

# Enfocus



Maximizing "Triple Bottom Line"
Impacts from Human-Centric Lighting

## The Triple Bottom Line

"Triple Bottom Line" (TBL) is a framework credited to John Elkington, a world authority on corporate responsibility and sustainable development. It examines social, environmental, and economic impact through the "3Ps": People, Planet and Profit (or Prosperity).

The framework has inspired numerous accounting and reporting structures including SROI (Social Return on Investment) and ESG (Environmental, Social, Governance), which guide the highest caliber of investors and financial analysts such as BlackRock – the world's largest asset manager. BlackRock's CEO, Larry Fink, stated in January 2020 that his firm will immediately stop investing in companies that "present a high sustainability-related risk." Accounting for sustainability is moving from a practice of only the most conscientious businesses organizations to an economic imperative for all.

The TBL framework was designed in 1984 to provoke a systemic change to transform capitalism. It aimed to disrupt businesses that had focused solely on their shareholders at the expense of the greater stakeholder universe (all the people and communities a business' operations touch). A TBL perspective involves an organization's ability to track and manage "economic (not just financial), social, and environmental value added – or destroyed."(1)

The "Planet" element entails consideration for the impact on the natural environment. This comprises everything from carbon footprint to usage of toxic materials, as well as remediation for natural harm caused during day-to-day operations. Think: preservation.

The "People" aspect of the TBL framework encapsulates the positive and negative impact on an organization or product's most important stakeholders. Unlike the perceived traditional notion of shareholder primacy, the People dimension intentionally includes any person affected by the organization such as employees, customers, suppliers, and communities. Think: well-being.

The "Profit" facet is where most of the confusion surrounding the TBL framework arises. Encapsulating the positive and negative impact on the local, national, or international economy, it goes beyond mere financial implications. In other words, "profit" connotes societal profit or prosperity, including innovation and job creation. Think: common good.

# **EnFocus**<sup>TM</sup>

At Energy Focus, sustainability is our first and last thought. Our latest innovation, the patent- pending EnFocus<sup>TM</sup> lighting control platform, embodies the true spirit of "Triple Bottom Line" benefits - financial, environmental, and health. The EnFocus<sup>TM</sup> platform—with LED lamps and wall switches—leverages existing wiring to provide dimming (EnFocus<sup>TM</sup> DM Series) and color tuning controls (EnFocus<sup>TM</sup> DCT Series) to provide a controlled lighting system that is affordable and accessible for existing buildings. In other words, EnFocus<sup>TM</sup> can enhance occupant well-being and maximize energy savings without the extra costs associated with existing lighting controls that typically require adding data cables or high frequency hardware that increases cost and may create a security risk.

Simply put, EnFocus™ enables facility managers and occupants to focus on the tasks that add the most value for their organization – rather than being distracted by the maintenance and quality issues of lighting.

Lighting controls today remain largely out of reach of end users mainly due to three bottlenecks: high cost, complexity, and lack of education. EnFocus<sup>™</sup> takes on the three main bottlenecks with a simple retrofit approach—no new wires or wireless protocols needed for controls, and no need to replace the fixtures. EnFocus<sup>™</sup> control operation is both intuitive and comes at a much more affordable cost than prevailing control systems.



#### **PLANET**

Energy Focus' lamp-focused philosophy enables future, advanced LED upgrades without replacing whole fixtures, avoiding 7-50 times of unnecessary waste generated from fixture replacements and making EnFocus™ DM and DCT products easily the most sustainable LED lighting systems in the market.(2) EnFocus™ can maximize energy savings, sustainability and human health through simple control switch and/or lamp upgrades.

#### **PEOPLE**

LEDs have brought renewed attention to the biological impact of lighting, increasing demand for lights that promote both physiological and emotional well-being. In addition to lumen output control through dimming mechanisms, there are two additional primary biological advantages of LED in high quality products: precise control over the wavelengths emitted, and control of both visible and invisible flicker. Controlling the wavelengths emitted by the lamps has enabled the development of lighting systems where the spectral output can be changed during the day to better match our biological clocks – our circadian rhythms. Additionally, LEDs'



closer match to natural sunlight results in better color differentiation, brighter whites, better color saturation and overall better color vision.(3)

Light has a remarkable capacity to influence well-being. Recent research has shown the disruption of the biological circadian clock leads to a dysregulation of immune responses, which govern the physiological processes that prevent disease. Reinforcing the circadian rhythm of high-risk people—in hospitals for example—may boost immunity and prevent hospital-acquired infections. Numerous studies demonstrate an increase in the morbidity risk of cardiovascular disease, metabolic disease, and cancers from the disturbance of one's circadian rhythm.(4)



