$IINN Nasdaq Listed

EMPOWERED BREATHING WITHOUT LUNGS

INVESTOR DECK | FEBRUARY 2024

inspira™ Breathing. Empowered.™

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 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 projected size of and the Mechanical ventilation Market and Perfusion Systems Market, the potential market sizes of its future products, the potential outcome that its technology can eliminate complications associated with Mechanical Ventilation, its aim to replace the use of Mechanical Ventilators, the intended uses and potential benefits of its products and technology,, its prospective targeting of current procedural terminology codes that the Company could potentially use for charging and reimbursement of its products, potential revenues models, revenue sources and streams that may be realized pursuant to various distribution agreements, strategic opportunities and based on software licensing, its prospective target consumers and end-users for its products, its projected milestone timelines for each of its products, its strategy for market penetration and market share gain, its go-to-market strategy, its regulatory strategy and anticipation of software licensing and U.S Food and Drug Administration (FDA) clearance, its potential commercialization of its products, and its prospective and ongoing regulatory approval processes in various jurisdictions. 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, 2022 filed with the U.S. Securities and Exchange Commission (the "SEC"), which is available on the SEC's website, www.sec.gov.

See Disclaimers on slides 1-16.

Disclaimers

$IINN Nasdaq Listed

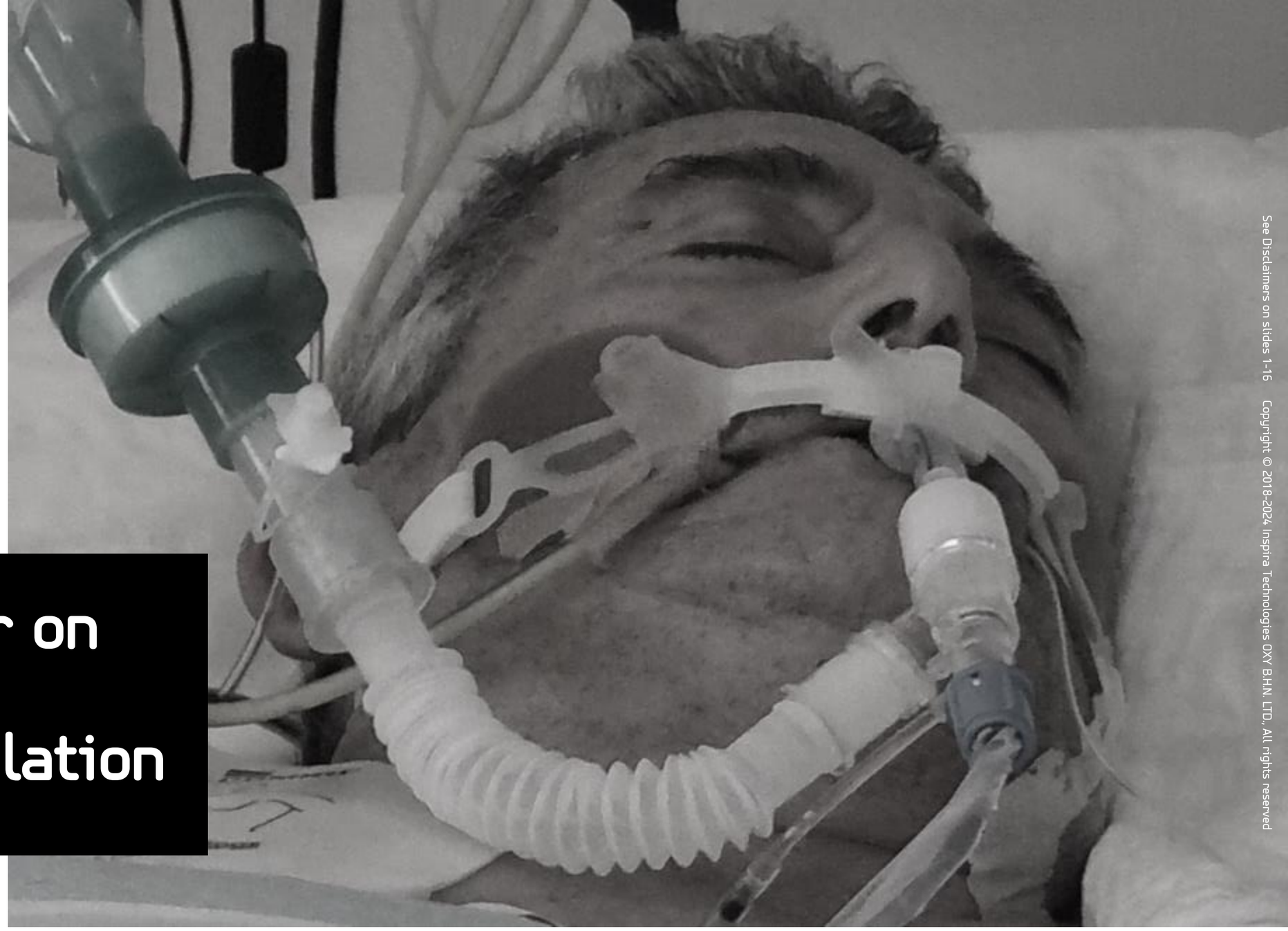
- The reference to INSPIRA™ ART is a series of planned devices. The use of the term INSPIRA™ ART can refer to the INSPIRA™ ART500. INSPIRA™ ART100 was previously known as the ALICE™. Mechanical Ventilation/Ventilators or MV refers to Invasive Mechanical Ventilation or IMV.
- Planned timelines, milestones, estimates or assumptions are subject to change.
- To-date the Augmented Respiration Technology, INSPIRA™ AI, HYLA™, INSPIRA™ ART100, INSPIRA™ ART500, INSPIRA™ ART, 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 U.S. Food and Drug Administration (FDA) or any other regulatory or authorizing authority. 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 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 the clinical studies may be conducted outside of the U.S.
- INSPIRA™ ART100, INSPIRA™ ART500, INSPIRA™ ART or HYLA™ may either have embedded or integrated INSPIRA™ AI or other software's with selective levels or functionality, yet to be decided by the company.
