF believes that community input is essential to tailoring programs that genuinely reflect and meet local needs. Feedback mechanisms and community advisory boards will be established to monitor the programs' impacts and guide iterative improvements as evidence proves that community involvement is crucial for the success and sustainability of public health programs (Mattessich & Rausch 2014).

Program Plan

Introduction to Program Strategy

The Global Happiness Initiative Foundation (GHIF) is committed to addressing critical needs in communities across the United States and Italy. We implement multifaceted strategies that enhance individual well-being and community health specifically designed to complement rather than duplicate existing services. Our comprehensive approach leverages local strengths and targets specific challenges through innovative and sustainable solutions.

Integration with Government and Healthcare Services

Our initiative targets significant gaps in access to healthcare and government support services. These gaps have been identified through extensive community outreach and stakeholder engagement underscoring a pressing need for improved service accessibility and quality. To address these challenges GHIF plans to forge strategic alliances with local health departments and social service agencies creating a referral network that simplifies the process for individuals to access the services they need. This network aims to increase the efficiency and responsiveness of health and social care systems.

Partnership development is crucial for the success of our healthcare integration strategy. By collaborating with local health authorities and service

providers we aim to establish robust partnerships that facilitate streamlined access to healthcare and support services. These partnerships will be foundational in building a comprehensive referral system that enhances service delivery and meets the specific needs of the communities we serve.

In addition to building partnerships GHIF will engage in advocacy and policy work to enhance healthcare delivery. We will work closely with policymakers to advocate for regulations and policies prioritizing the health and well-being of underrepresented communities. Our focus on advocacy aims to influence policy changes that improve healthcare accessibility and address systemic barriers in service delivery.

Training community health workers is another critical component of our strategy. GHIF will implement comprehensive training programs designed to enhance the capabilities of health workers in assisting individuals effectively. These programs will focus on developing empathy technical skills and a deep understanding of the healthcare system. This will ensure that community health workers are well-equipped to support individuals in navigating health and social services.

Wellness Travel Model

GHIF recognizes the therapeutic potential of travel in promoting mental and physical well-being. To harness this potential we are developing a Wellness Travel Model that integrates health benefits with cultural and educational experiences. This innovative approach to wellness extends beyond traditional health settings and includes travel packages that feature guided meditations wellness workshops and cultural tours. Each package is designed in collaboration with travel experts and cultural institutions to ensure that it offers genuine health benefits and facilitates cultural appreciation.

Community-based involvement is integral to the design and execution of our Wellness Travel Model. We engage local communities in developing travel experiences to ensure they are culturally respectful and enriching for visitors and hosts. This engagement helps create authentic travel experiences sensitive to the host communities'; cultural dynamics and provides meaningful interactions that benefit all participants.

Holistic Educational Access

GHIF is also dedicated to transforming educational access by integrating a curriculum that includes advanced technology training and comprehensive arts education. This holistic approach aims to bridge the gap in technological and creative skills preparing individuals for the demands of the modern workforce and personal development. Our curriculum includes coding robotics visual arts and music training and is designed to be integrated into school systems and community learning centers.

GHIF will establish ongoing learning opportunities through workshops and seminars open to all age groups to complement our formal education initiatives. These initiatives focus on continuous skill development and personal growth promoting lifelong learning and adaptability. By offering workshops and seminars that cover a range of skills and artistic disciplines we aim to foster an environment of continuous learning and creative exploration.

Timeline and Evaluation

The timeline for these initiatives is strategically set to ensure a phased implementation. By the end of the second quarter of 2025 GHIF will establish the initial partnerships necessary for the referral systems and develop training programs for community health workers. Following the establishment of partnerships early in the same year the Wellness Travel Packages are expected to be launched by the third quarter of 2025. Educational program rollouts will begin in the fourth quarter of 2024 and be fully implemented across targeted regions by the second quarter of 2025.

Each element of the program plan is designed to measure specific outcomes related to access satisfaction and educational attainment ensuring that GHIF's interventions create measurable and sustainable impacts in the communities served. This strategic planning demonstrates GHIF's capability to

manage a large grant effectively and fulfill its mission of building a foundation for long-term social change that contributes significantly to global well-being.

\n\n\n\n\t\nDeliverables\t\nActivities\t\nDue Date\t\nExpected Challenges\t\n\t\nSet up Referral Systems\t\nEstablish partnerships develop training for staff\t\nQ2 2025\t\nRegulatory hurdles securing partner cooperation\t\n\t\nLaunch Wellness Travel Packages\t\nDesign packages negotiate with travel agencies\t\nQ3 2025\t\nLogistics coordination ensuring accessibility and inclusion\t\n\t\nRollout Educational Programs\t\nDevelop curricula and integrate into schools\t\nQ4 2025\t\nAdaptation to local educational standards funding\t\n\t\nPublic Workshops and Seminars\t\nPlan and implement workshops and lifelong learning seminars\t\nQ1 2026\t\nCommunity engagement sustaining interest over time\n\n\nReferences\nCunningham W. E. Hays R. D. Ettl M. K. Dixon W. J. Liu R. C.-C. Beck C. K. & Shapiro M. F. (1998). The prospective effect of access to medical care on health-related quality-of-life outcomes in patients with symptomatic HIV disease. *Medical Care* 36(3) 295\u2013306. \nDonne J. (2010). No man is an island. *Am Soc Neuroradiology*. \nGu D. Zhang Z. & Zeng Y. (2009). Access to healthcare services makes a difference in healthy longevity among older Chinese adults. *Social Science & Medicine* 68(2) 210\u2013219. \nKilgo C. A. Ezell Sheets J. K. & Pascarella E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Higher Education* 69 509\u2013525. \nKondrinski F. & Sunder N. (2022). Mental health effects of education. *Health Economics* 31 22\u201339. \nMattessich P. W. & Rausch E. J. (2014). Cross-sector collaboration to improve community health: A view of the current landscape. *Health Affairs* 33(11) 1968\u20131974. \nOvseiko P. V. O\u2019Sullivan C. Powell S. C. Davies S. M. & Buchan A. M. (2014). Implementation of collaborative governance in cross-sector innovation and education networks: Evidence from the National Health Service in England. *BMC Health Services Research* 14 1\u201314. \nRandall S. White D. & Dennis S. (2023). A collaborative primary health care model for children and young people in rural Australia: Explorations of cross-sectoral leader action. *Australian Journal of Primary Health*. \nRoss C. E. & Van Willigen M. (1997). Education and the subjective quality of life. *Journal of Health and Social Behavior* 275\u2013297. \nRoss C. E. & Wu C. (1995). The links between education and health. *American Sociological Review* 719\u2013745. \nSeid M. Varni J. W. Cummings L. & Schonlau M. (2006). The impact of realized access to care on health-related quality of life: A two-year prospective cohort study of children in the California State Children\u2019s Health Insurance Program. *The Journal of Pediatrics* 149(3) 354\u2013361. \nYoung T. MacInnes S. Jarden A. & Colla R. (2022). The impact of a wellbeing program imbedded in university classes: The importance of valuing happiness baseline wellbeing and practice frequency. *Studies in Higher Education* 47(4) 751\u2013770.

