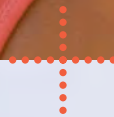




HEAD



HEART

LivaNova 2017 Year in Review



LivaNova
Health innovation that matters

TRANSFORM + ADVANCE

LivaNova is a leader in cardiac surgery and neuromodulation, dedicated to helping patients achieve their full potential through focused medical innovations. Day by day, life by life.

We are transforming our company to change lives, advancing new and established technologies to improve the standard of care.

We are sharpening our focus on the head and heart, positioning our company to grow as market leaders in neuromodulation and cardiac surgery.

We are improving performance and delivering on our near-term commitments, while investing in our pipeline to drive future growth.

We are LivaNova.

Four Pillars to transform the organization:

| | | | |
|---|--|--|---|
| <p>Growth</p> <ul style="list-style-type: none"> – Drive demand – Build pipeline – Expand portfolio | <p>Profitability</p> <ul style="list-style-type: none"> – Build better – Spend better – Price better | <p>Talent</p> <ul style="list-style-type: none"> – Attract talent – Retain talent – Develop talent | <p>Culture</p> <ul style="list-style-type: none"> – Continuous improvement – Discipline & Accountability – Teamwork |
|---|--|--|---|

Letter from the Chief Executive Officer

Dear Shareholder,

Transformation is the key word I would use to describe 2017. We began and ended the year with a renewed vigor. This energy drove a new strategy that called for an increased focus on four near-term growth drivers to propel current year performance while we began investing aggressively in our future. We executed that strategy based on guiding principles, which we call the Four Pillars:

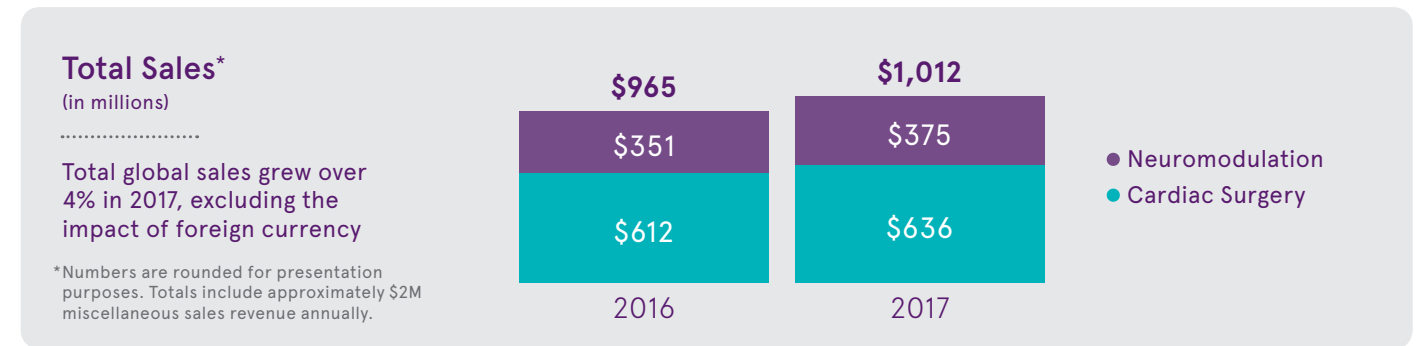
- **Growth** – expansion based on core areas of leadership and strength, driving strong customer demand, ensuring regular innovation cycles, building a robust pipeline and targeted M&A activity
- **Profitability** – improvements derived from focused organizational initiatives, including pricing consistency, lean manufacturing, direct and indirect procurement discipline, SKU rationalization and footprint consolidation
- **Talent** – attracting, developing and retaining the best people
- **Culture** – emphasis on “continuous improvement,” “discipline and accountability,” and “teamwork”

In line with these principles, our focus in 2017 was on creating a top-tier executive leadership team, growing the core businesses through focused execution on our market-leading positions, improving profitability by making effective cost-saving decisions and building out our product pipeline. I’m pleased to report that we are beginning to see the benefits of these efforts manifest themselves in LivaNova’s results and in our culture.

