

# Dynamic Neurobehaviors in the Workplace Index

Measuring the adaptive effect of neurobehaviors of leaders in the workplace



November 2021

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### **Contributors**

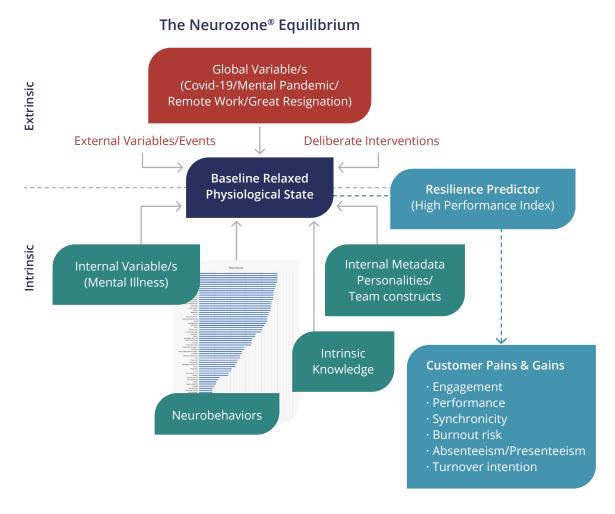


### **Executive Summary**

The business case for including neurobehavioral analytics into organizational goals is more vital than ever for businesses that want to build a high performance culture.

The Dynamic Neurobehavior in the Workplace Index produced by Neurozone® is based on insights and analysis gained through our High Performance Code. The report shows that the business case remains robust for including neurobehavioral insights into team and individual goal management. The data also builds the case for the positive impact of individuals and teams, who can adapt their neurobehavior to manage stressors, on metrics such as job satisfaction, engagement, innovation, and productivity, as shown in the Neurozone® Equilibrium in Figure 1 below.

Figure 1: Neurozone® Equilibrium



Source Neurozone® 2021

The insights are provided by the analysis of our proprietary data set, which comprises 14,500 leaders and high performing individuals globally, distributed across gender, geography, industries, and levels of education. The data set is also dynamic and continually updated, allowing it to adapt to external macro variables that impact neurobehaviors that predict resilience.

By following this dynamic data since 2016, we can see the change in neurobehavior of high performing teams and individuals pre- the pandemic, through the pandemic and how it has stabilized as the world tries to moves past the pandemic. The report also covers critical learnings based on these insights for leaders, coaches, human capital managers and HR directors to take back into their business to start developing a high performance culture while understanding the neuroscience behind it, as shown in Figure 2 below.

Figure 2: Critical learnings for organizations and their leaders

#### Impact of external stressors on organizations financial performance



Lack of adaptation by leaders, teams and organizations to long term stressors of Covid-19 and outcomes such as work from home is driving a global mental pandemic, resulting in a decrease in job satisfaction, engagement, innovation, and productivity. This change in behavior is seriously impacting the financial performance of organizations as trends such as the Great Resignation continue to grow.

#### Impact of external stressors on Neurobehaviors of high performing people over the past 18 months



The shifts in the Neurozone® High Performance Code from 2019 (pre the pandemic), through the pandemic to March 2021 shows how high performing individuals have unconsciously reprioritized their neurobehaviors to counter the effects of the global pandemic caused by stressors such as lockdown, helping them build their resilience and ensure their wellbeing by quickly and effectively moving back to their State of High Performance Readiness.

How to support leaders and teams in organizations to build a high performance culture



Using the current global aggregated data, Neurozone® recommends that organizations invest in the well-being of their people with particular emphasis on:

- · Rhythms:
  - Regular and diverse types of exercise
  - Mobility
- Consider awareness campaigns and team coaching sessions to:
  - · Replace destructive habits with constructive ones
  - Avoid negative thought patterns
  - · Harness the energy value of gratitude, humor, and enthusiasm
- · Cultivate curiosity through micro-learning and formal collective internal learning sessions.