", "title": "GW ASSIGNMENT 1.docx", "tether_id": null}, "status": "finished_successfully", "end_turn": null, "weight": 1.0, "metadata": {"command": "context_stuff", "is_visually_hidden_from_conversation": true, "message_type": null, "model_slug": "gpt-4o", "default_model_slug": "gpt-4", "parent_id": "f2df83ae-21ed-4b8e-bd59-a8599a5356c8", "request_id": "88d2ed6609823763-MXP", "timestamp": "absolute"}, "recipient": "all", "channel": null}, "parent": "f2df83ae-21ed-4b8e-bd59-a8599a5356c8", "children": [{"id": "8d090f95-ca57-48f8-9092-f283eed4471c"}], "8d090f95-ca57-48f8-9092-f283eed4471c": {"id": "8d090f95-ca57-48f8-9092-f283eed4471c", "message": {"id": "8d090f95-ca57-48f8-9092-f283eed4471c", "author": {"role": "assistant", "name": null, "metadata": {}}, "create_time": 1717283961.31999, "update_time": null, "content": {"content_type": "text", "parts": ["I appreciate your detailed description of

developing a theory of change for the Boys & Girls Clubs of San Francisco. It's inspiring to see how you applied these concepts to address the specific needs of the youth in your community. Your approach to defining long-term outcomes and conducting a thorough needs assessment aligns well with best practices in theory of change development. In my experience, engaging stakeholders and continuously monitoring and evaluating the program's effectiveness are crucial steps that ensure the theory of change remains a living document, adaptable to new insights and changing circumstances (Hayes, Parchman, & Howard, 2011).

I'm curious about your experience with stakeholder engagement, especially with youth and parents. How did you navigate gathering feedback from these groups, and what adjustments did you make to your theory of change based on their input? This interaction is essential, as highlighted by Research to Action (2015), which emphasizes the value of including diverse perspectives in refining program goals and strategies. Could you elaborate on the specific methods you used to collect and integrate stakeholder feedback into your plan?"

}}, "status": "finished_successfully", "end_turn": true, "weight": 1.0, "metadata": {"citations": [], "gizmo_id": "g-HTKib04fm", "message_type": null, "model_slug": "gpt-4o", "default_model_slug": "gpt-4", "pad": "AAAAAAAAAAAAAAAA", "parent_id": "569af402-a73d-4512-9610-9065e9decbe3", "finish_details": {"type": "stop", "stop_tokens": [200002]}, "is_complete": true, "request_id": "88d2ed6609823763-MXP", "timestamp": "absolute", "recipient": "all", "channel": null, "parent": "569af402-a73d-4512-9610-9065e9decbe3", "children": []}, "9d08a86d-965e-4b0e-be3f-0dfe62a3858a": {"id": "9d08a86d-965e-4b0e-be3f-0dfe62a3858a", "message": {"id": "9d08a86d-965e-4b0e-be3f-0dfe62a3858a", "author": {"role": "tool", "name": "myfiles_browser", "metadata": {}}, "create_time": 1717284015.987058, "update_time": null, "content": {"content_type": "tether_quote", "url": "file-AEKe65mxexeltTKrZAXyz0", "domain": "SRM Assignment 1.docx", "text": "Sustainability Analysis of Extra Virgin Olive Oil Production\n\nAlexis Lindsay\n\nClaremont Lincoln University\n\nMSL 5307-01: Sustainable Resource Management\n\nProfessor Rian Satterwhite\n\nMay 19 2024\n\nSustainability Analysis of Extra Virgin Olive Oil Production\n\nI recently came across a TikTok video discussing a claim that the amount of olive oil available in stores exceeds the global production capacity of olive groves. This assertion suggested that perhaps olive oil is mislabeled or willfully misrepresented by manufacturers as olive oil when in reality they are some other cheaper more common oil like canola. The video suggested a test to determine the authenticity of olive oil by refrigerating it to see if it remained in a liquid state a characteristic of genuine extra virgin olive oil (EVOO). Intrigued by this I decided to investigate the claim myself focusing on my preferred brand Farchioni and investigating through the lens of authority and knowledge one might expect of Farchioni's Chief Sustainability Officer. Given the high demand and available agricultural resources are the current levels of EVOO production sustainable?\n\nBackground of EVOO Production\n\nItaly stands out as a leading producer of olive oil reflecting a rich blend of tradition and modernity in its agricultural practices. This duality is embodied in every bottle of olive oil such as my 1-liter bottle of extra virgin olive oil (EVOO) from Farchioni which I recently placed in the fridge to chill. As I waited to observe the results of my experiment I reflected on Farchioni's claims of harmoniously combining age-old techniques with contemporary methods to meet today's sustainability standards (Sustainability n.d.). This integration helps maintain the ecological balance and ensures the survival of traditional practices cherished across generations.\n\nFarchioni a prominent figure in

the olive oil market serves as a prime example of the successful integration of tradition and modernity in EVOO production. Their production process combines advanced machinery to enhance efficiency and reduce waste with traditional methods like hand-picking and first-cold-pressing (Sustainability n.d.) . These traditional methods are crucial for maintaining the distinct quality and authenticity of their EVOO setting a benchmark for sustainable production in the industry. Farchioni's approach reflects a broader commitment across Italy to innovate while preserving the integrity of the olive oil heritage. \nAs the olive oil industry evolves regions like Umbria where Farchioni's farms are located encounter their share of challenges. These include high operational costs and an aging workforce which necessitate further technological advancements. Modern tools like open-source spectrophotometers and AI are now being used to enhance traceability and ensure the purity of EVOO (Bayreuth n.d.; Violino et al. 2020). These technologies strengthen the 'Made in Italy' label a crucial asset in the global marketplace and drive significant environmental improvements. For instance optimizing distribution and updating packaging materials are proposed to reduce the carbon footprint of EVOO production (Pisanelli et al. 2023) . This paints a picture of a future where tradition and innovation continue to merge ensuring the sustainability and authenticity of Italian olive oil on a global scale.\nSustainability Metrics and Indicator Analysis\nTo comprehensively assess the sustainability of extra virgin olive oil (EVOO) production it is essential to consider a range of indicators that align with the seven principles of sustainability: efficiency substitution economic environmental social sustainability inter-generational equity and institutional sustainability. These principles can be measured using specific metrics such as material and energy intensity water consumption emission of toxic substances human health implications fair labor practices and the overall impact on the community. These metrics help in evaluating the breadth and depth of sustainability practices within the EVOO production process and are critical for making informed decisions aimed at improving sustainability outcomes over time (Maesano et al. 2021; Safeie-Noghlbari et al. 2024).\nIn the context of material intensity EVOO production demands significant resources particularly in packaging and equipment. Commonly used for oil bottling glass is energy-intensive to produce and contributes to higher CO2 emissions. This highlights the need for more sustainable packaging solutions such as recycled or lighter glass which could decrease material intensity and environmental impact (Maesano et al. 2021; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Similarly the metals used in processing equipment also require consideration particularly in terms of the energy and resources consumed during their manufacture and eventual recycling or disposal (Hansen 2022; Pisanelli et al. 2023; Salomone & Ioppolo 2012)\nEnergy and water consumption are equally critical metrics. The operation of irrigation systems and processing facilities consumes substantial energy which can be mitigated by integrating renewable energy sources such as solar or wind power to reduce the carbon footprint of production processes (Allen et al. 1998; Hansen 2022; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Concerning water consumption olive cultivation particularly in drier regions necessitates significant water usage. Employing sustainable water management practices such as adopting drip irrigation systems can dramatically decrease water consumption preserving vital water resources. Additionally using pesticides and fertilizers in olive farming introduces toxic emissions and pollutants that can affect soil and water quality. Implementing organic farming practices and optimizing transportation and logistics can help minimize these environmental impacts (Ivic et al. 2021; Maesano et

al. 2021).