Organic Growth

Sales for 2017 grew by over four percent compared to 2016 on a constant-currency basis. Our growth rate improved every quarter in 2017, with a particularly strong second half of the year. The drivers for this growth were strong customer demand, account acquisition and penetration, advancing established and new technologies, and leveraging our market-leading positions in neuromodulation and cardiac surgery.

On October 9, 2017 we received FDA approval for the latest VNS Therapy® System, which included the SenTiva® generator, a wireless wand, and a new user interface and tablet. The initial response to SenTiva was strong, bolstered by expanded MRI and pediatric labeling earlier in the year that allowed us to serve a broader patient population. In 2017, our Neuromodulation business achieved record sales, even as our Houston facility faced hurricane-related challenges in the second half of the year.



Letter from the Chief Executive Officer

Our Neuromodulation business franchise has also been exploring opportunities for LivaNova’s VNS Therapy to treat patients with Treatment-Resistant Depression (TRD), a large and growing market with limited treatment options. We are piloting TRD initiatives in European countries where we have approval and reimbursement and are in on-going discussions with the Centers for Medicare and Medicaid Services (CMS) regarding U.S. reimbursement approval.

Specialized forms of VNS Therapy may also improve regulation of cardiovascular function to treat heart failure. Heart failure affects nearly six million patients in the United States and more than 23 million worldwide. The costs in the U.S. alone are estimated to be more than \$70 billion by 2030. LivaNova’s VITARIA® System received CE Mark approval in February 2015 and was granted an Expedited Access Pathway designation by the FDA in 2017. Enrollment will begin in 2018 for our Anthem heart failure pivotal study to further evaluate this life-saving technology.

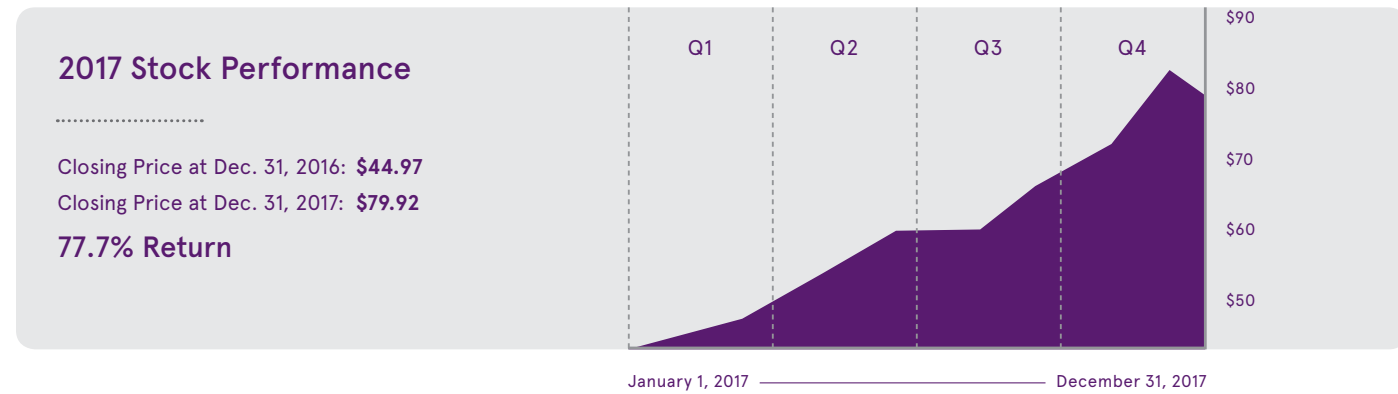
Our Cardiac Surgery business also achieved record sales in 2017, driven by a number of products. Through a focused sales effort and strong execution, we made significant progress in upgrading customers from our older S3® Heart-Lung Machine (HLM) model to our market-leading S5® HLM. The Inspire® oxygenator passed a major milestone, treating its one-millionth patient, and our Perceval® sutureless

valve achieved 10 years of clinical use, with sales of Perceval growing double-digits every quarter in 2017.