#### What must organizations understand



Understanding this need for leaders, teams and organizations to continually adapt to the evolving pressures is of enormous value when wanting to build a resilient and high performing workforce.



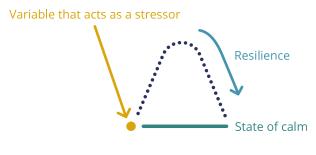
## Resilience is not grit or tenacity

### Understanding the neuroscience behind resilience

Today resilience is a hot commodity. This idea is not surprising since you need a lot of it to ensure high performance and to be able to thrive in a disruptive and rapidly evolving world. But resilience is not grit or tenacity. While determination and perseverance may help you overcome your challenges and ensure they don't overwhelm you, resilience is an inherent capacity of the brain-body system. It is the capacity of a biological organism (you) to overcome a challenge or experience that comes your way and the ability to return to a state of calm to reestablish your baseline or learn from that experience to help you tolerate the same or similar challenge better in the future. This recovery phase is vital for each of the systems in your body, for example, the immune system to recover, replenish, repair, or adapt.

Resilience refers to how effectively and quickly your system can counter, or balance external environmental changes (variables) based on past experiences and return to this baseline; your baseline relaxed physiological state, your state of calm, as shown in Figure 3 below. And by doing so, you learn from the experience and grow in capacity to overcome future challenges. This learning is what underpins evolution and adaptiveness.

Figure 3: Returning to the State of Calm



Source: Neurozone® 2021

If you cannot move back to the state of calm effectively and quickly, you go into chronic stress, become ill, and can die. Chronic stress results in burnout, something evident today as the world tries to move past the pandemic. The post-Covid-19 mental pandemic is now coming into play in organizations due to the inefficiency of people and teams to adapt successfully and build resilience since the pandemic started in 2020.

The state of calm is also the point where leaders, teams and organizations perform at their best. They are better at problem-solving, are more creative and innovative, and experience peak performance. At Neurozone®, this state is called the High Performance Readiness State.



## Neurobehaviors in **High Performing People**

Understanding the neurobehaviors that build resilience

When you are at your baseline relaxed physiological state or High Performance Readiness State, your brain (which affects emotion, behavior, and learning) functions at its optimum. In this state, you use less energy to achieve more significant results in the face of many internal and external variables, e.g., illness, new project or change in leadership. The way your brain affects emotions, behavior and learning is called neurobehavior.

For the past five years, Neurozone®'s team of neuroscientists and analysts have been tracking the neurobehavior of 14,500 highly resilient leaders globally to understand what neurobehaviors these people display. This data has been built into a code called the Neurozone® High Performance Code. As the data is dynamic, it reflects high performing people's capacity to adapt continually in the face of a rapidly evolving world.

Since the study's inception, which is still ongoing, over 68 different neurobehaviors have been studied in these high performing individuals. These 68 neurobehaviors displayed in Figure 4 below includes, for example, optimism, meaning in work-life, and curiosity.

