Inspira Technologies

Nasdaq: IINN

Investor Presentation

MARCH 2026

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Forward Looking Statement Disclaimer

This presentation contains express or implied forward-looking statements pursuant to U.S. Federal securities laws. These forward-looking statements and their implications are based on the current expectations of the management of Inspira Technologies OXY B.H.N.. LTD. (the "Company") only, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. For example, the Company is using forward-looking statements when it discusses the prospective commercialization of its products and roadmap to market disruption , prospective U.S. Food and Drug Administration ("FDA") regulatory submissions and clearances for its products the projected size of the mechanical ventilation market and perfusion systems market, potential grants of patents, the projected size of any other markets the Company may operate in, the potential market sizes of its future products, the intended outcomes and use of its products, including the HYLA™ Blood Sensor and INSPIRA™ ART100, the intended uses and potential benefits of its products, future products and technology, and the potential effects of its products on patients. This presentation also contains estimates of the Company's health economics model. These forward-looking statements and their implications are based solely on the current expectations of the Company's management and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Except as otherwise required by law, the Company undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. More detailed information about the risks and uncertainties affecting the Company is contained under the heading "Risk Factors" in the Company's annual report on Form 20-F for the fiscal year ended December 31, 2025, filed with the U.S. Securities and Exchange Commission (the "SEC"), which is available on the SEC's website, www.sec.gov.

Disclaimers

Mechanical Ventilation refers to Invasive Mechanical Ventilation. Planned timelines, milestones, estimates or assumptions are subject to change. The INSPIRA™ ART100 system has FDA 510(k) clearance and Israeli AMAR certification for Cardiopulmonary Bypass and ECMO procedures. The INSPIRA™ ART100 System is FDA 510(k) cleared for use in an extracorporeal perfusion circuit to pump blood during short-duration cardiopulmonary bypass procedures lasting 6 hours or less.

INSPIRA™ ART100 and INSPIRA™ ART500 are different devices The Augmented Respiration Technology, Adaptive Blood Oxygenation Technology, INSPIRA™ AI, HYLA™, INSPIRA™ ART500, VORTX™ and any other Inspira products, devices, disposables, components, software or technologies are still in development and have not been tested or used on humans. Product intent of uses and regulatory pathways are yet to be defined or finalized. The products have not been cleared or approved by the FDA or any other regulatory or authorizing authority. The estimated date/time of regulatory clearance or approval may be subject to change. Approval or clearance by the FDA, CE or any other authorizing entity may not be granted or may require different study parameters or data or validation from those that are intended or were included in the submission. In addition, there is an inherent risk and variability in the overall regulatory process and no guarantee as to the success of any trial or regulatory approval or clearance. Some or all of the clinical studies may be conducted outside the U.S.

INSPIRA™ ART500 or HYLA™ may either be embedded or integrated with other software with selective levels or functionality, yet to be decided by the Company.

References:

1-Source: $19B Market size by 2030

2-Source: 20M Annual Patients

3-Source: 50%+ Mortality Rate

4-Source: Mechanical Ventilation

5-Source: acquisition in perfusion domain

6-Source: acquisition in perfusion domain

Mission Statement

To provide acute respiratory care patients a minimally invasive respiratory support solution, which may eliminate the need for mechanical ventilators, intubation and induced coma.

Mechanical Ventilation:

The Human and Economic Cost

$19B

Market Opportunity[1]

Market for the legacy standard of care.

20M

Patient Volume[2]

Patients placed on invasive mechanical ventilation annually.

>50% Mortality

Associated with Legacy Procedures[3]. Significant risks include lung injury, infections and prolonged intensive care unit stays[4].

A Critical Gap

No intermediate solution to treat failing lungs - the market is split between two distinct extremes, with no middle ground.

Non-Invasive Basic Oxygen Therapy

Early Stage: Safe and comfortable, but insufficient for patients in acute respiratory failure.

Invasive Mechanical Ventilation

Last Resort: Powerful but requires medically-induced coma and carries high risk of complications.[4]

A new treatment paradigm is entering this space to bridge this gap - designed to deliver extracorporeal respiratory support while the patient remains fully awake.

New Treatment Paradigm

Bridging the treatment gap between non-invasive and invasive respiratory support

NON-INVASIVE VENTILATION:
Nasal plugs, face mask, HFNC, BIPAP/CPAP, oxygen helmet.

INSPIRA™ ART500 SYSTEM
Awake extracorporeal respiratory support

INVASIVE MECHANICAL VENTILATION

ECMO
Extracorporeal Membrane Oxygenation

INSPIRA™ ART500: Early Intervention with Advanced Life-Support System

High Flow Nasal Cannula (HFNC);
Bilevel (BiPAP);
Continuous Positive Airway Pressure (CPAP).

Play video

NEXT-GENERATION RESPIRATORY SUPPORT

INSPIRA™ ART500

Designed to elevate and stabilize declining oxygen saturation levels without mechanical ventilation.

Rapid Response

Rapidly boosts oxygen saturation levels within minutes - potentially enabling treatment of a great number of patients, both in and beyond ICU settings.