#### **PROFIT**

While energy savings often initiate the discussion to switch to LED, other non-energy costs could be even more powerful catalysts. Jones Lang Lasalle's real estate industry rule of thumb, called the "3-30-300", states that each year on average it costs a building \$3 per square foot in utilities, \$30 per square foot in rent, and \$300 per square foot in payroll.(5)

Better lighting means healthier and happier workers who are destined to be more productive. One study found happier employees are 20% more productive than unhappy employees.(6) If improved lighting reduces wasted time

by even 5 minutes per day—1% of a standard workday—that would equate to a \$500 savings per person per year for employees with an annual salary of \$50,000. This can be achieved by suppressing melatonin with the right kind of quality, low-flicker light during the day through applying higher lumen output and higher, or "cooler", color temperature light.(7) This induces alertness, which results in increased productivity, improved mood, and the cascading effects of healthier metabolisms and immune systems.

Through technological innovations, EnFocus<sup>™</sup> enables organizations to focus on the projects that provide the most benefits to society while retaining resources to further their mission.

## Conclusion

We believe our clients can affordably increase energy efficiency—saving more energy and reducing carbon footprint—and enhance employee well-being through an utterly simple and powerful control lighting platform such as EnFocus<sup>TM</sup>. People spend almost 90% of their time indoors and lighting touches us all every day: influencing our mood, alertness, and productivity during the day and quality of sleep at night. Controlling artificial light relieves stress levels and increases capacity for effective work and learning. EnFocus<sup>TM</sup> DM and EnFocus<sup>TM</sup> DCT lighting systems provide low-flicker dimming and color tuning controls that are easy to install at unprecedented affordability. We've focused on creating such engineering marvel to help you make your facility more sustainable and your occupants healthier and happier, so both you and your occupants can focus on the projects that matter.

### Sources

- 1. Harvard Business Review. John Elikington. "25 Years Ago I Coined the Phrase "Triple Bottom Line." Here's Why It's Time to Rethink It." <a href="https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it">https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it</a>
- 2. Energy Focus. "LED Tubes Versus Integrated Fixtures." <a href="https://energyfocus.com/resource/led-tubes-versus-integrated-led-fixtures/">https://energyfocus.com/resource/led-tubes-versus-integrated-led-fixtures/</a>
- 3. Rensselaer. "Human eye sensitivity and photometric quantities." <a href="https://www.ecse.rpi.edu/~schubert/Light-Emitting-Diodes-dot-org/Sample-Chapter.pdf">https://www.ecse.rpi.edu/~schubert/Light-Emitting-Diodes-dot-org/Sample-Chapter.pdf</a>
- 4. Sleep Science and Practice. Maria Comas, Christopher J. Gordon, Brian G. Oliver, Nicholas W. Stow, Gregory King, Pawan Sharma, Alaina J. Ammit, Ronald R. Grunstein, and Craig L. Phillips. "A circadian based inflammatory response implications for respiratory disease and treatment." <a href="https://sleep.biomedcentral.com/track/pdf/10.1186/s41606-017-0019-2">https://sleep.biomedcentral.com/track/pdf/10.1186/s41606-017-0019-2</a>
- 5. JLL. "A suprising way to cut real estate costs." <a href="https://www.us.jll.com/en/trends-and-insights/workplace/a-surprising-way-to-cut-real-estate-costs">https://www.us.jll.com/en/trends-and-insights/workplace/a-surprising-way-to-cut-real-estate-costs</a>
- 6. CAGE. Social Market Foundation. Daniel Sgroi. "Happiness and productivity: Understanding the happy-productive worker." <a href="http://www.smf.co.uk/wp-content/uploads/2015/10/Social-Market-Foundation-Publication-Briefing-CAGE-4-Are-happy-workers-more-productive-281015.pdf#page=9">http://www.smf.co.uk/wp-content/uploads/2015/10/Social-Market-Foundation-Publication-Briefing-CAGE-4-Are-happy-workers-more-productive-281015.pdf#page=9</a>
- 7. Fordham University. Joan E. Roberts. "Light and Immunomodulation." <a href="http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.650.5399&rep=rep1&type=pdf">http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.650.5399&rep=rep1&type=pdf</a>



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**CERTIFICATIONS** 

