Beyond environmental considerations the human dimension of sustainability is pivotal. Protecting human health and safety in EVOO production involves minimizing workers' exposure to harmful chemicals ensuring proper safety training and providing adequate protective equipment (Connor & Fereres 2010; Ncube et al. 2022). Furthermore adhering to labor laws and embracing fair trade practices are essential to guarantee fair wages and good working conditions for all employees. Finally the broader community impact of companies like Farchioni should be recognized as they often support local initiatives in education and healthcare contributing positively to the social fabric of their operating regions (Ncube et al. 2022). These efforts enhance community well-being and bolster the social sustainability of the business practices. By addressing these various sustainability indicators companies can comply with current standards and set new benchmarks for responsible production in the industry.

Supply Chain Model

The supply chain for EVOO includes several stages: olive cultivation and harvesting processing and extraction packaging and storage and distribution and retail. Each stage presents unique sustainability challenges and opportunities. Improving energy efficiency in processing and adopting sustainable packaging materials can significantly enhance the product's overall sustainability (Maesano et al. 2021).

Information Gaps and Inferences

There are notable gaps in available data particularly regarding comprehensive lifecycle assessments for EVOO production. Data on the environmental impacts of material extraction and processing is limited. However comparative analysis with similar agricultural products such as wine or almond production provides insights into potential sustainability impacts. Studies on these products show that organic farming practices and renewable energy usage can significantly reduce environmental footprints (Gennaro & Nardone 2014; Maesano et al. 2021).

Role as Chief Sustainability Officer

As Farchioni's Chief Sustainability Officer several measures can be prioritized to enhance sustainability in the company's operations. These include enhancing energy efficiency and renewable energy use implementing sustainable water management practices improving waste management and reducing emissions and ensuring fair wages and safe working conditions. Progress can be measured by setting specific measurable goals conducting regular sustainability audits publicly reporting on sustainability performance engaging stakeholders and maintaining open communication about progress and challenges (Allen et al. 1998; Maesano et al. 2021; Safeie-Noghlbari et al. 2024; Salomone & Ioppolo 2012).

Conclusion

Reflecting on the initial question of whether the levels of EVOO production are sustainable the answer is complex. Farchioni's EVOO did not solidify in the refrigerator maintaining its same viscosity and overall physical properties indicating its authenticity (Bayreuth n.d.). However the sustainability of EVOO production can be significantly improved through targeted measures that address material and energy use water consumption emissions and social impacts. Cooperative resource allocation systems emphasizing community involvement and fair practices are essential for achieving long-term sustainability in the olive oil industry. By adopting these measures companies can contribute to a more sustainable future while maintaining the cultural and economic significance of EVOO production in Italy.

References

Allen R. G. Pereira L. S. Raes D. & Smith M. (1998). Crop evapotranspiration-Guidelines for computing crop water requirements-FAO Irrigation and drainage paper 56. Fao Rome 300(9) D05109.

Armstrong S. (n.d.). How sustainable is extra virgin olive oil? Olive Wellness Institute. Retrieved May 27 2024 from <https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/>

Bayreuth U. of. (n.d.). New rapid test detects

quality and authenticity of olive oil. Retrieved May 27 2024 from <LINK>; <LINK>; <https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html>\nConnor D. J. & Fereres E. (2010). The physiology of adaptation and yield expression in olive. *Hortic. Rev* 31 155\u2013229.\nGennaro B. D. & Nardone G. (2014). Sustainability of the Agri-food System: Strategies and Performances: Proceedings of the 50th SIDEA Conference. Lecce Chiostro dei Domenicani 26-28 September 2013. Universitas Studiorum.\nHansen C. (2022 December 7). Environmental Impact of Olive Oil Processing | EcoMENA. <LINK>; <LINK>; <https://www.ecomena.org/olive-oil-wastes/>\nMaesano G. Chinnici G. Falcone G. Bellia C. Raimondo M. & D\u2019Amico M. (2021). Economic and environmental sustainability of olive production: A case study. *Agronomy* 11(9) 1753.\nNcube A. Fiorentino G. Panfilo C. De Falco M. & Ulgiati S. (2022). Circular economy paths in the olive oil industry: A Life Cycle Assessment look into environmental performance and benefits. *The International Journal of Life Cycle Assessment* 1\u201321.\nPisanelli A. Consalvo C. Russo G. Ciolfi M. Lauteri M. & Paris P. (2023). Modelling Stakeholders\u2019 Knowledge and Perception in a Fuzzy Cognitive Map: The Case of the Extra-Virgin Olive Oil (EVOO) Value Chain in Central Italy. *Sustainability* 15(7) 6236.\nRinaldi S. Barbanera M. & Lascaro E. (2014). Assessment of carbon footprint and energy performance of the extra virgin olive oil chain in Umbria Italy. *Science of The Total Environment* 482 71\u201379.\nSafeie-Noghlbari B. Amiri Z. Allahyari M. S. Nikkhah A. Ben Hassen T. & Bacenetti J. (2024). Social life cycle assessment of the olive oil industry: A case study in Guilan Province Iran. *Environment Development and Sustainability* 1\u2013147.\nSalomone R. & Ioppolo G. (2012). Environmental impacts of olive oil production: A Life Cycle Assessment case study in the province of Messina (Sicily). *Journal of Cleaner Production* 28 88\u2013100.\nStatista. (n.d.). Topic: Olive oil industry in Italy. Statista. Retrieved May 27 2024 from <LINK>; <LINK>; <https://www.statista.com/topics/6013/olive-oil-industry-in-italy/>\nSustainability. (n.d.). Store Farchioni1780. Retrieved May 27 2024 from <LINK>; <LINK>; <https://farchioni1780.com/en/sustainability/>\nViolino S. Ortenzi L. Antonucci F. Pallottino F. Benincasa C. Figorilli S. & Costa C. (2020). An artificial intelligence approach for Italian EVOO origin traceability through an open source IoT spectrometer. *Foods* 9(6) 834.\n\n[URL: ""https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/""]\n[URL: ""https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/""]\n[URL: ""https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html""]\n[URL: ""https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html""]\n[URL: ""https://www.ecomena.org/olive-oil-wastes/""]\n[URL: ""https://www.ecomena.org/olive-oil-wastes/""]\n[URL: ""https://www.statista.com/topics/6013/olive-oil-industry-in-italy/""]\n[URL: ""https://www.statista.com/topics/6013/olive-oil-industry-in-italy/""]\n[URL: ""https://farchioni1780.com/en/sustainability/""]\n[URL: ""https://farchioni1780.com/en/sustainability/""]”,\n“title”: “SRM Assignment 1.docx”, “tether_id”: null}, “status”:\n“finished_successfully”, “end_turn”: null, “weight”: 1.0, “metadata”: {“command”:

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Foundation is committed to providing the necessary tools for individuals to pursue their happiness. Our starting point is ensuring access to healthcare and mental health services as a fundamental human right and a crucial component in our efforts to build a better world. We also aim to utilize well-being travel cultural immersion and education resources to empower individuals to gain self-awareness understand others and collectively achieve holistic happiness.