Patient Remains Awake

- No coma and weaning
- No tube in throat
- No lung infection or injury

Core Technology:

01

Smart Console:

Intuitive interface designed for general ICU staffs. AI algorithms analyze sensor data and provide clear decision-support guidance.

02

Real-Time Blood Sensor:

Current intermittent blood tests leave hours-long "gaps" for clinicians in determining changes to the patient's condition. The HYLA™ sensor clips onto any blood tubing to provide continuous, real-time blood gas monitoring without drawing a single drop of blood.

03

Adaptive Oxygenation Technology:

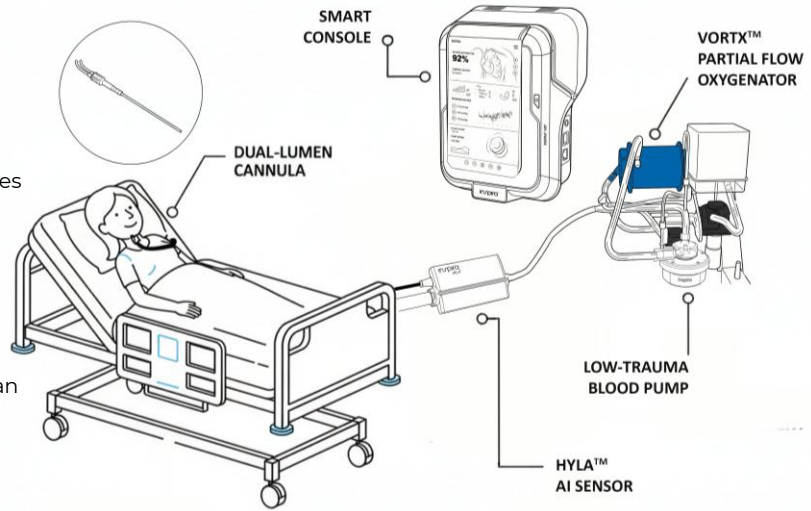
Engineered to be efficient at lower flow rates and to cause less blood trauma (hemolysis) than traditional oxygenators, so the system can be run safely for longer periods.

04

Safer Cannula:

Smaller, less invasive dual-lumen cannula in a single insertion point (the jugular vein). Enables rapid deployment by general staff.

INSPIRA™ ART500: NEXT-GENERATION RESPIRATORY SUPPORT



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Inspira Technologies: The Generational Leap

GEN 1: INSPIRA™ ART100

FDA 510(K) CLEARED PROVEN FIELD-TESTED TECHNOLOGY

GEN 2: INSPIRA™ ART500

IN DEVELOPMENT

Function: Blood Oxygenation
Use Cases: Cardiopulmonary Bypass and ECMO

Function: Adaptive Blood Oxygenation
Use Cases: Early Intervention, Respiratory Support, Awake Patients
Core Tech: AI-Powered Software, Multiple Patented Technologies, HYLA Gen2

INSPIRA™ ART100

Proven Track Record

FDA Cleared

510(k) cleared for short-duration cardiopulmonary bypass procedures.

Deployed

Incorporated into routine hospital workflow at top-ranked U.S. academic medical center.

$49.5M in Binding Purchase Orders (Outside the U.S.)

Designed for healthcare systems facing acute shortages of highly trained specialists.

Intuitive "App-Style" Workflow

Friendly interface and guided decision-support enhance efficiency and standardization.

Universal Disposables Compatibility

Drives potential cost savings of up to 80%*. Mitigating the risk of critical supply chain shortages.

*Consumables savings of up to 80% are based on selected use cases and comparisons to commonly used, functionally similar systems in U.S. hospitals. Actual savings depend on usage patterns and may vary by site.

HYLA™: Clip-On Blood Monitoring System

Continuous & Contactless

Real-Time Data

Second-by-second monitoring of key blood parameters replaces intermittent lab tests.

Non-Invasive

Optical sensor technology means zero blood contact or loss, critical for long-term care.

Device Agnostic

Clips onto the tubing of any extracorporeal circuit: in cardiopulmonary surgery, ECMO (Extracorporeal Membrane Oxygenation), Organ Perfusion, field CPR (Cardiopulmonary Resuscitation) etc.

Proactive Safety: continuous analysis enables early intervention to maintain patient stability.

Market Momentum

Permanent Preparedness
Post-COVID healthcare systems maintain respiratory surge readiness.

The Training Barrier Has Collapsed
ICU teams now have hands-on experience with extracorporeal support.

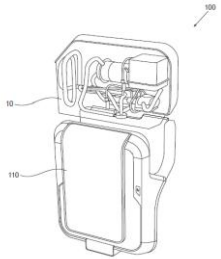
Expanding U.S. Market Indications
Use cases expanding into lung transplant and organ preservation.

$100M → Multi-Billion Dollar Acquisitions[5,6]

Strategic acquisitions in cardiopulmonary support and perfusion technologies highlight strong industry consolidation and long-term market confidence.

