CARMAT

BECAUSE WE DON'T BELIEVE THE FUTURE CAN WAIT FOR THE FUTURE

Annual General Meeting
May 12, 2021

Safe Harbor

The following presentation and the information it contains do not constitute an offer to sell or subscribe, or the solicitation of an order to buy or subscribe, CARMAT shares in any country. This presentation may contain forward-looking statements about the Company's objectives. These forward-looking statements are based on the current estimates and expectations of the Company's management and are subject to risk factors and uncertainties such as the Company's ability to implement its strategy, the pace of development of the relevant market, changes in technology and in the competitive environment, and all risks associated with managing the Company's growth. The Company's objectives mentioned in this presentation may not be achieved due to these or other risk factors and uncertainties. No guarantee can be given as to any of the events anticipated by the forward-looking statements, which are subject to inherent risks, including those described in the Universal registration document filed with the Autorité des Marchés Financiers on February 24, 2021 under number D.21-0076 as well as changes in economic conditions, the financial markets or the markets in which CARMAT operates. In particular, no guarantee can be given concerning the Company's ability to finalize the development, validation and industrialization of the prosthesis and the equipment required for its use, to manufacture the prostheses, satisfy the requirements of competent authorities, enroll patients, obtain satisfactory clinical results, perform the clinical trials and achieve commercial objectives. Aeson® is an active implantable medical device commercially available in Europe ONLY, CARMAT SA., CE0344. The Aeson® TAH is intended to replace ventricles of native heart and is indicated as a bridge to transplant in patients suffering from end-stage biventricular heart failure (INTERMACS classes 1-4) who are not amenable to maximal medical therapy or LVAD and are likely to undergo heart transplant in the 180 days following device implantation. The decision to implant and the surgical procedure must be executed by Health Care professionals trained by the manufacturer. Carefully read the documentation (clinician manual, patient manual & alarm booklet) for characteristics and information necessary for patient selection and good use (contraindications, precautions, side effects). In the USA, Aeson® is currently exclusively available within the framework of clinical trials.

Speakers

Jean-Pierre Garnier
Chairman

- Over 40 years of experience in the pharmaceutical industry
- Board member of several biotech companies
- Previously Chairman of GSK (2000-2008)

Stéphane Piat
Chief Executive Officer

- Over 20-year experience in the medical device business
- Previously Divisional Vice President Global Market Development at Abbott
- Johnson & Johnson Cordis (2002-2007)

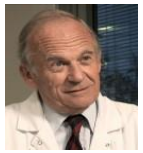
Pascale d'Arbonneau
Chief Financial Officer

- Over 25-year experience in Finance
- Previously VP-Finance at GSK
- Graduate of ESCP

Pr. Christian Latrémouille
Director of Surgical Affairs

- University Professor at the University of Paris
- Principal investigator of the CARMAT heart feasibility study
- Previously cardiac surgeon at the Georges-Pompidou European Hospital

Board of directors



Pr Alain Carpentier
Honorary Chairman

Jean-Pierre Garnier
Chairman

Karl Hennessee
Representative of Airbus Group

Stéphane Piat
CEO

André Muller
Independent Director

9
directors

Henri Lachmann
Independent Director

Jean-Luc Lemercier
Independent Director

Dr Antonino Ligresti
Representative of
Santé Holding SRL
Independent Director

Pierre Bastid
Independent Director

Dr Michael Mack
Independent Director

Diversified and complementary board

3 nationalities

6 independent directors

2 international experts in cardiology

3 new appointments to the Board of Directors proposed for approval by the meeting

Mr. Florent Battistella

- Engineer (INSA Toulouse), PhD in solid state physics (Paul Sabatier University of Toulouse)
- Previously CEO emerging countries at Converteam (acquired by General Electric in 2011)

Mr. David Coti

- Graduate in international business (ESSEC International and Plekhanov University in Moscow)
- Manager of family offices, including those of the Gaspard family (Bratya SPRL and Corely SPRL)

Mr. John B. Hernandez

- Doctor of Health Policy (Pardee RAND Graduate School, California).
- Clinical Director and Head of Clinical Research and Medico-economic Affairs at Google

Agenda

I. Bureau constitution

II. Progress made by CARMAT in 2020

III. Strategy and outlook

IV. 2020 Financial report

V. Statutory auditors' reports

VI. Questions & answers

VII. Voting on resolutions

I. Bureau constitution

Bureau constitution

- **Chairman:** Jean-Pierre Garnier
- **Secretary of the meeting:** Pascale d'Arbonneau
- **Scrutineers:**
  - Laurent Kirsch
  - David Coti
- **Quorum Update**
  - Number of shares with voting rights: **15,349,739**
  - Shareholders represented or voting by mail:
    - For ordinary resolutions: **7,809,738** shares; i.e. **9,748,305** votes
    - For the extraordinary resolutions: **7,261,738** shares; i.e. **8,652,305** votes
  - Quorum reached: **50.879%** for the OGM and **49.519%** for the EGM

