

# ONWARD™

EMPOWERING MOVEMENT™

**Investor Webcast**  
**Q3 2023 Business Update**  
November 16, 2023



# Forward Looking Statements

*This Presentation may include statements, including the Company's financial and operational medium term objectives that are, or may be deemed to be "forward looking statements". These forward looking statements may be identified by the use of forward looking terminology, including the terms "believes", "aims", "forecasts", "continues", "estimates", "plans", "projects", "anticipates", "expects", "intends", "may", "or" or, in each case, their negative or other variations or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. Forward looking statements may and often do differ materially from actual results. Any forward looking statements reflect the Company's current view with respect to future events and are subject to risks relating to future events and other risks, uncertainties and assumptions relating to the Company's business, results of operations, financial position, liquidity, prospects, growth or strategies. Forward looking statements speak only as of the date they are made.*



# Speaking Today



**Dave Marver** CEO



**Khaled Bahi** CFO

# Introduction

# ONWARD at a Glance

## Key Facts

- Founded in 2015
- ~110 FTEs<sup>1</sup>
- HQ in Eindhoven, the Netherlands
- Science and Engineering Center in Lausanne, Switzerland
- US office in Boston, Massachusetts
- IPO 2021, Euronext Brussels and Amsterdam; \$170M+ raised since inception

- **Technology** - 2 purpose-built neuromodulation platforms that stimulate the spinal cord via implantable (ARC<sup>IM</sup>®) or external (ARC<sup>EX</sup>®) technologies
- **Innovation** - 9 FDA Breakthrough Device Designations and 390+ issued or pending patents (230+ issued)
- **Clinical Validation** - One pivotal study completed with positive top line results reported for ARC<sup>EX</sup>; positive interim results also reported for ARC<sup>IM</sup> blood pressure indication
- **Commercialization** - Large total available market (\$20B+); first commercial sale expected 2H 2024; strategic relationship with Christopher & Dana Reeve Foundation

Note: 1 EUR = 1.1 USD

<sup>1</sup> As of September 30, 2023

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# Vision

Empowered by movement, people with spinal cord injury will enjoy life in every way that matters to them



# Technology



ARC IM

Note: For investigational use only



ARC EX

# Q3 Update



# Important progress, including first-in-human use of ARC<sup>IM</sup> BCI to restore thought-driven movement of upper extremities

## Q3 Business Update

August

### Clinical

First-in-human use of ARC<sup>IM</sup> BCI platform for upper extremities

September

### Commercial

Signed agreement with US 3PL<sup>1</sup> to provide rapid US government contract access

September

### Clinical

Began early feasibility clinical study for ARC<sup>IM</sup> mobility indication

September

### Clinical

Expanded ARC<sup>IM</sup> clinical feasibility study for blood pressure regulation in the Netherlands

July - September

### IP

Awarded 33 new patents<sup>2</sup>

November

### Science

*Nature Medicine* publication detailing use of ARC-IM Therapy for Parkinson's disease

