“Wearable humming-based access switch for assistive communication”

Expertiqa Technologies

Kitchener, Ontario

https://expertiqa.com/

Value Proposition 解決方案及核心價值

Our technology is a wearable access switch that converts humming into precise, repeatable switch inputs for Augmentative & Alternative Communication (AAC) and computer access. By sensing vocal-cord vibration at the neck, it ignores room noise and requires no speech, eye gaze, or fine motor control. It is comfortable, low-power, and compatible with standard switch-scanning interfaces, offering an option when eye-gaze, sip-and-puff, or mechanical switches are unreliable. Early clinical and usability tests show consistent activation and positive user feedback.

開發「穿戴式控制開關裝置」，藉由偵測頸部聲帶振動來辨識指令，能將「哼聲」轉換為精準可重複的輸入資訊，無需語音、眼球追蹤或精細手部控制，亦不受環境噪音干擾，可應用於「輔助與替代性溝通系統（AAC)」及電腦。
產品具備輕巧舒適、耗能低、相容性高等特色，可與標準AAC開關介面整合，且經臨床與可用性測試，比起傳統的眼控式、吹吸式、機械式輔具在使用上更穩定。

Main Business Areas 主要業務及應用方向

- Wearable switch for AAC and computer access
- Alternative access using physiological signals (vocal-cord vibration)
- Integration with mainstream AAC devices/apps (switch scanning, adapters)
- Clinical usability and training support for SLP/OT programs
- Mounting and setup accessories for wheelchair, bedside, and home use

- 穿戴式開關系統：應用於輔助與替代性溝通（AAC）及電腦操作控制。
- 生理訊號應用：利用聲帶震動作為控制輸入的替代方式。
- 系統整合：可與主流 AAC 裝置或應用程式（掃描開關、轉接器）整合。
- 臨床與培訓：用於語言治療師（SLP）與職能治療師（OT）培訓。
- 多場域安裝應用：適用於輪椅、病床及居家環境，並具備固定配件支援。

Partnership Goals 合作目標及需求

- Find Taiwanese clinical, research, and manufacturing partners, co-develop design improvements that matter to users
- Advance manufacturability: DFM/DFA, supplier ready components, and reliability and environmental tests
- Set up bench tests, clinician guided usability, and AAC compatibility with local devices and apps in Taiwan
- Discuss TFDA pathway, set post event follow ups such as LOIs or MOUs

- 尋找台灣臨床、研究及製造夥伴，共同開發更貼近使用者需求的產品設計。
- 推進製造可行性（DFM/DFA）、零件供應鏈整備及可靠度／環境測試。
- 在台設立功能測試與臨床使用者回饋試驗點，驗證在地裝置及App相容性。
- 法規與後續合作：探討 TFDA 醫療器材核准路徑，並規劃簽署LOI或MOU。

Types of R&D Being Pursued 研發重點

✔Technology Validation 技術驗證

✔Technology Adaptation 技術適應及在地化

✔Technology Co-development 共同開發

“Real-time AI instructor for hands-on clinical training and assessment”

Illumia Labs

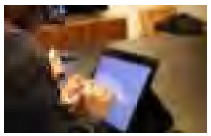
Winnipeg, MB

https://illumialabs.ai/

Value Proposition 解決方案及核心價值

- Adaptive and Action-Based Training: Unlike simple conversational chatbots, our system provides real-time coaching and assessment while trainees perform physical procedures or engage in role-playing scenarios. This approach is vital for developing muscle memory and essential skills required in clinical settings, accreditation and licensing requirements.
- Behavioral Replication: Training the AI to replicate the human instructor’s behavior, subtle actions, and complex assessment methods.
- Sensor Agnosticism: The technology is not restricted to bulky goggles but can be integrated into AR/XR glasses or sensor-filled training rooms.