II. Progress made by CARMAT in 2020

2020 Highlights

1. CARMAT is granted €13 million in national innovation funding to conduct the EFICAS study in France
2. 3 US centers successfully trained and ready to start enrolment of first US patient in Q2 2021
3. CE marking to market our total artificial heart in the EU as a bridge to transplant
4. Key objectives achieved despite COVID situation
5. Fully prepared for anticipated commercial launch in Q2 2021

CE Mark Opportunity

CE Mark Milestone Achievement

- **CE marking granted to CARMAT's total artificial heart system** as a bridge to transplant in patients suffering from end-stage biventricular heart failure (Intermacs Classes 1-4) who are not amenable to maximal medical therapy or the LVAD and who are likely to undergo heart transplant in the 180 days following implantation.

*LVAD: Left Ventricular Assist Device

- Anticipate ramp-up of manufacturing activities and discussions with core target customers to achieve smooth **commercial launch in Q2 2021**

- CE mark allows CARMAT access to a larger pool of patients

Advanced Heart Failure

5,500

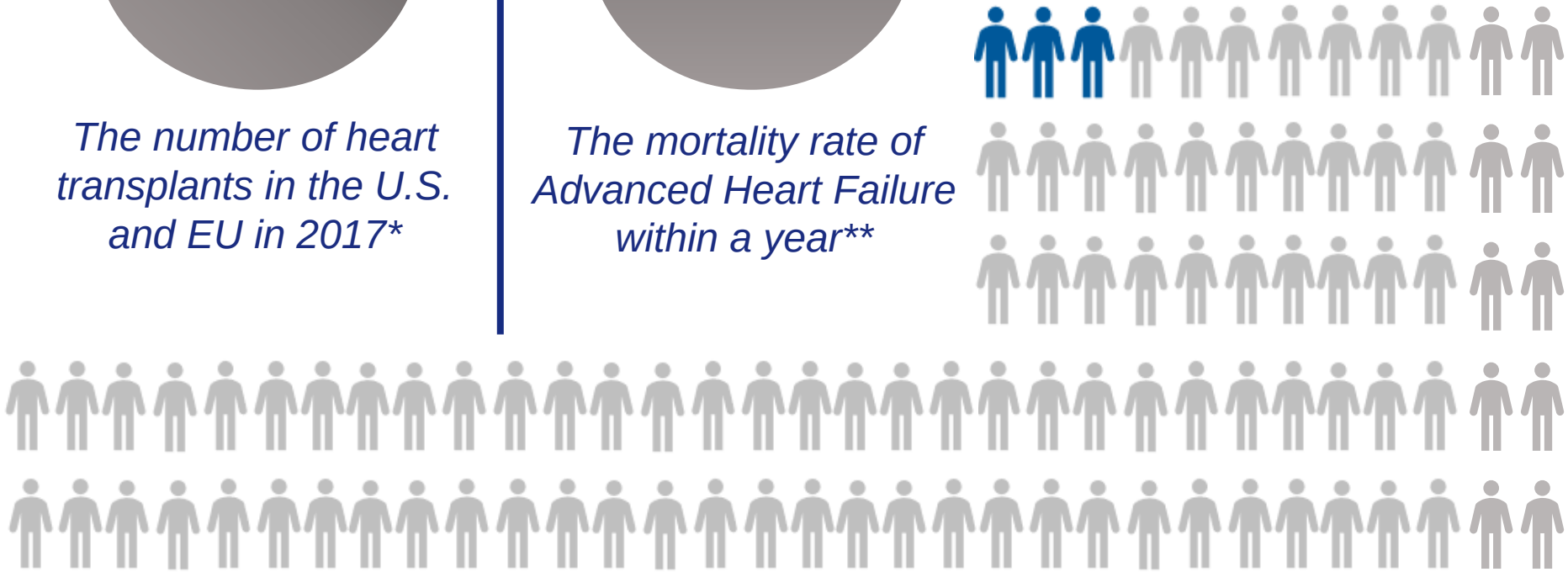
*The number of heart transplants in the U.S. and EU in 2017**

55-77%

*The mortality rate of Advanced Heart Failure within a year***

The percentage of patients treated in need of transplants

3%***



* Source: J Heart Lung Transplant 2019;38:1056-66
** Source: Circ Heart Fail. 2009;2:320-324.
*** Source: GlobalData, CARMAT estimates

CARMAT

Total Addressable Market

A large waiting list not served → 700 patients in active waiting list* in Germany and 900 in France** at the end of 2019