Intellectual Property

Extracorporeal Oxygenation System
For low flow rates and methods of use.
Two U.S. patents granted.
Filed in Canada, Europe, China, Korea, Japan, Australia, Brazil and Israel



Orbiting Blood Oxygenation Delivery System
A blood-gas exchange device and methods of use.
Two U.S. patents granted

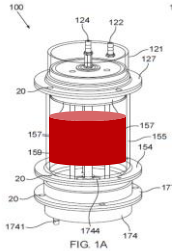


FIG. 1A

Dual Lumen Cannula and Methods of Use
Converts from a single-lumen cannula into dual-lumen cannula after initial insertion.
Patent granted in the U.S. and Japan.
Filed in Europe, China, Korea and Israel

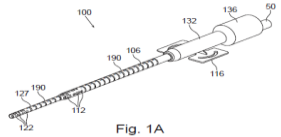
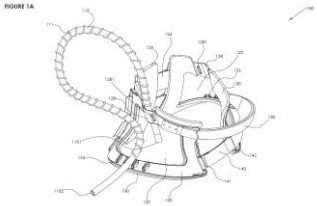
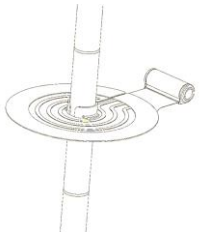


Fig. 1A

A Cannula Fixation Device
Secures a neck cannula from moving or dislodging.
Patent granted in Israel
Filed in the U.S



Bio-electronic technology - Patent Pending
Prevents the accumulation of bacteria that often results in a bloodstream infection (sepsis).



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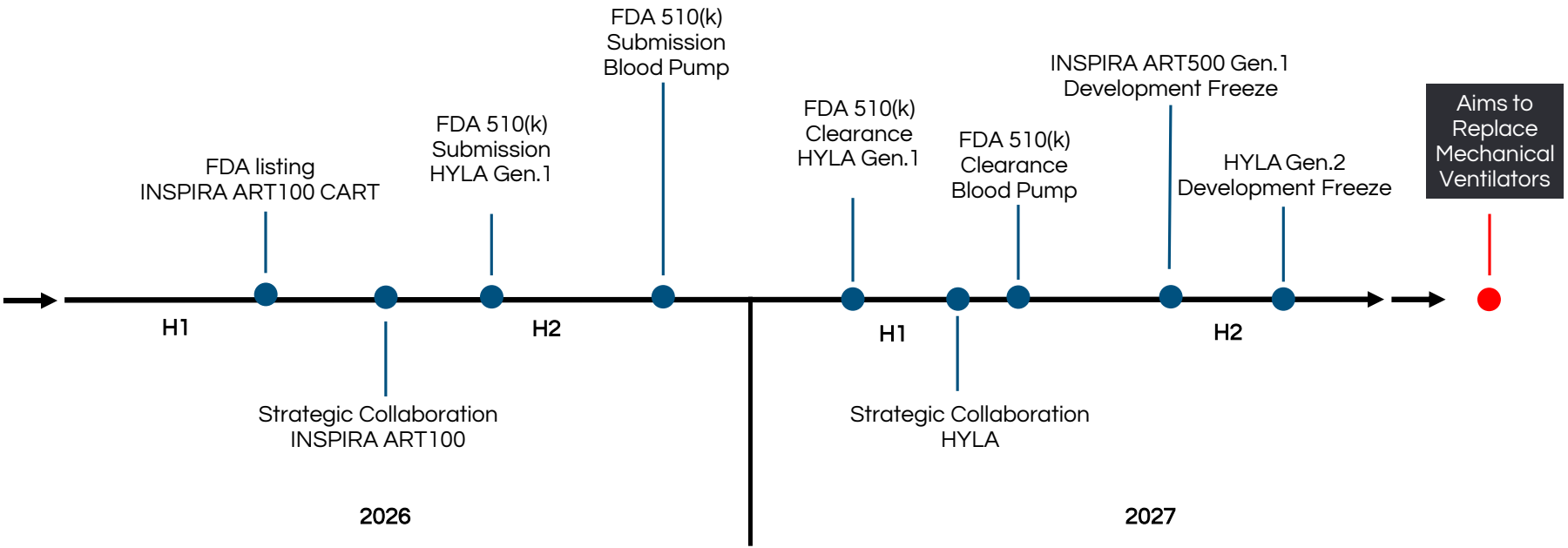
Roadmap to Market Disruption



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Board & Management

Lior Amit
Director
Veteran finance executive with extensive corporate finance experience

Tal Parnes
Chairman
Serial entrepreneur, veteran executive in the medical technology industry

Sivan Matza
Director
Senior investment executive in global capital markets

Dagi Ben-Noon, BSc
CEO, Director, Co-Founder
Co-founded Nano Dimension Nasdaq: NNMD

Avi Shabtay
COO and VP R&D
New technology development & delivery track record

Yafit Tehila, CPA
CFO
Serial Financial management experience in public companies

Daniella Yeheskely-Hayon, PhD, CTO
Renowned Expert in the field of Artificial Lung Development

Dr. Dekel Stavi, MD
Medical Director
Senior Intensive Care physician at Tel Aviv Medical Center.
Chairman of the Israeli ECMO Society