- 動態適應式實作訓練：不同於一般對話型 AI，系統可在學員實際操作或情境模擬時，提供即時教練指導與評估，有助於建立臨床工作中所需的肌肉記憶與核心技能，符合專業認證與執照培訓需求。
- 行為複製技術：AI可學習人類講師的行為模式、細微動作與複雜評估方式，精準還原專家教學過程。
- 感測裝置相容性：技術不受限於笨重的頭戴裝置，可整合至 AR/XR 智慧眼鏡或內建感測器的訓練環境中。



Main Business Areas 主要業務及應用方向

- Training Bottleneck: Creating unlimited training capacity without scaling human trainers.
- Compliance/Safety: Ensuring 100% standardized, high-quality, and auditable training for critical skills.
- ROI/Measurement: Providing deep learning analytics (action-based and conversational) to prove a clear return on investment.
- 突破培訓瓶頸：在不增加人力講師的前提下，打造無限延展的訓練容量。
- 合規與安全性：確保關鍵技能訓練過程標準化、高品質且可稽核。
- 效益分析：行為與對話式深度學習分析，量化訓練成效與投資報酬率。

Partnership Goals 合作目標及需求

- Strategic Partnerships: Actively pursuing channel partnerships and system integrators (SIs) with strong existing enterprise relationships in APAC to co-sell and co-deliver.
- Hardware provider to establish ISV providing scalable use case for them
- Service provider to integrate features for upselling to existing customers

- 策略合作：尋求與亞太地區具企業通路基礎的系統整合商(SI)及通路夥伴，共同推廣並導入市場。
- 與硬體供應商合作：建立可擴展應用場景的獨立軟體供應商(ISV)模式。
- 與服務供應商合作：整合功能以提升現有客戶的附加價值與再銷售機會。

Types of R&D Being Pursued 研發重點

✔Technology Validation 技術驗證

✔Technology Adaptation 技術適應及在地化

✔Technology Co-development 共同開發

“Upper-extremity rehab device simulating real-world motion”

Karma Medical Products

Edmonton, Alberta

https://fepsim.com/

Value Proposition 解決方案及核心價值

FEPSim is a patented, clinician-designed rehabilitation device that restores hand, wrist, and forearm function through realistic, resistance-based motion. Unlike bulky robotic systems, FEPSim is portable, affordable, and enables high-repetition, task-specific therapy for neuro, orthopedic, and sports patients. Validated by leading rehab centers, it fills the gap between passive recovery and real-world performance, helping patients regain strength and independence faster while offering clinics measurable outcomes and rapid ROI.

由臨床專家開發上肢功能復健裝置"FEPSim"，透過真實阻力模擬運動，幫助患者恢復手部、手腕與前臂功能。
有別於傳統笨重的機械式復健機台，攜帶方便、價格親民，能進行高重複次數且針對特定動作的訓練，適用於神經復健、骨科及運動傷害患者。
具備專利技術，並經多家國際復健中心驗證，協助弭平「被動恢復」與「實際動作能力」間的落差，加速患者自主復原能力，為醫療院所提供量化數據成果及高投資報酬率。

Main Business Areas 主要業務及應用方向

- Design and manufacture of upper extremity rehabilitation devices
- Evidence-based therapy tools for neuro, orthopedic, and sports recovery
- OEM precision machining and product development
- Clinical research collaborations with leading hospitals and universities
- Global distribution partnerships across North America, Europe, and Asia
- Future development of digital and IoT-enabled rehabilitation systems
- 上肢復健裝置設計與製造
- 臨床實證導向的治療工具（神經復健、骨科與運動傷害恢復）
- OEM 精密加工與產品開發
- 臨床研究合作：與國際知名醫院及大學共同開展臨床研究
- 全球通路合作：已拓展至北美、歐洲與亞洲市場
- 未來發展方向：導入數位化與物聯網（IoT）智慧復健系統

Partnership Goals 合作目標及需求

- Establish distribution and clinical partnerships across Taiwan and Asia
- Collaborate with rehabilitation hospitals and universities for clinical validation and R&D
- Identify OEM and component manufacturing partners for production
- Explore integration of digital and IoT features
- Build long-term relationships supporting joint innovation, data-driven rehab, and export growth
- 建立台灣及亞洲區銷售與臨床合作夥伴，拓展市場通路
- 與復健專科醫院及大學合作，進行臨床驗證與研發
- 尋找 OEM 及零組件製造合作夥伴，共同優化量產流程
- 結合台灣醫療科技專長，開發導入數位與 IoT 功能的智慧復健產品
- 建立長期合作關係，推動共同創新、資料導向復健及出口成長

Types of R&D Being Pursued 研發重點

✔ Technology Validation 技術驗證

✔ Technology Adaptation 技術適應及在地化

✔ Technology Co-development 共同開發

“Biofeedback platform for managing delirium while reducing use of antipsychotics”

MindfulGarden Digital Health

Vancouver, British Columbia

https://mindfulgarden.com/

Value Proposition 解決方案及核心價值

Agitated behaviours associated with major neurocognitive disorders are currently addressed with antipsychotics and restraints that often don’t work and result in high human and economic costs.