No strong alternative for patients not getting a heart transplant → Only 14 BVAD and 15 Syncardia performed in Germany in 2019, about the same in France ***

The BTT indication gives access in EU to a minimum of 2,000 patients per year

* Source: statistics.eurotransplant.org: 9023P_2019
** Source: https://rams.agence-biomedecine.fr
*** Source: ISHLT 2020 BVAD Virtual

CARMAT’s Unique Solution

Unparalleled Safety Profile

Thanks to its technology, CARMAT is the only device which does not generate any of the following:

No Stroke*

No GI Bleeding*

No Infection at Cable Site*

The CARMAT heart is a game changer for patients suffering with end-stage biventricular heart failure

* Source: Clinical Evaluation Report

Clinical Developement

European Studies

Pivotal Study

Objective: Safety & Performance data
Sample size: Target 20
Enrollment: 15 patients to date
Study Results: Support Clinical Evaluation Report for CE Marking

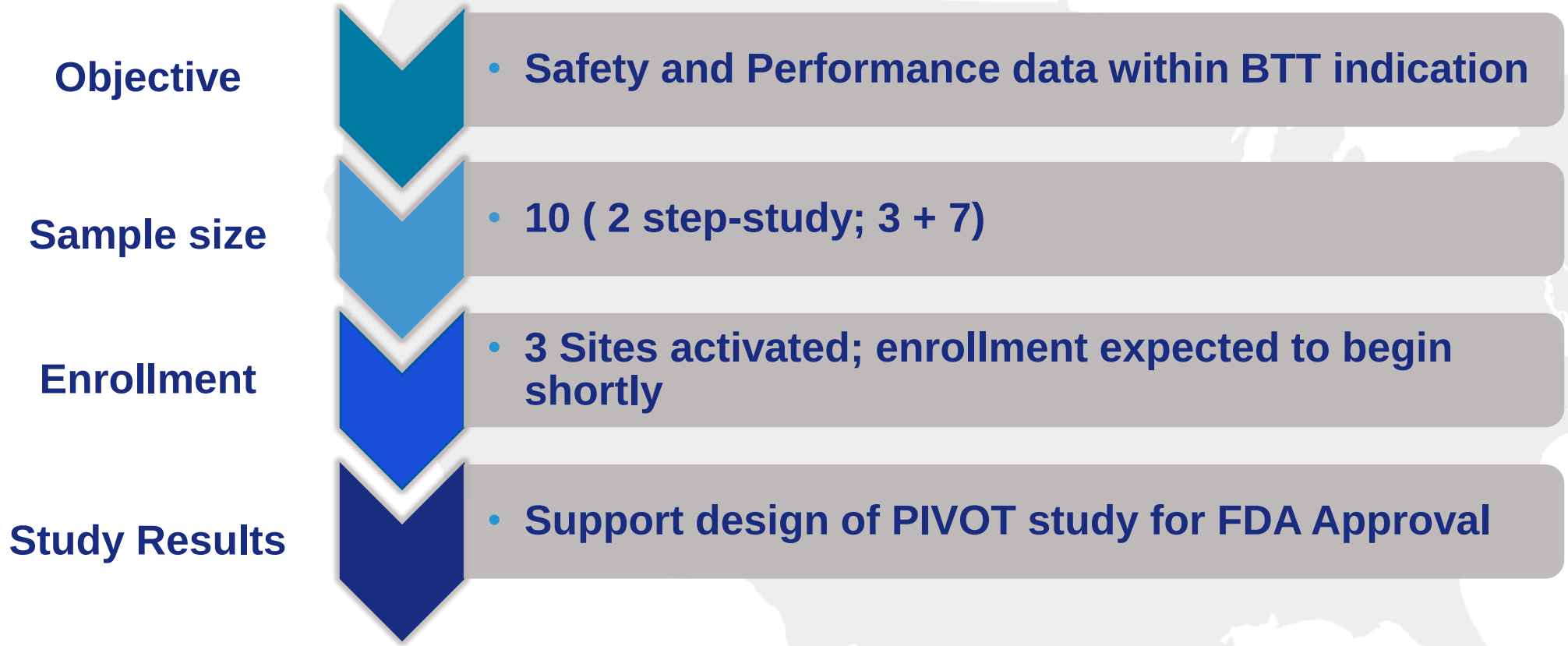
EFICAS in France

Objective: Safety & Performance data and Health Economics within BTT indication
Sample size: 52
Enrollment: Starting date Q3 2021
Study Results: Drive product adoption, support value proposition and get French reimbursement

PMCF (Post-Market Clinical Follow up)

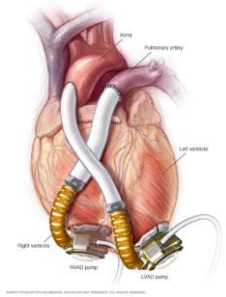
Objective: Device Safety & Performance data monitoring within BTT indication
Sample size: Target 95
Enrollment: Starting date Q2 2021
Study Results: LT data (>1 year) to support indication extension for Destination Therapy

U.S. Early Feasibility Study



PIVOTAL Study Results from 15 patients to date

The 6-months survival rate of the CARMAT TAH is superior to comparable therapy options.