M&A Activity

During our 2017 Investor Days in New York and London, we identified M&A as a critical component of our future growth goals. On May 2, we acquired Caisson Interventional, LLC (Caisson), a privately held clinical-stage medical device company. Prior to the acquisition, we owned approximately 49 percent of the issued and outstanding equity of Caisson, which is focused on the design, development and clinical evaluation of a unique Transcatheter Mitral Valve Replacement (TMVR) product, designed solely for a transseptal approach delivered through a single venous access. TMVR is a significant opportunity, potentially 2–3 times the size of the aortic market opportunity according to third-party estimates. We are currently running two studies – a FDA early feasibility study, called PRELUDE, which was initiated in June 2016 and a CE Mark trial, called INTERLUDE, which was initiated in August 2017.

Then, on December 5, we announced that we were acquiring the remaining outstanding interests in ImThera Medical, Inc. (ImThera), a privately held, early-stage development company that we have been investing in since 2011. ImThera focuses on neurostimulation for the treatment of obstructive sleep



Letter from the Chief Executive Officer

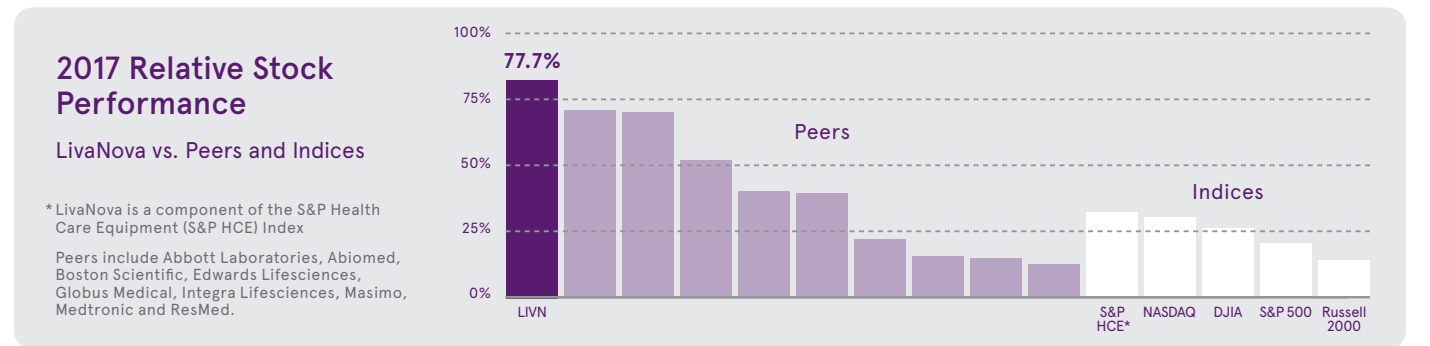
apnea (OSA), which occurs when the airway closes due to muscles relaxing while a patient is asleep. This can result in various issues ranging from impaired daytime functionality to serious comorbidities such as heart failure, stroke, depression and obesity. The current OSA market is a multi-billion dollar, large and growing market with high unmet needs. The acquisition is highly complementary to our Neuromodulation business. ImThera's sleep product has a small commercial presence in Europe and is currently enrolling patients in its U.S. FDA pivotal trial. LivaNova is uniquely positioned to leverage this technology through the proven market development capabilities in our Neuromodulation business, utilizing our broad global network.

Early in 2018, we also completed the purchase of TandemLife, a company focused on advanced temporary cardiopulmonary support systems. These systems, which include Extracorporeal Life Support (ECLS) and Percutaneous Mechanical Circulatory Support (pMCS), are a complementary fit to LivaNova's strong offerings in Cardiac Surgery. Use of ECLS and pMCS systems is on the rise and a growing number of hospitals are performing these advanced procedures. We will leverage our customer relationships and global infrastructure to increase penetration in the U.S. and to expand geographically.

Simplifying our Focus

Over the course of 2017, we also took steps to streamline LivaNova operations, focusing on areas of the company with high growth and strong margin potential. Following our September announcement that we were exploring strategic options for our Cardiac Rhythm Management (CRM) business, we entered into a binding letter of intent with MicroPort Scientific Corporation (MicroPort) in November for the sale of this business franchise. The CRM business has valuable assets and talented employees and we believe that the transaction will be favorable for all parties involved, allowing MicroPort to strengthen its global presence and LivaNova to focus on our areas of leadership and strength.