- While the Company intends to execute on the summary distribution agreements, there is no guarantee any sales will occur pursuant to those existing agreements, and agreements that may be executed in the future. The pre-conditional summary distribution agreements are for a period of up to seven years and are subject to the completion of the development and the required approvals by regulatory and other authorizing authorities. The timeline also assumes that Inspira's existing summary distribution agreements and arrangements, or any future similar types of agreements if and when they may be executed, will be initiated as planned, and that Inspira's planned devices will qualify for reimbursement pursuant to existing Current Procedural Terminology (CPT) codes or other reimbursement mechanisms. The company or distributor may decide to terminate the agreements at any given time. The reference in this deck to summary distribution agreements and or to distribution agreements are to be considered one and the same.
- There is no guarantee that the patents or patent families will be granted. Intellectual property is subject to development, testing validation and approval by regulatory or other authorizing authorities.
- Our future business model includes a future revenue model based on the disposable razorblade model and software licensing fees.
- "Inspira™ targets to revolutionize the $19B Mechanical Ventilation Market" refers to our belief that we can provide a better solution then current legacy solutions.
- "Patients can often experience legacy complications delirium, lung infections and injury or possible death!" refers to known associated risks and complications associated with Invasive Mechanical Ventilation
- "Inspira Oxygen Delivery straight into the blood" refers to our INSPIRA ART that is designed to directly oxygenate the blood that has been circulated through the device.
- "ADAPTIVE Blood Oxygenation" refers to the INSPIRA™ ART or to the INSPIRA™ ART500 which we believe has the potential to be a game-changing solution. "delivering needed oxygen volume" refers to the level/volume/flow/concentration of oxygen performed by device or defined by operator.
- "We aim to replace mechanical ventilators" refers to our intention to provide a new form of Life Support that can be administered to patients deteriorating (with acute respiratory failure) and that would be potential candidates for Invasive Mechanical Ventilation. "Potentially reduces hospital days", refers to the belief that with the INSPIRA ART500 expecting to treat patients that are awake and without intubation, the belief is that this will potentially reduce legacy complications and the need for weaning, therefore potentially reducing hospital days. "No lung infection I No lung injury", refers to our belief that our delivering oxygen straight into the blood (without intubation and going through lungs), reduces legacy complications such as Ventilator induced infections and lung injury.
- "Targeting Excising CPT Codes", refers to there potentially being existing CPT Codes (Current Procedural Terminology) for coding medical services that we could potentially use for charging and reimbursement of Inspira products and services