6-months Survival Rate	
CARMAT PIVOTAL (n=15)	**73%**
CARMAT PIVOTAL BTT patients (n=9)	**78%**
Syncardia*	54% - 62%
BVAD**	46% - 68%
LVAD***	90% - 92%

* Kirklin JK et al., JHLT 2018;37:685-691. Arabia F et al., JHLT, 2018;37:1304–1312. Demondion P et al., EJCS. 2013 Nov;44(5):843-8
** Lavee J et al., JHLT 2018;37:1399−1402. Arabia F et al., ATS 2018;105:548–56
*** Strueber M et al. JACC 2011;57:1375–82. Netuka I et al., JACC 2015;66:2579–89

Unparalleled Safety Profile

The CARMAT TAH shows an outstanding 6-months safety profile, with a low rate of bleeding events, no strokes and no driveline infections.

Adverse Event Rates at 6 months

	Re-operation for bleeding	Stroke	Gastrointestinal bleeding	Driveline infection
CARMAT	**20%**	**0%**	**0%**	**0%**
SynCardia*	41%	23%	20%	22%
BIVAD**	n/a	7%	7%	7%
LVAD***	14%	10%	25%	10%

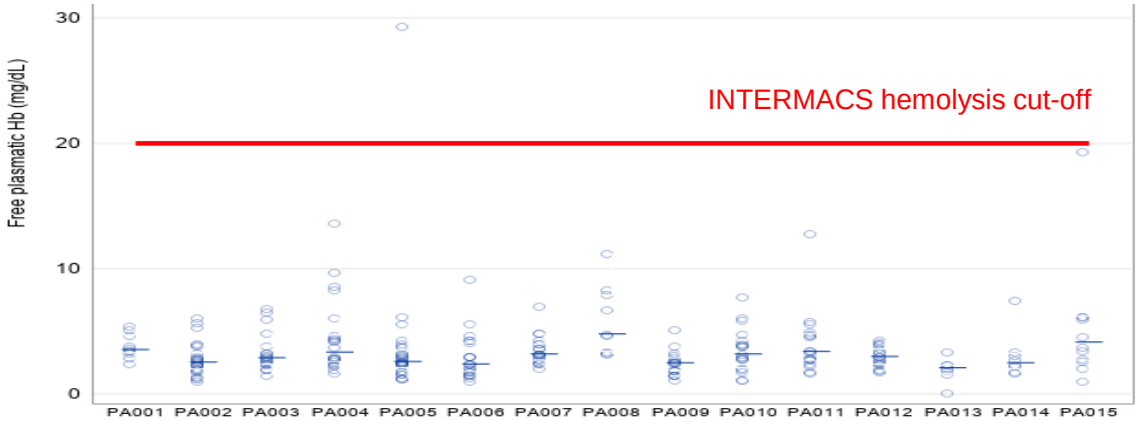
* Kirklin JK et al., JHLT 2018;37:685-691. Arabia F et al., JHLT, 2018;37:1304–1312. Demondion P et al., EJCS. 2013 Nov;44(5):843-8
** Lavee J et al., JHLT 2018;37:1399−1402. Arabia F et al., ATS 2018;105:548–56
*** Mehra MR, et al., NEJM. 2019 Apr 25;380(17):1618-27. Strueber M et al. JACC 2011;57:1375–82. Netuka I et al., JACC 2015;66:2579–89

Hemocompatibility

The combination of biocompatible surfaces, low shear rates, absence of hemolysis and autoregulation provides a unique safety profile with low-level anticoagulation treatment.