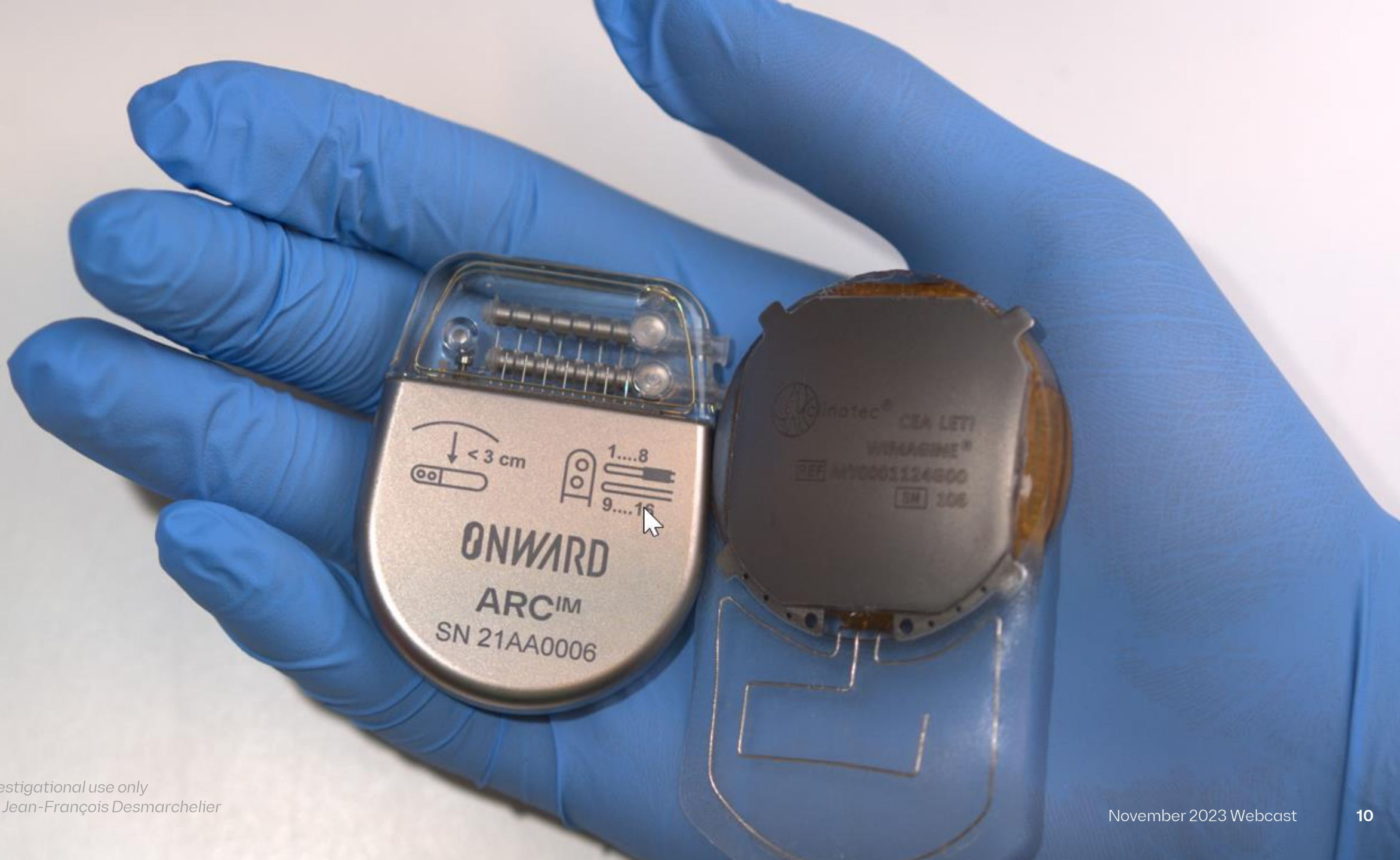
November

### Clinical

Announced grant from The Michael J. Fox Foundation for Parkinson's Research

<sup>1</sup> 3PL = Third-party logistics

<sup>2</sup> Patents awarded in the third quarter of 2023



Note: For investigational use only  
Photo credit: Jean-François Desmarchelier





# Think

An intention to move originates in the brain.

*Note: For investigational use only*



# Decode

The brain-computer interface uses AI to decode that intention.

# ARC-IM<sup>®</sup> BCI



# Move

The ONWARD ARC-IM platform converts that decoded information into precise stimulation of the spinal cord, resulting in thought-driven movement.

ONWARD



# Global visibility for first-in-human use of ARC<sup>IM</sup> BCI platform for upper extremities

# Media Coverage



Progress for paralyzed patients: First implanted device is placed to restore arm, hand and finger movement



AI Implants Help Paralyzed Patient Move Arms, Hands



BEKIJK – Uitzending Z-Nieuws woensdag



The ARC nerve-stimulation system could help quadriplegic patients move their arms again



Brain Implants Could Restore Paralyzed Patients' Arm Movements



How Onward uses spinal cord stimulation — and perhaps BCI — to restore movement

Note: For investigational use only

Forged agreement with US logistics and fulfilment partner in September 2023

# New Commercial Partnership



**Service-Disabled Veteran-Owned Small Business (SDVOSB) will serve as our Veterans Administration (VA) sales partner**

- ONWARD promotes therapy and maintains customer relationship (sales and training)
- 3PL partner manages logistics and fulfilment to federal government and commercial customers in the US
- Relationship gives ONWARD access to US government purchasing vehicles shortly after FDA clearance

**Purpose-designed ARC<sup>IM</sup> System  
implanted for the first time for mobility**

# ARC<sup>IM</sup> Mobility Early Feasibility Study



**Previous proof of concept study used highly modified commercially available stimulators**

- Changing IPG (neurostimulators) and leads in previous study participants
- Participants gaining improved user experience and other functional improvements
- Study is providing additional safety and effectiveness data for ARC<sup>IM</sup> platform