MindfulGarden is the first clinically validated affective biofeedback platform created as a bedside tool for clinicians to manage neurocognitive behaviours, beginning with delirium. An acute change in the brain considered a medical emergency, delirium adds 3X to cost of care, and 9Xs risk of cognitive decline including earlier onset of dementia.

In studies and real-world evaluations, MindfulGarden reduces ‘as needed’ antipsychotics and agitation, decreasing length of stay and cost of care.

現行針對重度神經認知障礙（如譫妄、失智）所引發的躁動行為，常依賴抗精神病藥物與身體約束，不僅效果有限，且須高昂人力與醫療成本。MindfulGarden 為首個經臨床驗證的「情緒回饋（Affective Biofeedback)」平台，為臨床醫師管理神經認知行為的輔助工具，尤其針對譫妄（Delirium）可有效降低使用抗精神病藥物的比例與躁動行為，縮短住院天數並減少醫療成本。譫妄是一種急性腦部變化急症，會使照護成本增加 3 倍，並讓認知衰退（含失智）風險提升 9 倍。

Main Business Areas 主要業務及應用方向

- Tertiary Care/Medical Centres & Regional Hospitals (with > 500 beds) focus on critical care, surgery (cardiac, orthopedic), and geriatric wards as early adopters
- Hospitals with delirium reduction/management as a priority
- Residential/Long-Term Care/Hospice — focus on delirium superimposed on dementia
- R&D collaboration: non-contact sensory technology and affective computing/biofeedback

- 醫學中心與大型區域醫院（500床以上）：鎖定加護病房、心臟外科、骨科及高齡病房等重點單位作為早期導入場域。
- 以譫妄症管理為重點的醫療院所：協助降低急性譫妄發生率與藥物使用。
- 長照與安寧照護機構：針對合併失智的譫妄個案提供非侵入式安撫方案。
- 研發合作：聚焦於非接觸式感測技術、情緒運算與生理回饋系統開發。

Partnership Goals 合作目標及需求

Interview potential partners for market expansion and collaborative R&D projects. Collaborations might include:

- Real-world validation of MindfulGarden with target hospitals
- Adaptation of MindfulGarden to Taiwan health system
- Exploring opportunities with leading Taiwan neuro/cognitive organizations

尋求潛在合作夥伴，共同推動市場拓展與研發合作，合作方向包括：

- 與目標醫院進行 MindfulGarden 的臨床實證與場域驗證
- 與台灣醫療體系合作，調整與在地化系統應用
- 與台灣領先的神經醫學與認知研究機構探索合作機會

Types of R&D Being Pursued 研發重點

✔ Technology Validation 技術驗證

✔ Technology Adaptation 技術適應及在地化

✔ Technology Co-development 共同開發

"AI-powered remote health monitoring for elderly with predictive alerts"

WeavAir

Toronto, Canada

https://weavair.com/

Value Proposition 解決方案及核心價值

WeavAir pioneers remote health monitoring for the elderly, integrating radar and ultrasonic sensors with predictive AI to deliver real-time vital signs and movement data. Our platform enables early detection of health risks, personalized care plans, and timely interventions, improving outcomes by up to 95% accuracy. Validated through pilots and healthcare collaborations, WeavAir bridges gaps in underserved areas, enhancing elderly care quality, accessibility, and proactive health management in both Canadian and Taiwanese markets.