Factors causing hemolysis	LVAD/BVAD	Syncardia	CARMAT
Shear stress	++	+++	-
Synthetic Material	+++	+++	+
Anti-platelet therapy*	Aspirin 81-325mg	81-325mg Dipyridamole 150mg	75-100mg
Anticoagulation therapy*	Coumadin (INR 2,0-3,0)	Coumadin (INR 2,0-3,0)	Prophylactic low molecular weight heparin

*Eur J Cardiothor Surg 2019;56:230-70



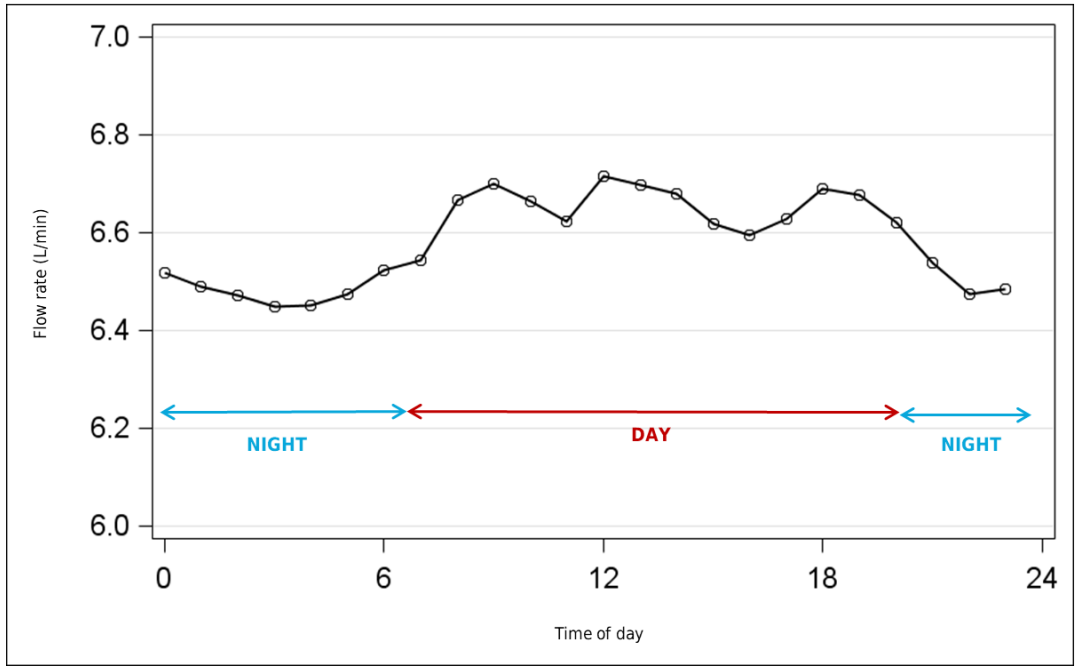
Hemolysis markers (plasma-free hemoglobin) are low in all CARMAT patients.

Replicating the Function of a Human Heart

The CARMAT TAH Autoregulation adapts appropriately to the physiological needs of patients in different daily situations*.

Circadian Cycle

10+ months of support



*Netuka, I *et al.*, ASAIO J, 2021; in press

Optimization of the Surgical Experience

- 100% success rate for the procedure
- Length of surgery shortened with the benefit of experience
- 100% success rate for Heart transplantation following the CARMAT implantation

Overview of the Clinical Experience to Date

- **Operation**
  - Recovery times comparable to the norm for high-risk patients
  - Physiological autoregulation of the prosthesis, adapting to the activity of the patient
- **Favorable safety profile**
  - No hemolysis, no stroke, no digestive system bleeding in the first cohort
- **Follow-up**
  - 6-month survival rate among **the first 15 patients: 73%**
  - Bridge to heart transplant performed with a 100% success rate
- **Latest experience very positive with the Lille University Hospital**

III. Strategy and Outlook

Upcoming Developments

1. Manufacturing
2. Clinical
3. Commercialization

All strategic projects are progressing well

Manufacturing

- Increased reliability of prostheses following the implementation of new manufacturing processes
- Control of the processes allowing a better fluidity of the production and ramp-up
- Focus on suppliers to ensure production continuity

Goal is to be able to assemble 20 products a month by end of the year in order to support commercial demand and studies for 2022

Clinical planning

PIVOTAL Study

- 15 patients enrolled to date
- Extremely encouraging data
- Completion of the study expected by Q1 2022

U.S. Feasibility Study

- 6 Centers selected
- 3 centers initiated
- First patients to be enrolled in Q2 2021

EFICAS Study

- 5 centers selected to date
- First patient to be treated in Q3 2021

CARMAT Creates a New Product Category

From TAH – Total Artificial Heart

To *PHRT – Physiologic Heart Replacement Therapy**

Adding autoregulation and higher hemocompatibility*** to allow**

AN ENHANCED QUALITY OF LIFE**

aeson
Because Life Beats

* Source: Richez U et al.; Hemocompatibility and safety of the CARMAT Total Artifical Heart hybrid membrane. Heliyon. 2019 Dec; 5(12): e02914. Published online 2019 Dec 8. doi: 10.1016/j.heliyon.2019.e02914
** Source: Bizouarn P et al. ; Effects of pre-load variations on hemodynamic parameters with a pulsatile autoregulated artificial heart during the early post-operative period. J Heart Lung Transplant. 2018;37(1):161-3.
*** Source: JACC 2017 Smadja, Bioprosthetic total artificial heart induces a profile of acquired hemocompatibility with membranes recellularization, July 2017:403-9
**** Source: Clinical Evaluation Report