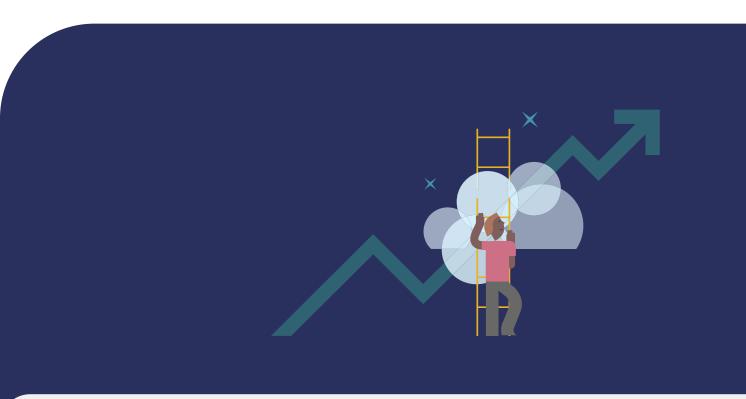


Figure 4: The 68 Neurobehaviors displayed by high performing leaders globally



#### HIGH PERFORMANCE **RHYTHMS**

- Alarm Snooze Avoidance
- Alcohol Moderation
- Balance & Flexibility Exercises
- Bedtime Consistency
- Caffeine Consumption
- Cardio Exercises
- · Consumption Before Bedtime
- Continuous Energy
- Dietary Balance
- Exercise Diversity
- Exercise Duration
- Fried Food Avoidance
- Fruit and Vegetables Consumption
- High-Intensity Interval Training (HIIT)
- Intermittent Fasting
- Medication Avoidance
- Mobility
- Napping
- Pollution Avoidance
- Sleep Duration
- Sleep Position
- Strength Exercises
- Water Consumption
- Weekend Bedtime Consistency



#### HIGH PERFORMANCE TRANSFORMERS

- Altruism
- Competitive Collaboration
- · Deep Breathing
- · Diversity in the Workplace
- Focused Attention
- Gender Diversity
- Open Monitoring
- Silencing the Mind Duration
- Silencing the Mind Noise Mastery
- · Silencing the Mind Times a Day
- Silencing the Mind Times a Week
- Silencing the Mind Timing



#### HIGH PERFORMANCE CONNECTORS

- Belonging in Work-Life
- Belonging in Personal Life
- · Empathy and Compassion
- Freedom to Voice Opinion
- Identity in Personal Life
- · Identity in Work-Life
- · Meaning in Personal Life
- · Meaning in Work-Life
- · Trust in Personal Life
- Trust in Work-Life
- · Views of High-Powered Members



#### HIGH PERFORMANCE **INNOVATORS**

- Brain Games Difficulty
- Brain Games Duration
- Cognitive Flexibility
- Constructive Mind Wandering
- Curiosity
- Disruptive Thinking
- · Generic Parts Problem-Solving Technique
- Involuntary Daydreaming Avoidance
- Learning a New Skill
- Learning Techniques
- Study Related to Job
- Study Unrelated to Job
- · What if? Thinking Method



#### HIGH PERFORMANCE **ENERGY**

- Curiosity
- Destructive Habit Avoidance
- Enthusiasm
- · Fear/Greed Drive
- Gratitude
- Humor
- Negative Thought Pattern Reduction
- Optimism

Source: Neurozone® 2021

We examine each of these neurobehaviors in the context of its relationship with resilience. Put differently, these behaviors can be seen as predictors of resilience. The Neurozone® team clustered these behaviors into five domains called the Neurozone® High Performance Domains, as shown in Figure 5 below.

Figure 5: The Neurozone® High Performance Domains



Source: Neurozone® 2021



#### **High Performance Connectors**

(e.g. social safety and team purpose)

To stay ahead of the curve in accelerating change and to be able to respond optimally to our environment, we must collaborate. Without collaboration, teams cannot operate effectively. The High Performance Connectors domain consists of interpersonal adhesive neurobehaviors such as belonging, entrustment and empathy. Strengthening these neurobehaviors, ensures that we feel connected as interdependent individuals within a team, and teams within an organization.



#### **High Performance Transformers**

(e.g. mindset optimization and team mindfulness)

Transforming one's mental perspective is an integral part of embodying high performance. To execute an action aligned with high performance, individuals within a team need to connect and ensure that everyone is operating with the optimal perception of the task, team, and conditions at hand. Optimizing perception is what High Performance Transformers are all about.