See Disclaimers on slides 1-16.

Inspira™ aims to revolutionize the $19 Billion Mechanical Ventilation Market

We aspire waves of change in the world of life support

Source: $19 Billion Predicted Global Mechanical Ventilation Market By 2030



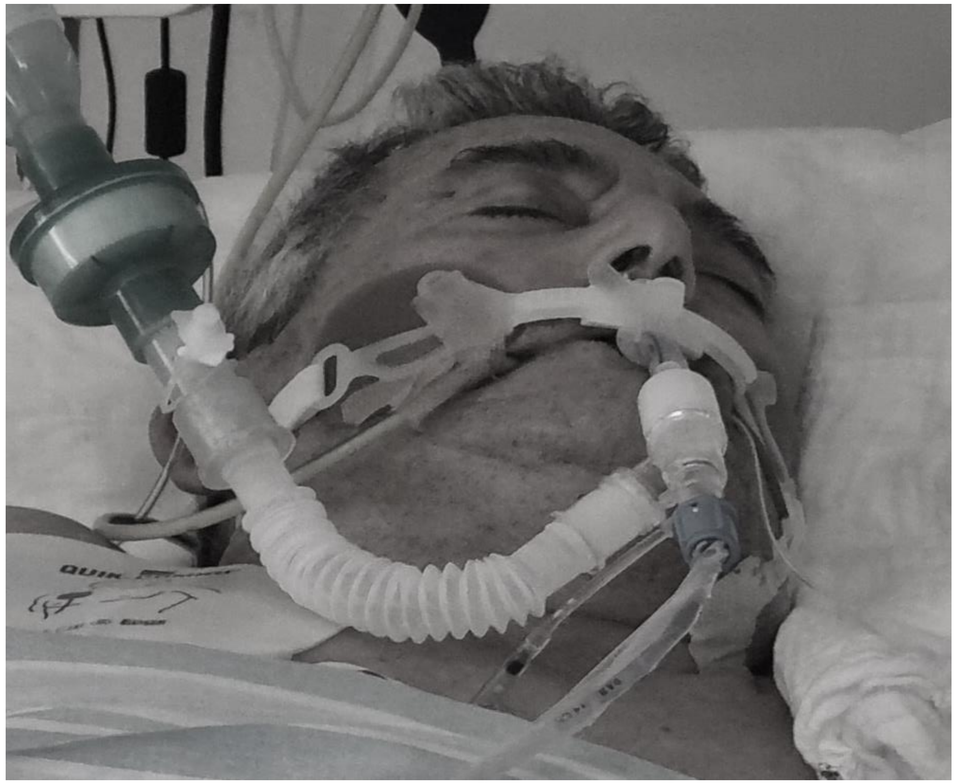
± 20 Million/Year on Mechanical Ventilation

Source: ±20M Patients/Year on MV

inspira™ Breathing. Empowered.™

Assisted Breathing

using a Mechanical Ventilator



Patient under heavy sedation (COMA)
with tube pushed down their throat

Ventilator FORCES oxygen-rich air into the lungs
to get oxygen into the blood and to body organs

Patients can often experience legacy complications:
delirium, lung infections and injury or possible death!