In another move toward simplification, we made the decision to delist from the London Stock Exchange (LSE). We made this decision primarily due to low trading volumes on the LSE, coupled with the fact that the vast majority of our shareholders trade on the NASDAQ market. The delisting was effective on April 5, 2017, leaving shares on the NASDAQ market unaffected. To consolidate our geographic footprint, we fulfilled plans to exit redundant manufacturing operations in Costa Rica, China and Cantu (Italy), and we also implemented an enterprise-wide accounting and reporting system to ensure operational consistency and focus.



Letter from the Chief Executive Officer

All of these factors contributed to the price performance of LivaNova stock, which returned more than 75 percent over the calendar year.

Looking Ahead

We leave 2017 with strong momentum and tremendous runway still ahead of us. We are developing new generations of life-saving therapeutic devices internally, and we will remain alert to new applications and opportunities to surround disease states through further strategic acquisitions. Our investments in OSA, ECLS, pMCS and TMVR, as well as initiatives in the fields of TRD and heart failure, provide us numerous opportunities to reach new patient populations and achieve market-leading positions. We will continue to improve margins, reduce costs across the company and introduce LivaNova's life-saving technologies into new geographies.

While these steps will position LivaNova for further success, our primary objective is always advancing the lives of the patients we serve. Each one is a story: a life spent striving for happiness, for fulfillment, for normalcy. It is amazing for parents to see their child with epilepsy sleep through the night, for loved ones to see their partners being able to return to a normal routine after receiving a new heart valve, or for someone suffering from depression to find relief. Patients put their trust in our products to change or even save lives, and every one of LivaNova's 3,500+ employees strives to be a guardian of that trust.

Finally, I would like to conclude by letting the employees of LivaNova know how proud and grateful I am for their efforts in 2017. The work of transforming a company can be challenging, and the results do not always happen overnight. We made great progress on the execution of our strategy last year, but we still have much to do. Together, I am confident we can complete the transformation of LivaNova into a company that creates significant value for all of its stakeholders, while continuing to bring positive change to the lives of patients around the world.

Thank you,

Damien McDonald
 Chief Executive Officer,
 LivaNova



Sales data in this document is displayed in constant currency, excluding the impact of foreign currency changes. This and other non-GAAP financial measures used by the company may be calculated differently from, and therefore, may not be comparable to, similarly titled measures used by other companies. These non-GAAP financial measures should be considered along with, but not as alternative to, the operating performance measures as prescribed per GAAP.

Any forward-looking statements are subject to risks and uncertainties such as those described in our periodic reports on file with the U.S. Securities and Exchange Commission. Actual results may differ materially from anticipated results.

HEAD + HEART

We are focused on the areas where we can lead and provide the most impact—neuromodulation and cardiac surgery.

Neuromodulation



Pioneer and Leader in Vagus Nerve Stimulation (VNS) Therapy

10M

Epilepsy Patients in the U.S., Western Europe and Japan

\$6.2B

Neuromodulation Market by 2020

1 in 3

Suffer From Drug-Resistant Epilepsy

\$375M

2017 Sales

Disease State

- Drug-Resistant Epilepsy
- Treatment-Resistant Depression
- Obstructive Sleep Apnea

Cardiac Surgery



Global Market Leader Supporting Life Changing Heart Procedures

40 years

as the market leader in heart-lung machines, with 70% market share

Cardiopulmonary

- Heart-Lung Machines
- Oxygenators
- Autotransfusion System
- Cannulae

Heart Valves

- Perceval Sutureless Valve
- Mechanical Valves
- Traditional Tissue Valves
- Annuloplasty Rings

10 years

of clinical use for Perceval

Disease State

- Heart Valve Disease
- Coronary Disease
- Congenital Heart Defects
- Heart Failure

LEAD + BUILD

At LivaNova, we are bulding upon a diverse portfolio of products to drive growth and value, both today and in the future.