#### **High Performance Rhythms**

(e.g. exercise and nutrition)

A core tenet underpinning high performance science is that the whole brain-body system works rhythmically. Like individual brain-body systems, teams, and functional groups (in other words, collective organisms) also naturally operate in rhythmic and cyclic manners ones that may require optimization. Observing, optimizing, and co-operating with our brainbody system is not only a natural imperative but a crucial key to unlocking high performance in individuals and teams. Rhythms such as whether team culture allows team members to exercise and move around regularly or allowing team members to take care of their diet mindfully can impact an individual and, therefore, a team's performance.



#### **High Performance Energy**

(e.g. optimism, curiosity and reducing negative thought patterns)

Energy regulation is a crucial requirement of our biological brain-body system, and why we need to ensure that we have a high yield for the limited amount of energy we can assign to our tasks. We can maximize our energy by cultivating the right emotional state as individuals and teams. On the converse side, embodying the wrong emotional states and associated behaviors (e.g., negative thought patterns) can block energy accumulation, leaving us underfueled for goal achievement.



#### **High Performance Innovators**

(e.g. problem-solving)

High performance is often practically measured by the degree of innovation in our daily output. The brain is a learning and problem-solving machine, so its measurable power lies in the extent to which it yields efficient results and fashion novel solutions. However, science has long established that collective intelligence is far superior to the highest intelligence quotient of any one member therein - provided, of course, that connective and transformative dynamics are present. Optimizing the brain's problem-solving power in a collective, interdependent context will enhance both individual and team high performance significantly.



## Tracking the adaptation of neurobehaviors in high performing people within organizations

The team at Neurozone®, led by Dr Etienne van der Walt, using the High Performance Code, have shown that, prior to the pandemic, humanity largely depended on a set of tools and behaviors to maintain mental and physical well-being. However, the environmental changes catalysed by the pandemic have meant that these resilience indicators have since transformed.

In 2019, the data showed clear clusters of ten neurobehaviors displayed by high performing individuals. The top 10 predictors of resilience were:

#### 2019: Pre-pandemic

- Optimism (Energy)
- Reducing Negative Thoughts (Energy)
- Meaning in Work-Life (Connectors)
- **Generic Parts Problem Solving Technique**
- **Intermittent Fasting** (Rhythms)
- Fear/Greed Drive (Transformers)
- **Bedtime Consistency** (Rhythms)
- **Identity in Work-Life** (Connectors)
- Meaning in Personal Life (Connectors)
- Water Consumption (Rhythms)

By March 2020, the picture started to change, and by the end of 2020, the top 10 predictors of resilience stabilized as:

#### 2020

- Reducing Negative Thoughts (Energy)
- 5

- 9

And by October 2021, the top 10 predictors of resilience were:

#### 2021

- 1 Exercise Duration (Rhythms)
- Exercise Diversity (Rhythms)
- Destructive Habit Avoidance (Energy)
- Reducing Negative Thoughts (Energy)
- Mobility (Rhythms)
- Enthusiasm (Energy)
- Curiosity (Energy)
- Optimism (Energy)
- **Gratitude** (Energy)
- Humor (Energy)

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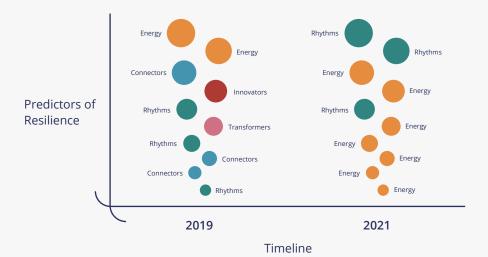




## **Observations and Critical Learnings**

- The pandemic and global lockdown was such a significant external variable (stressor) that it dwarfed other external influencing variables.
- In 2019, all five High Performance Domains featured in the behavior shown by high performing individuals. In 2020, this shifted to predominantly Energy Domain behaviors, with Rhythms and Transformers also featuring in the behavior set. By 2021 Energy Domains were the predominant behaviors followed by Rhythms (as shown in Figure 6).