WeavAir 致力於縮短偏鄉與高齡照護資源落差，開發長者遠距健康監測技術平台，結合雷達、超音波感測器及AI風險預測，即時偵測生命徵象與行動數據，協助醫療照護機構辨識早期健康風險、提供個人化照護建議與即時介入措施，準確率高達95%，經多項臨床試驗與醫療合作驗證，有效提升照護品質、醫療可及性與主動健康管理能力。

Main Business Areas 主要業務及應用方向

- AI-powered remote health monitoring for elderly care, integrating radar and ultrasonic sensors to track vital signs (heart rate, respiration, movement) in real time.
- Predictive analytics platform that identifies potential health risks early and supports personalized, preventive care.
- Seamless integration with healthcare and public health systems, enabling home care, assisted living, telehealth, and chronic disease management.

- AI遠距監測：即時生理數據（心率、呼吸、活動）監測。
- 預測式健康分析平台：主動辨識健康風險，支援個人預防醫療與照護決策。
- 醫療與公衛系統整合：應用於居家照護、安養院、遠距醫療及慢性病管理，提升長者生活品質。

Partnership Goals 合作目標及需求

- Joint technology and clinical validation in Taiwan, adapting WeavAir's platform to local healthcare regulations and clinical workflows.
- Collaborative R&D and data-driven innovation with healthcare providers, universities, and research institutes to enhance predictive AI and sensor applications.
- Strategic partnerships for large-scale deployment, system integration, and market expansion across Asia.

- 技術與臨床驗證：在台進行場域試點，符合在地醫療法規與臨床流程。
- 研發與資料導向：與醫療院所、大學及研究機構共同開發強化 AI 預測與感測應用。
- 策略性夥伴關係：推動系統整合與規模化導入，拓展亞洲市場。

Types of R&D Being Pursued 研發重點

✔ Technology Validation 技術驗證

✔ Technology Adaptation 技術適應及在地化

✔ Technology Co-development 共同開發

WECARE

“Contactless mmWave AI elder monitoring with real-time caregiver alerts”

Wecare Dynamics Solution

Edmonton, Alberta

https://www.wecaredynamics.com/

Value Proposition 解決方案及核心價值

WeCare Dynamics delivers contactless elder monitoring through advanced mmWave radar technology—offering 24/7 safety, health insights, and fall detection without cameras or wearables. Our AI-driven platform tracks breathing, sleep, and movement to predict risks early, empowering caregivers with real-time alerts and actionable analytics.
Unlike conventional solutions, WeCare ensures privacy, dignity, and proactive care for seniors at home or in facilities. Designed for scalability and clinical integration, our system reduces costs, enhances safety, and supports aging with independence.

WeCare Dynamics 以毫米波雷達技術開發「非接觸式長者監測系統」，全天候守護安全、健康與跌倒偵測，無需攝影機或穿戴裝置，其 AI 驅動平台可即時追蹤呼吸、睡眠與活動狀態，辨識潛在風險，提供照護者即時警示與可行性分析。相較傳統解決方案，WeCare 兼顧隱私與尊嚴，可適用於居家與照護機構，其系統具可擴展性，並能與臨床系統整合，有助於降低成本及支持長者自主安老。

Main Business Areas 主要業務及應用方向

- Senior living & LTC: room-level safety + proactive insights
- Home-care / B2C: independence with timely knowing for families
- Hospitals / transitional care: night-risk monitoring post-discharge
- Analytics: sleep/mobility/bathroom trends → actionable “nudges”

- 長者住宅與長期照護機構：提供房間級安全監測與主動風險洞察
- 居家照護（B2C）：協助家屬即時掌握長者狀況，維持自主生活
- 醫院／過渡照護：出院後夜間風險監測
- 數據分析：透過睡眠、行動與如廁行為趨勢，提供可行性行動建議

Partnership Goals 合作目標及需求

- Deploy at scale: distributors/installers for rapid room-by-room rollout
- Clinical validation: multi-site pilots with hospitals/senior operators
- Channel alliances: insurers, home-care networks, and regional health authorities
- Research: co-develop preventive indicators and publish outcomes

- 規模化導入：尋找經銷商與系統整合夥伴，加速場域部署
- 臨床驗證：與醫院及長照機構進行多據點試點合作
- 通路合作：與保險公司、居家照護網絡及地方衛生機構建立聯盟
- 研究合作：共同開發預防性指標並發表研究成果

Types of R&D Being Pursued 研發重點

✔ Technology Validation 技術驗證

✔ Technology Adaptation 技術適應及在地化