Goals

The Global Happiness Initiative Foundation is committed to enhancing the global quality of life through two strategic goals.

Long-term Goal: Increase Access to Key Well-being Services

Our long-term goal is to significantly increase access to key well-being services globally with our efforts first being localized in the United States and Italy. By doing so we aim to improve the quality of life and foster sustained happiness in diverse communities. This goal will not only benefit the communities we serve but also provide donor-investors with the satisfaction of knowing that their support is making a tangible difference in people's lives. The impact of these programs will be measured by tracking the number of individuals accessing these services the improvement in health and education outcomes and overall satisfaction rates among participants reflecting the direct benefits of our initiatives.

Short-term Goal: Establish and Strengthen Partnerships

Partnerships are at the heart of our strategy. Our short-term goal is to establish and strengthen partnerships with local and international public and private organizations. These partnerships are not just beneficial; they are crucial for enhancing our capability to deliver critical services effectively and efficiently. By collaborating with organizations with established infrastructures and expertise in our target regions we can leverage their strengths to better serve the communities' needs. Formalizing at least five significant partnerships within the first six months will be vital to achieving this goal.

Both goals complement existing efforts in the target communities rather than duplicate them ensuring that our interventions add value and create a measurable impact. Through these focused efforts the Global Happiness Initiative Foundation seeks to build a foundation for long-term social change that contributes to the well-being of individuals worldwide.

Objectives

The Global Happiness Initiative Foundation (GHIF) has set ambitious yet achievable objectives to ensure a broad and lasting impact on global well-being.

Educational Expansion

Our first objective focuses on education expansion. Within the first year GHIF plans to launch educational programs in at least two countries aiming to reach over 5000 individuals. These programs will be developed to address local educational gaps better equip youths with functional skills and promote holistic learning experiences. Evidence shows that educational programs can significantly enhance psychological well-being by increasing self-efficacy social support and overall life satisfaction (Ross & Willigen 1997). Moreover education has been linked to improved health outcomes and better mental health with increased years of education correlating with lower rates of depression and anxiety (Kondirolli & Sunder 2022). The success of these programs will be measured by the number of programs successfully launched the total number of participants enrolled and participant feedback on program effectiveness.

Healthcare Partnerships

Simultaneously GHIF aims to establish healthcare partnerships to enhance access to medical and mental health services. By the end of the first six months we will secure partnerships with at least five major healthcare providers. These collaborations will focus on providing comprehensive health services emphasizing preventive care and mental health which are crucial for improving individual well-being. Studies have shown that partnerships between educational institutions and healthcare providers can significantly improve health

outcomes particularly in preventive care and mental health services (Ross & Wu 1995). The effectiveness of these partnerships will be assessed through the number of agreements signed the range of services provided and feedback from service users regarding the accessibility and quality of care.

Wellness Travel Model

Lastly our third objective is to develop a wellness travel model which will be designed developed and ready for implementation within the first eighteen months. This model will provide frameworks for wellness-oriented travel experiences promoting mental and physical health benefits through carefully crafted travel packages. Wellness programs embedded in educational and travel contexts have shown positive impacts on well-being reducing stress and improving mental health (Young et al. 2020). The model's success will be evaluated based on participant satisfaction measured through surveys and the repeat engagement rate indicating the model's appeal and effectiveness in enhancing participants' well-being.

Organizational Capacity

Foundation Structure and Management Capability:

The Global Happiness Initiative Foundation (GHIF) is designed to be a robust organization capable of managing large-scale projects and substantial grants. At its inception GHIF will establish a governance structure with a board of directors comprising education healthcare mental health and non-profit management experts. This board will provide strategic oversight and ensure all activities align with our mission and objectives.

Founding Team Expertise:

The founding team of GHIF will include highly qualified professionals selected for their extensive experience in project management international development healthcare and educational programming. Our recruitment strategy focuses on identifying individuals with a proven track record such as a Project Director with significant experience in managing and scaling community health programs an Education Specialist renowned for developing effective curricula in diverse cultural settings and a Mental Health Advocate with a strong background in leading global mental wellness initiatives. This planned assembly of expertise ensures a comprehensive and skilled approach to achieving the foundation's objectives.

Project Management Systems:

GHIF will implement rigorous project management methodologies to oversee all foundation activities. We will utilize established frameworks such as the Project Management Body of Knowledge (PMBOK) guidelines to plan execute monitor and close projects. Additionally GHIF will adopt modern project management tools for real-time tracking and reporting facilitating transparent and efficient management of the grant funds.

Preparatory Actions for Grant Management:

Prior to receiving the grant GHIF will:

- Formulate detailed project plans including timelines budgets and resource allocation.
- Establish financial management policies tailored to ensure accountability and prudent use of funds.
- Initiate discussions with potential partners and stakeholders to build a support network for immediate project launch upon funding.

Demonstrating Capacity through Strategic Intentions:

While GHIF is a nascent organization our strategic planning reflects a clear and actionable roadmap for immediate impact upon funding. The foundation's goals are backed by a commitment to leverage the diverse skills of its team and the strategic insights of its board to establish a high-performing organization. GHIF's initial actions and detailed project preparations demonstrate our readiness and capability to effectively manage and utilize the grant to achieve significant social impact.

Cross-Sector Collaboration

The Global Happiness Initiative Foundation (GHIF) is committed to developing localized high-impact programs that serve as models for global implementation. To achieve this GHIF emphasizes cross-sector collaboration mainly focusing on strategic partnerships in Italy and the United States. These collaborations are designed to leverage regional

strengths and address specific local needs ensuring the adaptability and effectiveness of our well-being services.

Localized Educational Partnerships

GHIF will collaborate with leading educational institutions in Italy and the United States to integrate well-being practices into educational curricula. This initiative will focus on regions with significant disparities in educational outcomes providing targeted interventions that are culturally and contextually relevant. Research indicates that collaborative learning environments and educational partnerships can significantly enhance student outcomes and well-being (Kilgo et al. 2015). Success in these partnerships will be evaluated based on academic improvements student well-being metrics and the scalability of the programs to other regions.