Near-Term Growth Drivers



A Strong Portfolio of Market-Leading Technologies

SenTiva

Advancing the science of VNS Therapy

100,000+

VNS Therapy patients treated to date



S5 HLM

Reduces transfusions, improves recovery

40 years

of heart-lung machine leadership



Perceval

Only sutureless aortic valve on the market

10 years of clinical use



Inspire

Delivers personalized perfusion

1 million+

patients treated to date



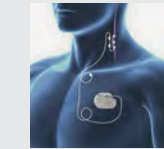
ACCELERATE + GROW

We are investing in R&D and M&A across an expanding array of long-term strategic portfolio initiatives in exciting, highly relevant areas of clinical need to create the LivaNova of the future.

Future Growth Drivers

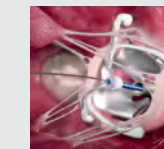


Promise and Potential:
Addressing Important Areas of Unmet Need



Treatment-Resistant Depression

- Depression is the leading cause of disability worldwide
- VNS Therapy may provide better outcomes and symptom improvement



Transcatheter Mitral Valve Replacement*

- Unique transeptal investigational device
- 2-3 times the size of the aortic market opportunity



Heart Failure

- Leading cause of morbidity and mortality
- A novel delivery of Autonomic Regulation Therapy may improve regulation of cardiovascular function



Obstructive Sleep Apnea

- Restoration of normal sleep patterns
- Less invasive than conventional sleep apnea surgeries



Advanced Temporary Cardiopulmonary Support

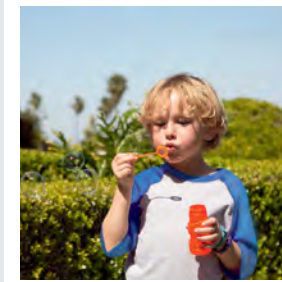
- Platform technology for temporary cardiopulmonary support
- Accessing a \$1B opportunity while advancing the standard of care

FIRST + FOREMOST

At LivaNova, we put the patient first. We are committed to improving the lives of patients and families dealing with chronic disease, and supporting the healthcare professionals who dedicate their lives to helping them.

Real patients. Real lives.

(Click names for patient stories)



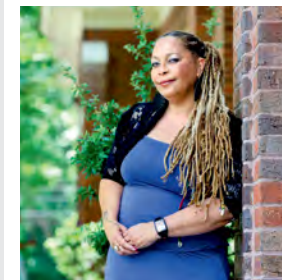
Finn



Jaime



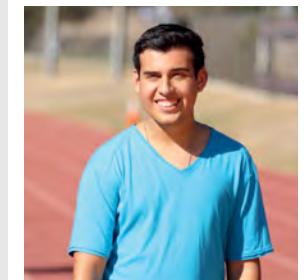
Mariam



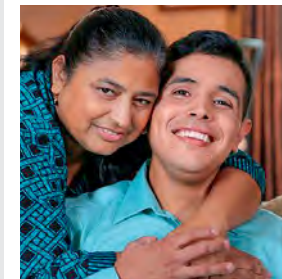
Starr



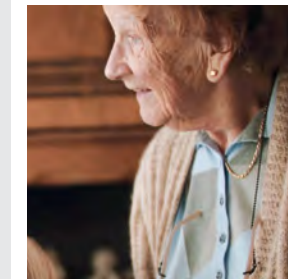
Taylor



Andres



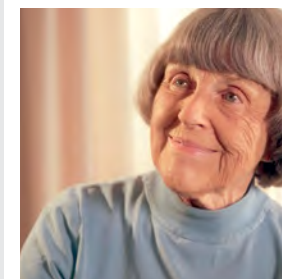
Joe



Maria



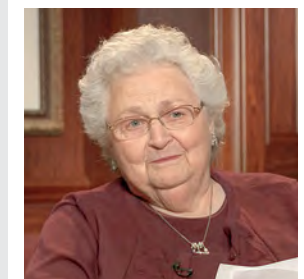
Nicks



Christine



Rosario



Jane

LivaNova

Health innovation that matters

3,500+ Employees

100+ Countries

1 Focus: Patients

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