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“Without intervention, heat stress will continue to erode productivity, income and worker health at a national scale”

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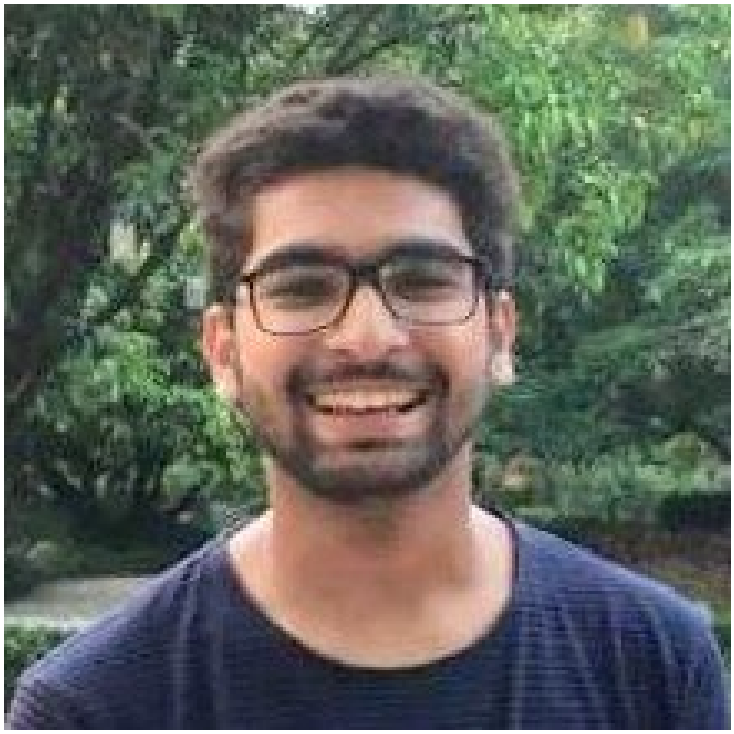
Founded in 2024 in Chennai, Sukoontech Solutions Private Limited, by Phalgun Vyas, is redefining wearablecomfort through customised, temperature-regulating clothing. Addressing the serious challenge of occupational heat stress that affects workforce health and productivity across industries, Sukoon is pioneering smart solutions for extreme environments. Its innovative cooling wearables, including a smart jacket powered by a Digital Hybrid-IDEC mechanism, enhance safety and performance in high-heat conditions. Recently, it received the Infosys Foundation Aarohan Social Innovations Award under the Jury’s Special Awards category. In an interview with BioSpectrum India Phalgun Vyas, Founder & CEO, Sukoontech Solutions shared his vision and journey.



What inspired you to develop Sukoon, and why is heat stress such a critical issue in India today?

Sukoon was born from a very real and visible problem; people working long hours in extreme heat with little protection beyond basic PPE. In India, workers in industries like steel, cement, chemicals, oil & gas, construction, and logistics routinely face temperatures exceeding 45–50°C. Heat stress doesn’t just cause discomfort; it leads to fatigue, dehydration, cognitive decline, accidents, and even fatalities.

At a national scale, the impact is enormous. According to the ILO, India is projected to lose 5.8 per cent of total working hours by 2030 due to heat stress—equivalent to 34 million full-time jobs. This makes heat stress not just a workplace issue, but a public health and economic crisis. Sukoon was created to address this gap where traditional PPEs fail.

How does Sukoon's Digital Hybrid-IDEC cooling technology work?

Sukoon's BluPULSE uses a Hybrid IDEC (Integrated Dynamic Evaporative Cooling) system, which in simple terms combines passive cooling through materials and airflow that naturally absorb and dissipate latent heat with active cooling that uses controlled airflow and evaporation to enhance cooling when needed. Along with this, the wearable integrates thermal, activity, and location sensors. These continuously monitor how the worker's body is responding to heat and send real-time insights to supervisors. The result is up to 15–16°C reduction from ambient temperature, while also enabling early detection of heat stress risks.