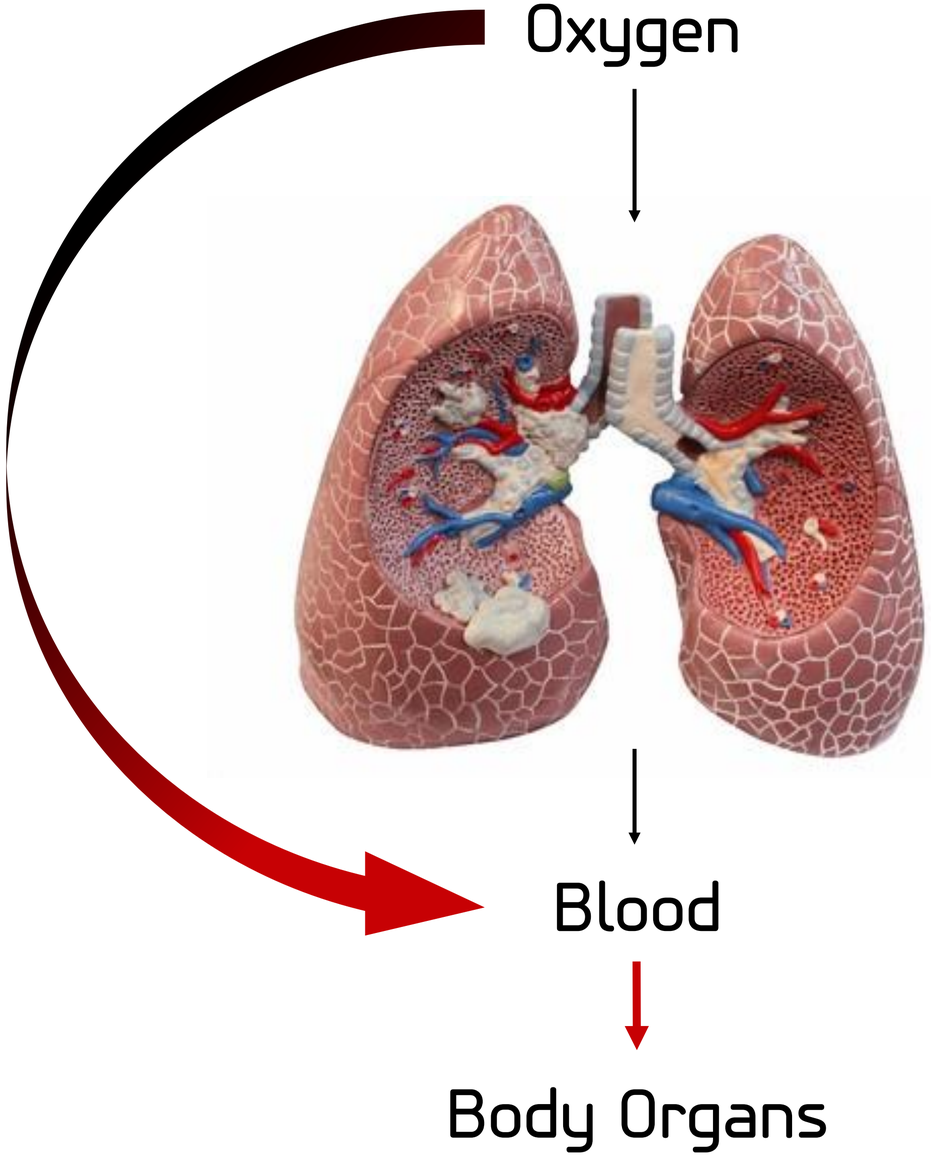
High Mortality Rate

Source: High Mortality Rate

See Disclaimers on slides 1-16.

$IINN Nasdaq Listed

Inspira™
Oxygen Delivery
Straight into the Blood



inspira™ Breathing. Empowered.™

$IINN Nasdaq Listed

ADAPTIVE Blood Oxygenation

Designed to continuously measure the patient's blood parameters in real-time, delivering needed oxygen volume straight into the blood

- Proprietary HYLA™ Blood Sensor
- Proprietary VORTX™ Orbiting Blood Oxygenation Delivery System

INSPIRA™ ART

inspira™ Breathing. Empowered.™

We Aim to Prevent Mechanical Ventilation

Patient treated awake
and without Mechanical Ventilation
No Coma | No Tube in throat | Potentially reduces hospital days