Healthcare Alliances

GHIF plans to partner with healthcare organizations in Italy and the United States to increase access to quality health services. These partnerships will focus on integrating mental health services with primary care a critical need in both countries according to local health reports. Studies have shown cross-sector healthcare collaborations can improve health outcomes particularly when mental health services are integrated with primary care (Randall et al. 2023). By working with local health providers and community organizations these initiatives aim to create sustainable health improvement models suitable for global replication.

Public-Private Partnerships

GHIF will seek partnerships with local government bodies and private sectors in Italy and the United States to support infrastructure development vital to program delivery. These partnerships will help facilitate the creation of community wellness centers which will serve as hubs for education healthcare and community activities. Effective public-private partnerships have been shown to significantly enhance community health and well-being (Ovseiko et al. 2014). The effectiveness of these centers will be measured through community engagement rates and the overall improvement in community health and educational outcomes.

Community Engagement

Integral to our strategy is the direct involvement of local communities in Italy and the United States in the planning and implementation phases. GHIF believes that community input is essential to tailoring programs that genuinely reflect and meet local needs. Feedback mechanisms and community advisory boards will be established to monitor the programs' impacts and guide iterative improvements as evidence proves that community involvement is crucial for the success and sustainability of public health programs (Mattessich & Rausch 2014).

Program Plan

Introduction to Program Strategy

The Global Happiness Initiative Foundation (GHIF) is committed to addressing critical needs in communities across the United States and Italy. We implement multifaceted strategies that enhance individual well-being and community health specifically designed to complement rather than duplicate existing services. Our comprehensive approach leverages local strengths and targets specific challenges through innovative and sustainable solutions.

Integration with Government and Healthcare Services

Our initiative targets significant gaps in access to healthcare and government support services. These gaps have been identified through extensive community outreach and stakeholder engagement underscoring a pressing need for improved service accessibility and quality. To address these challenges GHIF plans to forge strategic alliances with local health departments and social service agencies creating a referral network that simplifies the process for individuals to access the services they need. This network aims to increase the efficiency and responsiveness of health and social care systems.

Partnership development is crucial for the success of our healthcare integration strategy. By collaborating with local health authorities and service providers we aim to establish robust partnerships that facilitate streamlined access

to healthcare and support services. These partnerships will be foundational in building a comprehensive referral system that enhances service delivery and meets the specific needs of the communities we serve.

In addition to building partnerships GHIF will engage in advocacy and policy work to enhance healthcare delivery. We will work closely with policymakers to advocate for regulations and policies prioritizing the health and well-being of underrepresented communities. Our focus on advocacy aims to influence policy changes that improve healthcare accessibility and address systemic barriers in service delivery.

Training community health workers is another critical component of our strategy. GHIF will implement comprehensive training programs designed to enhance the capabilities of health workers in assisting individuals effectively. These programs will focus on developing empathy technical skills and a deep understanding of the healthcare system. This will ensure that community health workers are well-equipped to support individuals in navigating health and social services.

Wellness Travel Model

GHIF recognizes the therapeutic potential of travel in promoting mental and physical well-being. To harness this potential we are developing a Wellness Travel Model that integrates health benefits with cultural and educational experiences. This innovative approach to wellness extends beyond traditional health settings and includes travel packages that feature guided meditations wellness workshops and cultural tours. Each package is designed in collaboration with travel experts and cultural institutions to ensure that it offers genuine health benefits and facilitates cultural appreciation.

Community-based involvement is integral to the design and execution of our Wellness Travel Model. We engage local communities in developing travel experiences to ensure they are culturally respectful and enriching for visitors and hosts. This engagement helps create authentic travel experiences sensitive to the host communities'; cultural dynamics and provides meaningful interactions that benefit all participants.

Holistic Educational Access

GHIF is also dedicated to transforming educational access by integrating a curriculum that includes advanced technology training and comprehensive arts education. This holistic approach aims to bridge the gap in technological and creative skills preparing individuals for the demands of the modern workforce and personal development. Our curriculum includes coding robotics visual arts and music training and is designed to be integrated into school systems and community learning centers.

GHIF will establish ongoing learning opportunities through workshops and seminars open to all age groups to complement our formal education initiatives. These initiatives focus on continuous skill development and personal growth promoting lifelong learning and adaptability. By offering workshops and seminars that cover a range of skills and artistic disciplines we aim to foster an environment of continuous learning and creative exploration.

Timeline and Evaluation

The timeline for these initiatives is strategically set to ensure a phased implementation. By the end of the second quarter of 2025 GHIF will establish the initial partnerships necessary for the referral systems and develop training programs for community health workers. Following the establishment of partnerships early in the same year the Wellness Travel Packages are expected to be launched by the third quarter of 2025. Educational program rollouts will begin in the fourth quarter of 2024 and be fully implemented across targeted regions by the second quarter of 2025.

Each element of the program plan is designed to measure specific outcomes related to access satisfaction and educational attainment ensuring that GHIF's interventions create measurable and sustainable impacts in the communities served. This strategic planning demonstrates GHIF's capability to manage a large grant effectively and fulfill its mission of building a foundation for

long-term social change that contributes significantly to global well-being.

\n\n\n\n\n\t\nDeliverables\t\nActivities\t\nDue Date\t\nExpected Challenges\n\t\nSet up Referral Systems\t\nEstablish partnerships develop training for staff\t\nQ2 2025\t\nRegulatory hurdles securing partner cooperation\n\t\nLaunch Wellness Travel Packages\t\nDesign packages negotiate with travel agencies\t\nQ3 2025\t\nLogistics coordination ensuring accessibility and inclusion\n\t\nRollout Educational Programs\t\nDevelop curricula and integrate into schools\t\nQ4 2025\t\nAdaptation to local educational standards funding\n\t\nPublic Workshops and Seminars\t\nPlan and implement workshops and lifelong learning seminars\t\nQ1 2026\t\nCommunity engagement sustaining interest over time\n\n\n\nReferences\nCunningham W. E. Hays R. D. Ettl M. K. Dixon W. J. Liu R. C.-C. Beck C. K. & Shapiro M. F. (1998). The prospective effect of access to medical care on health-related quality-of-life outcomes in patients with symptomatic HIV disease. *Medical Care* 36(3) 295\u2013306. \nDonne J. (2010). No man is an island. *Am Soc Neuroradiology*. \nGu D. Zhang Z. & Zeng Y. (2009). Access to healthcare services makes a difference in healthy longevity among older Chinese adults. *Social Science & Medicine* 68(2) 210\u2013219. \nKilgo C. A. Ezell Sheets J. K. & Pascarella E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Higher Education* 69 509\u2013525. \nKondrinski F. & Sunder N. (2022). Mental health effects of education. *Health Economics* 31 22\u201339. \nMattessich P. W. & Rausch E. J. (2014). Cross-sector collaboration to improve community health: A view of the current landscape. *Health Affairs* 33(11) 1968\u20131974. \nOvseiko P. V. O\u2019Sullivan C. Powell S. C. Davies S. M. & Buchan A. M. (2014). Implementation of collaborative governance in cross-sector innovation and education networks: Evidence from the National Health Service in England. *BMC Health Services Research* 14 1\u201314. \nRandall S. White D. & Dennis S. (2023). A collaborative primary health care model for children and young people in rural Australia: Explorations of cross-sectoral leader action. *Australian Journal of Primary Health*. \nRoss C. E. & Van Willigen M. (1997). Education and the subjective quality of life. *Journal of Health and Social Behavior* 275\u2013297. \nRoss C. E. & Wu C. (1995). The links between education and health. *American Sociological Review* 719\u2013745. \nSeid M. Varni J. W. Cummings L. & Schonlau M. (2006). The impact of realized access to care on health-related quality of life: A two-year prospective cohort study of children in the California State Children\u2019s Health Insurance Program. *The Journal of Pediatrics* 149(3) 354\u2013361. \nYoung T. MacInnes S. Jarden A. & Colla R. (2022). The impact of a wellbeing program imbedded in university classes: The importance of valuing happiness baseline wellbeing and practice frequency. *Studies in Higher Education* 47(4) 751\u2013770.