CARMAT

Commercial Planning 2021

- Focus commercially on Germany which represents 40%* of the MCS** market in EU5
- Prospection extended to Italy and the Netherlands

* Source: Global Data
** Mechanical Circulatory Support

Commercial Launch Preparation

Accounts	Q2	Q3	Q4	Total
Trained	4	3	5	12
Open	1	5	6	12

First commercial sales in Q2 2021

Covid-19 Epidemic Impact on CARMAT

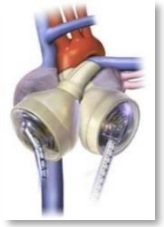
Manufacturing	▪ Mild impact on suppliers
PIVOTAL study	▪ Delayed because of suppliers
EFICAS study	▪ Limited delay because of suppliers
EFS	▪ Limited access to the US delaying start
Commercialization	▪ Training planning slightly delayed

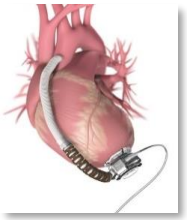
Limited but increased impact compared to last year

CARMAT, a Unique and Eagerly Awaited Solution

4 essential requirements to provide physiological support without complications*:

- Biventricular support
- Pulsatility
- Self-regulation
- High biocompatibility

	CARMAT TAH	Syncardia TAH	BVAD	LVAD + pRVAD	LVAD
Biventricular support	✓	✓	✓	✓	✗
Pulsatility	✓	✓	✗	✗	✗
Self-regulation	✓	✗	✗	✗	✗
High biocompatibility	✓	✗	✗	✗	✗

- **The only system to offer real physiological support**

** Rogers JC et al. N Engl J Med 2017; Money L et al. ASAIO J 2020; Lai JV et al. ASAIO J 2020 Mehra M. Eur Heart J 2017; Murase S et al. J Heart Lung Transpl 2020*

CARMAT, a New Opportunity in Cardiology

1

Large Market Opportunity

Over 100k patients in irreversible conditions at risk of death within weeks

2

First bioprosthetic physiological replacement heart

Credible therapeutic and economic alternative to transplant

3

Clear market-access strategy

- CE marking granted
- EFS undergoing
- KOL advocacy

4

Short-term value creation milestones

- EFICAS start
- US EFS start
- First sales

Their life. Your skills. Our technology.

CARMAT

IV. Financial Report 2020

P&L: Operating expenses under control

In €m	2020	2019
Sales	-	-
Operating Result	**(36.4)**	**(42.4)**
Financial Result	(2.5)	(1.8)
Non-recurring items	0.2	(0.1)
Research and Innovation tax credit	1.7	1.6
Net Result	**(37.0)**	**(42.6)**

- **No sales in 2020 - first sales expected in 2021**
- **Operating expenses under control :**
  1. Production ramp-up
  2. Finalization of the commercial configuration of the artificial heart
  3. Preparation for commercialization in Europe
  4. Continuation of clinical activities: pivotal study underway, preparation of EFS (United States) and EFICAS (France) studies
  5. Inventories recorded for the first time as assets on the balance sheet (net impact of €10 million)
- **Increase in financial interests - impact of the EIB loan**
- **Research and Innovation tax credit of €1.7m**

CARMAT

Cash position of €36m at 31.12.2020

In m€	2020	2019
Cash and cash equivalents at beginning of year	**55.5**	**25.3**
Cash flow from operating activities	(43.0)	(40.2)
Cash flow from investment activities	(2.3)	(0.6)
Cash flow from financing activities	25.8	71.1
Cash and cash equivalents at end of year	**36.0**	**55.5**

- **Cash-burn of €45 million (vs. €41 million in 2019)**
- **Drawdown of 2nd tranche of EIB loan: +€10m**
- **State-Guaranteed Loan: + 10 M€**
- **Kepler-Cheuvreux equity line: +€5.8m**

CARMAT

Funding: financial visibility until mid-2022

Cash as 31.12.2020	**€36m**	
Fundraising (March 2021)	**€56m**	
EIB Loan - Tranche 3 (undrawn)	**€10m**	**Non-dilutive financing (drawing conditions met)**
Kepler-Cheuvreux Equity Line	**Max. €16m**	**Available until the end of September 2021**