Oxygen is delivered straight into the blood,
with carbon dioxide removed
No lung infection | No lung injury

Blood parameters measured continuously and in real-time
Early detection of changes | Provides decision-making assistance data

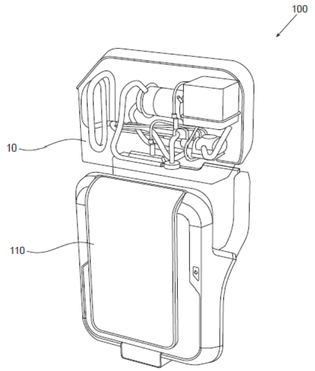
See Disclaimers on slides 1-16.

$IINN Nasdaq Listed

Inspira™ Patent Portfolio

Extracorporeal oxygenation system for low flow rates and methods of use

- Granted in the U.S., 2023*
- Filed in the U.S., Canada, Europe, China, Korea, Japan, Australia, Brazil, Israel



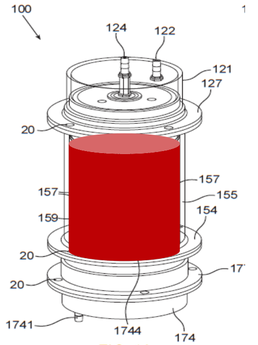


FIG. 1A

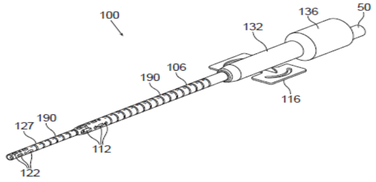
VORTX™ - Orbiting blood oxygenation delivery system:

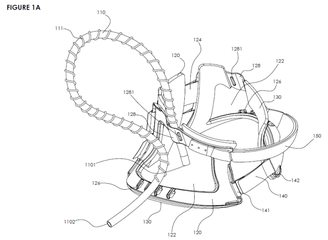
A blood-gas exchange device and methods of use

- Granted in the U.S. 2024

Dual lumen cannula and methods of use

- Granted in the U.S., 2023
- Filed in Europe, China, Korea, Japan, Israel





A cannula fixation device

- Filed in the U.S., Europe
- Granted in Israel, 2022

inspira™ Breathing. Empowered.™

*Initiation module

$IINN Nasdaq Listed

And aiming much higher...

We touch BLOOD

We believe our devices will revolutionize the medical landscape

INSPIRA™ ART100
Submitted to the
FDA in **2023**

Gen 1

Blood Oxygenation
(Cardio-Pulmonary Bypass)

HYLA™1 Blood Sensor
(Integrated with INSPIRA™ ART100)

INSPIRA™ ART

Gen 2

Adaptive Blood Oxygenation

VORTX™ Orbiting Blood Oxygenation

HYLA™2 Blood Sensor
- Continuous blood monitoring
- Real-time detection of changes
- Provides decision-making assistance data

The timeline assumes certain approvals by regulatory and or other authorizing authorities and are subject to change. There is inherent risk and variability in the overall regulatory process and no guarantee as to the success of any device or the approval or clearance of such devices by any regulatory authorities and or other authorizing authorities.

$IINN Nasdaq Listed

Disrupting the Medical Landscape

Tapping on strategic business opportunities

$1 Billion
Perfusion Systems Market

$19 Billion
Mechanical Ventilation Market

INSPIRA™ ART100 Submitted to the FDA in 2023

INSPIRA™ ART

Targeting ICUs, medical units & rural hospitals

Recurring revenue model:

- Blood oxygenation disposables
- Blood sensor disposables
- Blood monitoring software licensing

Targeting existing CPT Codes

inspira™ Breathing. Empowered.™

Source: Perfusion Systems Market

Source: $19 Billion Predicted Global Mechanical Ventilation Market By 2030

$IINN Nasdaq Listed

$546 Million in Pre-conditional Signed Summary Distribution Agreements

$271 Million — North America

$28 Million — Central America

$200 Million — Europe

$47 Million — Israel, Gulf States

Source: inspira-technologies.com/news/

While the Company intends to execute on the signed summary distribution agreements, there is no guarantee any sales will occur pursuant to the existing agreements. The potential pre-conditional summary distribution agreements are subject to signing definitive agreements, targeting Minimum Order Quantities for a period of up to seven years and are subject to the completion of the development and the required approvals by regulatory and other authorizing authorities. The company or distributor may decide to terminate the agreements at any given time.