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church. Your focus on addressing the needs and challenges of young people, such as the lack of purpose and respect for authority, is very impactful. Your method of involving them through engaging activities and creating a supportive environment aligns well with best practices in youth development. According to Kilgo, Ezell Sheets, and Pascarella (2015), collaborative learning environments significantly enhance student outcomes and well-being, which resonates with your strategy of using group activities and discussions to build trust and encourage open communication. I'm curious about the specifics of your stakeholder engagement process. How do you ensure that the feedback from the youth and their families is effectively integrated into your program's design and activities? Engaging stakeholders and incorporating their input is essential for the success and sustainability of any program, as emphasized by Mattessich and Rausch (2014). Could you elaborate on the techniques you use to gather and utilize this feedback to refine your initiatives?"], "status":

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Analysis of Extra Virgin Olive Oil Production\n\nAlexis Lindsay\nClaremont Lincoln
University\nMSL 5307-01: Sustainable Resource Management\nProfessor Rian
Satterwhite\nMay 19 2024\nSustainability Analysis of Extra Virgin Olive Oil
Production\nI recently came across a TikTok video discussing a claim that the amount
of olive oil available in stores exceeds the global production capacity of olive
groves. This assertion suggested that perhaps olive oil is mislabeled or willfully
misrepresented by manufacturers as olive oil when in reality they are some other
cheaper more common oil like canola. The video suggested a test to determine the
authenticity of olive oil by refrigerating it to see if it remained in a liquid state
a characteristic of genuine extra virgin olive oil (EVOO). Intrigued by this I decided
to investigate the claim myself focusing on my preferred brand Farchioni and
investigating through the lens of authority and knowledge one might expect of
Farchioni's Chief Sustainability Officer. Given the high demand and available
agricultural resources are the current levels of EVOO production
sustainable?\nBackground of EVOO Production\nItaly stands out as a leading producer of
olive oil reflecting a rich blend of tradition and modernity in its agricultural
practices. This duality is embodied in every bottle of olive oil such as my 1-liter
bottle of extra virgin olive oil (EVOO) from Farchioni which I recently placed in the
fridge to chill. As I waited to observe the results of my experiment I reflected on
Farchioni's claims of harmoniously combining age-old techniques with contemporary
methods to meet today's sustainability standards (Sustainability n.d.). This
integration helps maintain the ecological balance and ensures the survival of
traditional practices cherished across generations.\nFarchioni a prominent figure in
the olive oil market serves as a prime example of the successful integration of
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tradition and modernity in EVOO production. Their production process combines advanced machinery to enhance efficiency and reduce waste with traditional methods like hand-picking and first-cold-pressing (Sustainability n.d.) . These traditional methods are crucial for maintaining the distinct quality and authenticity of their EVOO setting a benchmark for sustainable production in the industry. Farchioni's approach reflects a broader commitment across Italy to innovate while preserving the integrity of the olive oil heritage. \nAs the olive oil industry evolves regions like Umbria where Farchioni's farms are located encounter their share of challenges. These include high operational costs and an aging workforce which necessitate further technological advancements. Modern tools like open-source spectrophotometers and AI are now being used to enhance traceability and ensure the purity of EVOO (Bayreuth n.d.; Violino et al. 2020). These technologies strengthen the 'Made in Italy' label a crucial asset in the global marketplace and drive significant environmental improvements. For instance optimizing distribution and updating packaging materials are proposed to reduce the carbon footprint of EVOO production (Pisanelli et al. 2023) . This paints a picture of a future where tradition and innovation continue to merge ensuring the sustainability and authenticity of Italian olive oil on a global scale.\nSustainability Metrics and Indicator Analysis\nTo comprehensively assess the sustainability of extra virgin olive oil (EVOO) production it is essential to consider a range of indicators that align with the seven principles of sustainability: efficiency substitution economic environmental social sustainability inter-generational equity and institutional sustainability. These principles can be measured using specific metrics such as material and energy intensity water consumption emission of toxic substances human health implications fair labor practices and the overall impact on the community. These metrics help in evaluating the breadth and depth of sustainability practices within the EVOO production process and are critical for making informed decisions aimed at improving sustainability outcomes over time (Maesano et al. 2021; Safeie-Noghlbari et al. 2024).\nIn the context of material intensity EVOO production demands significant resources particularly in packaging and equipment. Commonly used for oil bottling glass is energy-intensive to produce and contributes to higher CO2 emissions. This highlights the need for more sustainable packaging solutions such as recycled or lighter glass which could decrease material intensity and environmental impact (Maesano et al. 2021; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Similarly the metals used in processing equipment also require consideration particularly in terms of the energy and resources consumed during their manufacture and eventual recycling or disposal (Hansen 2022; Pisanelli et al. 2023; Salomone & Ioppolo 2012)\nEnergy and water consumption are equally critical metrics. The operation of irrigation systems and processing facilities consumes substantial energy which can be mitigated by integrating renewable energy sources such as solar or wind power to reduce the carbon footprint of production processes (Allen et al. 1998; Hansen 2022; Rinaldi et al. 2014; Salomone & Ioppolo 2012). Concerning water consumption olive cultivation particularly in drier regions necessitates significant water usage. Employing sustainable water management practices such as adopting drip irrigation systems can dramatically decrease water consumption preserving vital water resources. Additionally using pesticides and fertilizers in olive farming introduces toxic emissions and pollutants that can affect soil and water quality. Implementing organic farming practices and optimizing transportation and logistics can help minimize these environmental impacts (Ivic et al. 2021; Maesano et al. 2021).\nBeyond environmental considerations the human dimension of sustainability

is pivotal. Protecting human health and safety in EVOO production involves minimizing workers' exposure to harmful chemicals ensuring proper safety training and providing adequate protective equipment (Connor & Fereres 2010; Ncube et al. 2022). Furthermore adhering to labor laws and embracing fair trade practices are essential to guarantee fair wages and good working conditions for all employees. Finally the broader community impact of companies like Farchioni should be recognized as they often support local initiatives in education and healthcare contributing positively to the social fabric of their operating regions (Ncube et al. 2022). These efforts enhance community well-being and bolster the social sustainability of the business practices. By addressing these various sustainability indicators companies can comply with current standards and set new benchmarks for responsible production in the industry.