Preparing for Empower BP pivotal study, expected to begin enrollment in 2H 2024

# ARC<sup>IM</sup> Blood Pressure Early Feasibility Study



## Studying use of ARC<sup>IM</sup> Therapy to address hemodynamic instability

- Expansion to St. Marten's Clinic in Nijmegen, the Netherlands
- Lessons from early feasibility studies in Switzerland and the Netherlands are informing design of Empower BP pivotal study
- Publication of interim data from feasibility study expected mid-to-late 2024

*Note: For investigational use only*

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33 new patents awarded in Q3 2023,  
strengthening first-mover advantage

# IP Portfolio

>230

Issued patents

Exclusive Licenses

Caltech

EPFL

UNIVERSITY  
of LOUISVILLE



>390

Issued or pending patents

  
UNIVERSITY OF MINNESOTA



THE UNIVERSITY  
OF BRITISH COLUMBIA



New patents cover multiple areas including closed-loop control of stimulation

Potential expansion into large, adjacent population with same technology platform and therapy

# Parkinson's Disease Opportunity



A spinal cord neuroprosthesis for locomotor deficits due to Parkinson's disease, *Nature Medicine*, Nov 2023

## Proof of concept published in *Nature Medicine*, to be followed by early feasibility study

- Supported by \$1M grant\* from Michael J. Fox Foundation for Parkinson's research
- Six participants to be implanted with ONWARD ARC<sup>IM</sup> System in 2024
- One year follow-up; study expected to be completed by end of 2025



\*Awarded to .NeuroRestore; ONWARD will provide investigational ARC<sup>IM</sup> systems and regulatory support



# Financial Update

Expect current cash position to fuel operations through end of 2024

# Q3 Cash Update

**Burn**  
€7.0M used  
during Q3 2023

**Ending Balance**  
€36.8M net cash<sup>1</sup>  
as of 30 Sep 2023

<sup>1</sup> Net cash is defined as the sum of cash and cash equivalents and fixed term deposits included in the current assets as included in consolidated statement of financial position in the Financial Statements.



# Outlook



## Several important milestones expected in Q4 2023 and 2024

# Upcoming Milestones

**COMPLETED**

**ARC<sup>EX</sup>**

Shared *additional* results from Up-LIFT pivotal study

**COMPLETED**

**ARC<sup>IM</sup>**

First-in-human use of ARC<sup>IM</sup> Lead

**COMPLETED**

**ARC<sup>IM</sup>**

Began early feasibility clinical study for mobility indication

**COMPLETED**

**ARC<sup>IM</sup>**

Expanded clinical feasibility study for blood pressure regulation to the Netherlands

**COMPLETED**

**ARC<sup>IM</sup>**

*Nature Medicine* publication detailing use of ARC Therapy for Parkinson's disease

**COMPLETED**

**ARC<sup>IM</sup>**

Announced grant from The Michael J. Fox Foundation for Parkinson's Research

**COMPLETED**

**ARC<sup>IM</sup> BCI**

Major BCI publication for first-in-human use of BCI for mobility

**COMPLETED**

**ARC<sup>IM</sup> BCI**

First-in-human use of ARC<sup>IM</sup> BCI platform for upper extremities

**ARC<sup>EX</sup>**

Share *detailed* results from Up-LIFT pivotal study

**ARC<sup>EX</sup>**

Submit for regulatory clearance for upper limb indication<sup>1</sup>

**ARC<sup>IM</sup>**

First enrollment for Parkinson's mobility early feasibility study<sup>3</sup>

**ARC<sup>IM</sup>**

Publication of interim results for blood pressure indication

**ARC<sup>IM</sup>**

Begin Empower BP pivotal clinical study for blood pressure indication<sup>2</sup>

Note: All platforms and therapies are for investigational use only

<sup>1</sup> Improvement of upper extremity strength and function in patients with SCI

<sup>2</sup> The Company plans to begin its pivotal clinical study in the next year to evaluate the safety and effectiveness of the implantable ARC<sup>IM</sup> system to better regulate blood pressure after SCI

<sup>3</sup> Michael J. Fox Foundation for Parkinson's Research

# Q&A



The background features a series of wavy, parallel lines in shades of red and grey. On the left side, there are several thick, vibrant red lines that curve and flow towards the center. The rest of the background is filled with thinner, lighter grey lines that follow a similar wavy pattern, creating a sense of movement and depth.

# Thank you!



The background of the image features a vibrant red color with a complex pattern of wavy, overlapping lines. In the lower-left corner, there is a darker red diamond-shaped grid pattern that blends into the overall wavy design.

**ONWARD**<sup>TM</sup> EMPOWERING  
MOVEMENT<sup>TM</sup>