Figure 6: Changing Neurobehavior of High Performing Individuals (2019 - 2021)



- The shifts in the Neurozone® High Performance Code from 2019 to 2021 clearly shows how high performing individuals have unconsciously reprioritized their neurobehaviors to counter the effects of the global pandemic caused by stressors such as lockdown, helping them build their resilience and ensure their well-being by quickly and effectively moving back to their State of High Performance Readiness.
- A likely explanation for this behavioral shift is that people were more sedentary and had less energy (secreting less dopamine in anticipation of achieving higher goals) pre- the 2020 pandemic. Lockdown forced people to engage in activities that boosted their high performance energy, such as optimism, humor etc. because those behaviors unlocked dopamine release in the brain. Hence, in a very negative time, these behaviors prove themselves to be predictors of resilience.
- All these neurobehaviors and domains intrinsically enhance problem-solving and innovation.



### Outcome

Everything affects everything in a living system. All these neurobehaviors and domains intrinsically enhance problem-solving and innovation. They differ in the way they work, their effect, and where they lie within the chain of events that leads to resilience.

While there is a need to improve resilience by consciously retraining behaviors, it is also clear that high performing people who can withstand more challenges have an innate unconscious capability to reprioritize the most critical behaviors that will keep them resilient under the stressful circumstances, including mindset shifts that internally motivate behavioral change as well.

Understanding this need for leaders, teams and organizations to continually adapt to the evolving pressures is of enormous value when wanting to build a resilient and high performing workforce.



## Recommendations for **Organizational Leaders**

The Neurozone® dataset provides an aggregated picture of the prioritization of neurobehaviors of leaders who made use of Neurozone® services globally.

Using the current global aggregated data, we recommend that organizations invest in the wellbeing of their people with particular emphasis on:



- Regular and diverse types of exercise
- Mobility



### **ENERGY**

Consider awareness

- with constructive ones
- of gratitude, humor, and



#### HIGH PERFORMANCE **INNOVATORS**

 Cultivate opportunities for micro-learning through formal collective internal learning sessions

We believe the data is of practical value for organizations, as the pandemic still dominates the external business environment. Organizations will increasingly need to gain a quantified understanding of the external factors that influence their immediate business environment. These may even vary between different geographies of larger organizations. All these external influencers (providing metadata) will affect the prioritization of the neurobehaviors in the Neurozone® High Performance Code. For organizations to personalize the support of their people to remain a resilient workforce in a rapidly accelerating ecosystem, the neuroanalytical contributions of a dynamic data-driven high performance system may well become a significant differentiator.

### **About the Authors**



Dr. Etienne van der Walt Neurologist and CEO of Neurozone®

Etienne pioneers the way for high performance readiness in the field of organizational development and business coaching. He can identify the heart of the problem organizations face when trying to build a high performance culture. He can then simplify the insights and knowledge of neuroscience and the data derived from Neurozone®'s High Performance Code into actions that help organizations build high performing workforces. In the last decade, he has worked with global businesses such as MIT and McKinsey to contribute, develop, and consolidate a unified theory of brain/body performance, optimization, and innovation through managing resilience. He is also a highly sought-after keynote speaker and masterclass presenter in this field.



Dr. Mariza van Wyk PhD Head of Science and Analytics at Neurozone®

Mariza is a neuropsychologist and neuroscientist with both clinical and research experience in understanding the enigmas of the brain. She uses this knowledge and insights from Neurozone®'s proprietary data, the High Performance Code, to inform the development of practical and usable products.



**Judy Lain** Chief Marketing Officer at Neurozone®

Judy has 20 years of experience in the marketing field and a passion for data and insights. She spends her time at Neurozone® by leading marketing efforts to connect Neurozone® with companies, coaches, and communities globally.

### About Neurozone®

Neurozone® is a leading neurotech and performance analytics business that has pioneered the path to delivering evidence-based interventions to build resilience as the buffer against burnout and simultaneously unlock the potential of teams and their leaders in high performing organizations.

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