Supply Chain Model

The supply chain for EVOO includes several stages: olive cultivation and harvesting processing and extraction packaging and storage and distribution and retail. Each stage presents unique sustainability challenges and opportunities. Improving energy efficiency in processing and adopting sustainable packaging materials can significantly enhance the product's overall sustainability (Maesano et al. 2021).

Information Gaps and Inferences

There are notable gaps in available data particularly regarding comprehensive lifecycle assessments for EVOO production. Data on the environmental impacts of material extraction and processing is limited. However comparative analysis with similar agricultural products such as wine or almond production provides insights into potential sustainability impacts. Studies on these products show that organic farming practices and renewable energy usage can significantly reduce environmental footprints (Gennaro & Nardone 2014; Maesano et al. 2021).

Role as Chief Sustainability Officer

As Farchioni's Chief Sustainability Officer several measures can be prioritized to enhance sustainability in the company's operations. These include enhancing energy efficiency and renewable energy use implementing sustainable water management practices improving waste management and reducing emissions and ensuring fair wages and safe working conditions. Progress can be measured by setting specific measurable goals conducting regular sustainability audits publicly reporting on sustainability performance engaging stakeholders and maintaining open communication about progress and challenges (Allen et al. 1998; Maesano et al. 2021; Safeie-Noghlbari et al. 2024; Salomone & Ioppolo 2012).

Conclusion

Reflecting on the initial question of whether the levels of EVOO production are sustainable the answer is complex. Farchioni's EVOO did not solidify in the refrigerator maintaining its same viscosity and overall physical properties indicating its authenticity (Bayreuth n.d.). However the sustainability of EVOO production can be significantly improved through targeted measures that address material and energy use water consumption emissions and social impacts. Cooperative resource allocation systems emphasizing community involvement and fair practices are essential for achieving long-term sustainability in the olive oil industry. By adopting these measures companies can contribute to a more sustainable future while maintaining the cultural and economic significance of EVOO production in Italy.

References

Allen R. G. Pereira L. S. Raes D. & Smith M. (1998). Crop evapotranspiration-Guidelines for computing crop water requirements-FAO Irrigation and drainage paper 56. Fao Rome 300(9) D05109.

Armstrong S. (n.d.). How sustainable is extra virgin olive oil? Olive Wellness Institute. Retrieved May 27 2024 from <https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/>

Bayreuth U. of. (n.d.). New rapid test detects quality and authenticity of olive oil. Retrieved May 27 2024 from <https://www.bayreuth.de/en/news/2024/05/new-rapid-test-detects-quality-and-authenticity-of-olive-oil>

<https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html> Connor D. J. & Fereres E. (2010). The physiology of adaptation and yield expression in olive. *Hortic. Rev* 31 155-229. Gennaro B. D. & Nardone G. (2014). Sustainability of the Agri-food System: Strategies and Performances: Proceedings of the 50th SIDEA Conference. Lecce Chiostro dei Domenicani 26-28 September 2013. Universitas Studiorum. Hansen C. (2022 December 7). Environmental Impact of Olive Oil Processing | EcoMENA. <https://www.ecomena.org/olive-oil-wastes/> Maesano G. Chinnici G. Falcone G. Bellia C. Raimondo M. & D'Amico M. (2021). Economic and environmental sustainability of olive production: A case study. *Agronomy* 11(9) 1753. Ncube A. Fiorentino G. Panfilo C. De Falco M. & Ulgiati S. (2022). Circular economy paths in the olive oil industry: A Life Cycle Assessment look into environmental performance and benefits. *The International Journal of Life Cycle Assessment* 1-321. Pisanelli A. Consalvo C. Russo G. Ciolfi M. Lauteri M. & Paris P. (2023). Modelling Stakeholders Knowledge and Perception in a Fuzzy Cognitive Map: The Case of the Extra-Virgin Olive Oil (EVOO) Value Chain in Central Italy. *Sustainability* 15(7) 6236. Rinaldi S. Barbanera M. & Lascaro E. (2014). Assessment of carbon footprint and energy performance of the extra virgin olive oil chain in Umbria Italy. *Science of The Total Environment* 482 71-1379. Safeie-Noghlbari B. Amiri Z. Allahyari M. S. Nikkhah A. Ben Hassen T. & Bacenetti J. (2024). Social life cycle assessment of the olive oil industry: A case study in Guilan Province Iran. *Environment Development and Sustainability* 1-347. Salomone R. & Ioppolo G. (2012). Environmental impacts of olive oil production: A Life Cycle Assessment case study in the province of Messina (Sicily). *Journal of Cleaner Production* 28 88-100. Statista. (n.d.). Topic: Olive oil industry in Italy. Statista. Retrieved May 27 2024 from <https://www.statista.com/topics/6013/olive-oil-industry-in-italy/> Sustainability. (n.d.). Store Farchioni1780. Retrieved May 27 2024 from <https://farchioni1780.com/en/sustainability/> Violino S. Ortenzi L. Antonucci F. Pallottino F. Benincasa C. Figorilli S. & Costa C. (2020). An artificial intelligence approach for Italian EVOO origin traceability through an open source IoT spectrometer. *Foods* 9(6) 834.
<https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/>
<https://olivewellnessinstitute.org/article/how-sustainable-is-extra-virgin-olive-oil/>
<https://phys.org/news/2021-03-rapid-quality-authenticity-olive-oil.html>
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their happiness. Our starting point is ensuring access to healthcare and mental health services as a fundamental human right and a crucial component in our efforts to build a better world. We also aim to utilize well-being travel cultural immersion and education resources to empower individuals to gain self-awareness understand others and collectively achieve holistic happiness.

Goals

The Global Happiness Initiative Foundation is committed to enhancing the global quality of life through two strategic goals.

Long-term Goal: Increase Access to Key Well-being Services

Our long-term goal is to significantly increase access to key well-being services globally with our efforts first being localized in the United States and Italy. By doing so we aim to improve the quality of life and foster sustained happiness in diverse communities. This goal will not only benefit the communities we serve but also provide donor-investors with the satisfaction of knowing that their support is making a tangible difference in people's lives. The impact of these programs will be measured by tracking the number of individuals accessing these services the improvement in health and education outcomes and overall satisfaction rates among participants reflecting the direct benefits of our initiatives.

Short-term Goal: Establish and Strengthen Partnerships

Partnerships are at the heart of our strategy. Our short-term goal is to establish and strengthen partnerships with local and international public and private organizations. These partnerships are not just beneficial; they are crucial for enhancing our capability to deliver critical services effectively and efficiently. By collaborating with organizations with established infrastructures and expertise in our target regions we can leverage their strengths to better serve the communities' needs. Formalizing at least five significant partnerships within the first six months will be vital to achieving this goal.

Both goals complement existing efforts in the target communities rather than duplicate them ensuring that our interventions add value and create a measurable impact. Through these focused efforts the Global Happiness Initiative Foundation seeks to build a foundation for long-term social change that contributes to the well-being of individuals worldwide.