Inspired Team

$IINN Nasdaq Listed

Dagi Ben-Noon, BSc
Co-Founder & CEO

Co-founded Nano Dimension
Nasdaq: NNMD

Joe Hayon, MBA
Co-Founder & President

M&A experience & track record
Elscint Technologies, Arazim

Yafit Tehila, CPA
CFO & Legal

Serial Financial management
experience in public companies

Avi Shabtay
COO

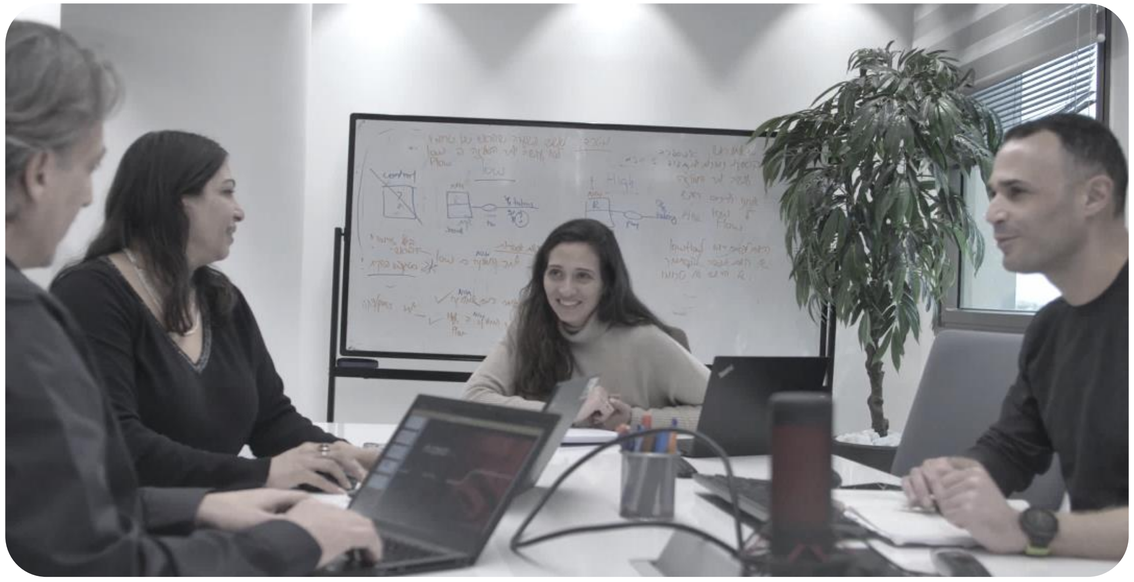
Serial New-tech development
& delivery track record

Dr. Daniella Yeheskely-Hayon, PhD
CTO

Renowned Expert in the field of
Artificial Lung Development

Prof. Benad Goldwasser, MD, MBA
Executive Chairman

Urologic surgeon, inventor
& entrepreneur.
Multiple well-known industry exits



Dr. Dekel Stavi, MD
Medical Director

Senior Intensive Care physician at
Tel Aviv Sourasky Medical Center.
Chairman of the Israeli ECMO Society

inspira™ Breathing. Empowered.™

INTUITION

INSPIRA™ ART

- Strong execution team
- We believe there is a $19 billion market opportunity
- FDA Clearance anticipated in H1-2024 for INSPIRA™ ART100
- Potential recurring revenue model based on disposables and software licensing

Source: $19 Billion Predicted Global Mechanical Ventilation Market By 2030

$IINN Nasdaq Listed

Inspira has a life print...

Thank You