Who are the primary users of Sukoon, and how does it improve their safety and productivity?

Our primary users are industrial workers operating in high-heat environments in all sectors. From maintenance staff near boilers, furnace operators, outdoor workers, logistics and delivery personnel, to emergency responders.
BluPULSE improves safety by reducing heat fatigue and enabling early intervention through real-time monitoring, enhances productivity by helping workers stay focused, hydrated, and physically capable for longer durations, and supports well-being by making work in extreme heat more humane and sustainable. By aligning worker health with organisational performance, it creates a win-win outcome for both.

What makes Sukoon different from other cooling or protective wearables available today?

Most cooling wearables globally focus on one dimension—either cooling or comfort. Sukoon operates at the intersection of thermal systems, electronics, software, advanced textiles, and ergonomic design. What truly differentiates BluPULSE is its hybrid IDEC cooling, which delivers higher comfort performance on psychrometric charts than any existing cooling jacket, combined with data-driven safety insights rather than just cooling, and comparable or better performance at a significantly lower price point. This level of interdisciplinary integration makes BluPULSE difficult to replicate.

Approximately how much investment has gone into developing Sukoon so far?

Around Rs 40 lakh. Investment has primarily gone into R&D, materials, field trials, electronics, and pilot deployments. While we are still early-stage, the focus has been on real-world validation over lab-only development.

Who were the key supporters that helped bring Sukoon to life?

Sukoon is incubated at IIT Madras Research Park, which has been instrumental in providing technical mentorship, ecosystem access, and credibility. We have also received strong support from industrial safety leaders and HSE teams, mentors from manufacturing and heavy industry, early pilot partners who trusted us with on-ground trials, and the families of our team members. This ecosystem of support has been critical in enabling our journey from concept to deployment.

What has been the response from industries and institutions that have piloted Sukoon?

The response has been highly encouraging. We have conducted successful pilots at multiple sites across India. Feedback consistently highlights a noticeable reduction in heat fatigue, leading to an improved productivity baseline, enhanced comfort during long shifts that boosts overall morale, and better acceptance compared to bulky traditional PPEs. These pilots have resulted in early revenue and established a clear pathway toward commercial-scale adoption.

How affordable and accessible is Sukoon for small contractors and public-sector organisations?

Affordability is a core design principle. BluPULSE delivers higher cooling performance at a lower cost than comparable global products. This makes it viable not only for large enterprises but also for small contractors, public-sector units, and CSR-led deployments. We are additionally working on a cooling jacket that will be globally the most effective and cheapest ever made which will be ready for deployment for the summer of 2026.

What does recognition at the Infosys Aarohan Social Innovation Awards 2025 mean to you?

Being recognised as a Jury Favourite in the Healthcare Category at the Infosys Foundation Aarohan Social Innovation Awards 2025 is deeply meaningful. It validates that Sukoon is not just a product, but a socially critical solution. The recognition reinforces our belief that worker safety, health, and dignity must be central to India's growth story.

How do you see Sukoon contributing to India's public health and occupational safety goals?

Sukoon directly supports the reduction of heat-related illnesses and accidents, improves occupational safety compliance, and promotes long-term workforce health and productivity. By transforming PPEs into climate-adaptive, data-driven safety systems, we help shift India's safety ecosystem from reactive to proactive.

With rising temperatures due to climate change, how urgent is the need for solutions like Sukoon?

The urgency is immediate. Climate change is making extreme heat the new normal. Without intervention, heat stress will continue to erode productivity, income, and worker health at a national scale. Solutions like Sukoon are no longer optional—they are essential infrastructure for climate resilience.

What are your immediate next steps for scaling Sukoon?

Our next steps focus on scaling manufacturing for commercial deployment, expanding adoption across manufacturing, emergency services, logistics, and public infrastructure, and strengthening our data platform to enable predictive heat-stress analytics. In parallel, we aim to partner with industry leaders and government bodies to support large-scale rollouts. Our vision is to make Sukoon a standard layer of safety wherever humans work in extreme heat.

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