Objectives

The Global Happiness Initiative Foundation (GHIF) has set ambitious yet achievable objectives to ensure a broad and lasting impact on global well-being.

Educational Expansion

Our first objective focuses on education expansion. Within the first year GHIF plans to launch educational programs in at least two countries aiming to reach over 5000 individuals. These programs will be developed to address local educational gaps better equip youths with functional skills and promote holistic learning experiences. Evidence shows that educational programs can significantly enhance psychological well-being by increasing self-efficacy social support and overall life satisfaction (Ross & Willigen 1997). Moreover education has been linked to improved health outcomes and better mental health with increased years of education correlating with lower rates of depression and anxiety (Kondirolli & Sunder 2022). The success of these programs will be measured by the number of programs successfully launched the total number of participants enrolled and participant feedback on program effectiveness.

Healthcare Partnerships

Simultaneously GHIF aims to establish healthcare partnerships to enhance access to medical and mental health services. By the end of the first six months we will secure partnerships with at least five major healthcare providers. These collaborations will focus on providing comprehensive health services emphasizing preventive care and mental health which are crucial for improving individual well-being. Studies have shown that partnerships between educational institutions and healthcare providers can significantly improve health outcomes particularly in preventive care and mental health services (Ross & Wu

1995). The effectiveness of these partnerships will be assessed through the number of agreements signed the range of services provided and feedback from service users regarding the accessibility and quality of care.

Wellness Travel Model

Lastly our third objective is to develop a wellness travel model which will be designed developed and ready for implementation within the first eighteen months. This model will provide frameworks for wellness-oriented travel experiences promoting mental and physical health benefits through carefully crafted travel packages. Wellness programs embedded in educational and travel contexts have shown positive impacts on well-being reducing stress and improving mental health (Young et al. 2020). The model's success will be evaluated based on participant satisfaction measured through surveys and the repeat engagement rate indicating the model's appeal and effectiveness in enhancing participants' well-being.

Organizational Capacity

Foundation Structure and Management Capability:

The Global Happiness Initiative Foundation (GHIF) is designed to be a robust organization capable of managing large-scale projects and substantial grants. At its inception GHIF will establish a governance structure with a board of directors comprising education healthcare mental health and non-profit management experts. This board will provide strategic oversight and ensure all activities align with our mission and objectives.

Founding Team Expertise:

The founding team of GHIF will include highly qualified professionals selected for their extensive experience in project management international development healthcare and educational programming. Our recruitment strategy focuses on identifying individuals with a proven track record such as a Project Director with significant experience in managing and scaling community health programs an Education Specialist renowned for developing effective curricula in diverse cultural settings and a Mental Health Advocate with a strong background in leading global mental wellness initiatives. This planned assembly of expertise ensures a comprehensive and skilled approach to achieving the foundation's objectives.

Project Management Systems:

GHIF will implement rigorous project management methodologies to oversee all foundation activities. We will utilize established frameworks such as the Project Management Body of Knowledge (PMBOK) guidelines to plan execute monitor and close projects. Additionally GHIF will adopt modern project management tools for real-time tracking and reporting facilitating transparent and efficient management of the grant funds.

Preparatory Actions for Grant Management:

Prior to receiving the grant GHIF will:

- Formulate detailed project plans including timelines budgets and resource allocation.
- Establish financial management policies tailored to ensure accountability and prudent use of funds.
- Initiate discussions with potential partners and stakeholders to build a support network for immediate project launch upon funding.
- Demonstrating Capacity through Strategic Intentions:

While GHIF is a nascent organization our strategic planning reflects a clear and actionable roadmap for immediate impact upon funding. The foundation's goals are backed by a commitment to leverage the diverse skills of its team and the strategic insights of its board to establish a high-performing organization. GHIF's initial actions and detailed project preparations demonstrate our readiness and capability to effectively manage and utilize the grant to achieve significant social impact.

Cross-Sector Collaboration

The Global Happiness Initiative Foundation (GHIF) is committed to developing localized high-impact programs that serve as models for global implementation. To achieve this GHIF emphasizes cross-sector collaboration mainly focusing on strategic partnerships in Italy and the United States. These collaborations are designed to leverage regional strengths and address specific local needs ensuring the adaptability and effectiveness

of our well-being services.

Localized Educational Partnerships

GHIF will collaborate with leading educational institutions in Italy and the United States to integrate well-being practices into educational curricula. This initiative will focus on regions with significant disparities in educational outcomes providing targeted interventions that are culturally and contextually relevant. Research indicates that collaborative learning environments and educational partnerships can significantly enhance student outcomes and well-being (Kilgo et al. 2015). Success in these partnerships will be evaluated based on academic improvements student well-being metrics and the scalability of the programs to other regions.

Healthcare Alliances

GHIF plans to partner with healthcare organizations in Italy and the United States to increase access to quality health services. These partnerships will focus on integrating mental health services with primary care a critical need in both countries according to local health reports. Studies have shown cross-sector healthcare collaborations can improve health outcomes particularly when mental health services are integrated with primary care (Randall et al. 2023). By working with local health providers and community organizations these initiatives aim to create sustainable health improvement models suitable for global replication.

Public-Private Partnerships

GHIF will seek partnerships with local government bodies and private sectors in Italy and the United States to support infrastructure development vital to program delivery. These partnerships will help facilitate the creation of community wellness centers which will serve as hubs for education healthcare and community activities. Effective public-private partnerships have been shown to significantly enhance community health and well-being (Ovseiko et al. 2014). The effectiveness of these centers will be measured through community engagement rates and the overall improvement in community health and educational outcomes.

Community Engagement

Integral to our strategy is the direct involvement of local communities in Italy and the United States in the planning and implementation phases. GHIF believes that community input is essential to tailoring programs that genuinely reflect and meet local needs. Feedback mechanisms and community advisory boards will be established to monitor the programs' impacts and guide iterative improvements as evidence proves that community involvement is crucial for the success and sustainability of public health programs (Mattessich & Rausch 2014).

Program Plan

Introduction to Program Strategy

The Global Happiness Initiative Foundation (GHIF) is committed to addressing critical needs in communities across the United States and Italy. We implement multifaceted strategies that enhance individual well-being and community health specifically designed to complement rather than duplicate existing services. Our comprehensive approach leverages local strengths and targets specific challenges through innovative and sustainable solutions.

Integration with Government and Healthcare Services

Our initiative targets significant gaps in access to healthcare and government support services. These gaps have been identified through extensive community outreach and stakeholder engagement underscoring a pressing need for improved service accessibility and quality. To address these challenges GHIF plans to forge strategic alliances with local health departments and social service agencies creating a referral network that simplifies the process for individuals to access the services they need. This network aims to increase the efficiency and responsiveness of health and social care systems.

Partnership development is crucial for the success of our healthcare integration strategy. By collaborating with local health authorities and service providers we aim to establish robust partnerships that facilitate streamlined access to healthcare and support services. These partnerships will be foundational in