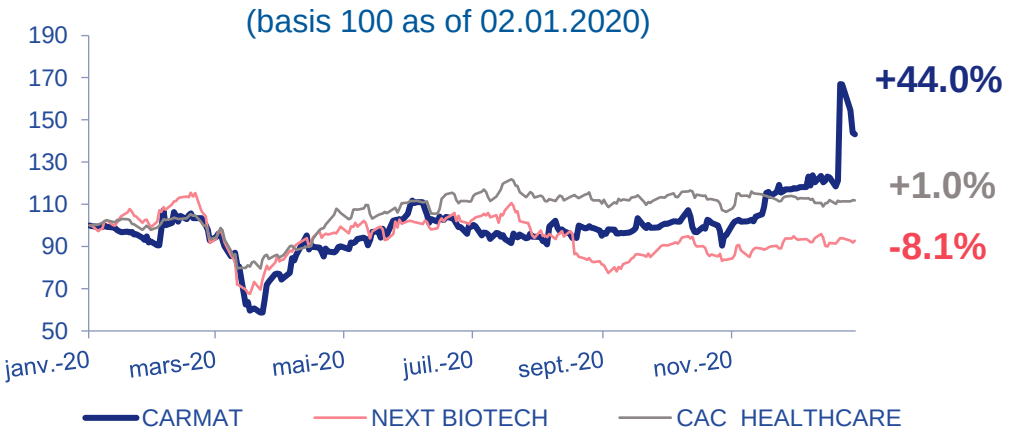
Financial visibility until mid-2022 (without use of the Kepler line)

CARMAT and the stock market

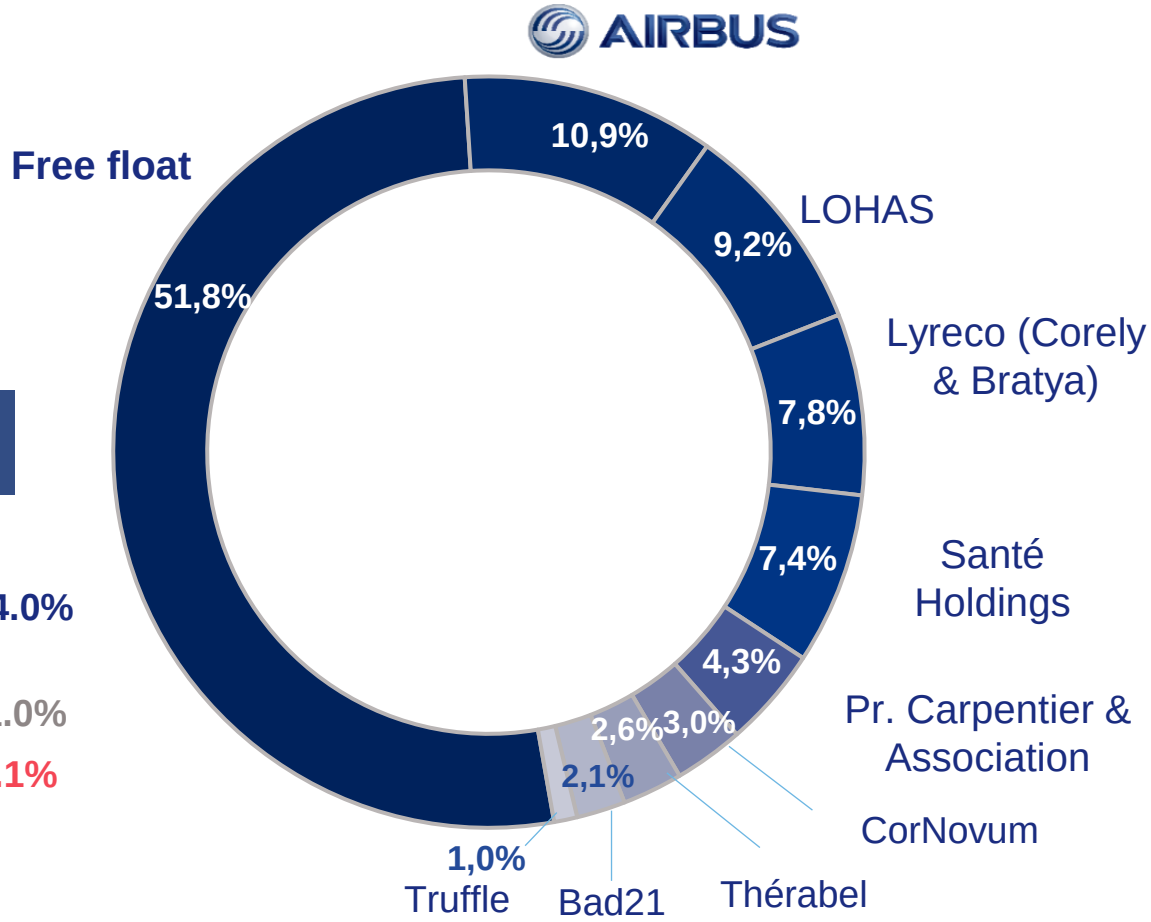
Stock information as of 30.04.2021

- **Ticker:** ALCAR
- **ISIN Code:** FR0010907956
- **Industry:** Health equipment and services
- **Share price:** 25,45 €
- **Number of shares:** 15 353 452
- **Market cap.:** €391 m

Change in CARMAT share price vs. sector indexes in 2020



Shareholding structure as of 10/03/2021 (post fundraising)



V. Statutory auditors' reports

VI. Questions and answers

VII. Voting on resolutions

Ordinary resolutions

N°	Resolution	Adopted at	Rejected at
1	**Approval** of the annual accounts for the year ending December 31, 2020	100%	
2	**Discharge** of the directors for the performance of their duties during the past financial year	95.14%	
3	**Allocation** of results for the year ended December 31, 2020	100%	
4	**Review** of agreements covered by Articles L. 225-38 et seq. of the French Commercial Code	99.999%	
5	**Appointment** of a new director - Mr. David Coti	87.638%	
6	**Appointment** of a new director - Mr. John B. Hernandez	87.638%	
7	**Appointment** of a new director - Mr. Florent Battistella	87.638%	
8	**Renewal** of the mandate of PRICEWATERHOUSECOOPERS AUDIT as statutory auditor	91.834%	
9	**Authorization** for the Board of Directors to purchase the Company's own shares	98.482%	

Extraordinary resolutions (1/2)

N°	Resolution	Adopted at	Rejected at
10	**Consultation of shareholders**, pursuant to Article L. 225-248 of the French Commercial Code, on the possible early dissolution of the Company following the recognition of accounting losses that reduce shareholders' equity to less than half the share capital	100%	
11	**Authorization** for the Board of Directors to reduce the share capital by cancelling treasury shares	98.293%	
12	**Delegation** to increase the capital by issuing ordinary shares and/or any other securities, with shareholders' pre-emptive rights maintained	98.293%	
13	**Delegation** to increase the capital by issuing ordinary shares and/or any other securities, without shareholders' pre-emptive rights and with a public offering	93.225%	
14	**Delegation** to increase the share capital by issuing ordinary shares and/or any other securities, without shareholders' pre-emptive rights, to be issued as part of an offer to qualified investors or a limited circle of investors as provided for in Article L. 411-2 of the Monetary and Financial Code	93.225%	
15	**Authorization** for the Board of Directors, in the event of the issue of shares or any other securities giving access to the capital with cancellation of the shareholders' preferential subscription rights, to set the issue price within the limit of 10% of the share capital and within the limits provided for by the General Meeting	94.387%	
16	**Delegation** to increase the amount of each of the issues with or without preferential subscription rights that would be decided under the 12th to 14th resolutions above	93.23%	
17	**Delegation** of authority to the Board of Directors to decide to issue shares and/or securities, without shareholders' pre-emptive rights, to investors in the life sciences and technologies sector	87.925%	
18	**Delegation** of authority to the Board of Directors to decide to issue shares and/or securities, without shareholders' pre-emptive rights, to strategic, commercial or financial partners	87.925%	

Extraordinary resolutions(2/2)

N°	Resolution	Adopted at	Rejected at
19	**Delegation** to increase the capital by issuing any securities that are equity securities giving access to other equity securities or giving the right to the allocation of debt securities, and/or securities giving access to equity securities, with cancellation of the pre-emptive right, to the benefit of a third category of persons in the context of an equity or bond financing facility	87.91%	
20	**Determination** of the total amount of the delegations granted under the 12th to 19th resolutions above	99.996%	
21	**Delegation** of authority to the Board of Directors to increase capital by incorporation of premiums, reserves, profits or other items	100%	
22	**Delegation** to issue warrants to (i) members and non-voting members of the Board of Directors in office on the date of allocation of the warrants who are not employees or executives of the Company or one of its subsidiaries, or (ii) persons linked by a service or consultancy contract to the Company or one of its subsidiaries, or (iii) members of any committee that has been or is to be set up and who are not employees or executives of the Company or one of its subsidiaries	91.356%	
23	**Authorization** for the Board of Directors to grant existing or new shares at no cost	89.414%	
24	**Amendment** of article 14 of the articles of association "double voting rights"	100%	
25	**Amendment** to the terms of the AGAP 2019-01 and consequential amendment to paragraph 1 of Article 12.2. III of the Bylaws	92.988%	
26	**Delegation** of authority to the Board of Directors to increase the share capital by issuing shares and securities giving access to the capital to employees participating in the company savings plan		60.566%

Their life. Your skills. Our technology.

Thank you for your attention!