Innovations in robotics for improved health security
"Euronext Access is a market operated by Euronext.

The companies listed on Euronext Access are not bound by the same rules as companies listed on regulated markets.

They are, however, subject to a less extensive set of criteria appropriate to small growth companies.

The risk associated with an investment on Euronext Access may consequently be greater than investing with a company listed on a regulated market."
Governance

Experts in agricultural and health innovation

Olivier Somville – Chairman (aged 52) Entrepreneur and Director of SMEs for over 25 years
Acquired and Chaired the company MCAI, then OCTOPUS ROBOTS since 2004
In 2012, created the TWINCRUISER, an airborne surface disinfection device
12 patents registered in artificial vision and in airborne surface disinfection (or DSVA)

Charles-Olivier Oudin – CFO (aged 47)
Holds agricultural qualifications and is a graduate of the French business school Ecole Supérieure Appliquée Aux Affaires
15 years’ experience in financial management for SMEs
Agricultural experience as a young farmer from 2009 to 2014, was involved in the development of a bee-keeping start-up
Accustomed to managing development and financial markets
AgTech: Companies specialised in cutting-edge technology for agriculture and the agri-food industry. IC: prevention and infection control.
Key factors of success

An AgTech focused on health security

- **Breakthrough technology** with a versatile, autonomous, intelligent robot, equipped with a patented atomisation system for targeted, mobile sanitation

- **1 patent registered** (atomisation) and 2 patents pending registration

- **A robust solution** in response to the growing global health issue of antibiotic resistance through poultry farming

- **Aviculture (poultry farming) – a huge primary market:** an estimated 1 million buildings to be treated worldwide, 350,000 of which are owned by the 80 leading global agri-food groups (1)

- **Intentions to order** stated by major players in the aviculture industry in France and internationally

- **Various related applications** including the decontamination of industrial sites, food storage facilities, etc.

Emerging markets with strong growth potential

(1) Source: Zion research analysis 2016
Key factors for success

On track for growth

- Provisional turnover for 2018: €5.3m
- Winner of the INNOV-SPACE 2016 award
- Winner of the AGROFARM MOSCOW 2018 award for scientific innovation
- Partnerships with major French industrial groups:

Marketing strategy up and running
Technological breakthrough
Unique concept

Mobile, autonomous, intelligent and modular robots

Targeted atomisation  Autonomous guidance  Ultra-flexibility  Video surveillance  Mechanical action
The modular robot revolution, using blockchain technology

- **Technical features**
  - **Onboard intelligence**: multi-sensor totem featuring autonomous, triangulated and secure guidance
  - **Communication 3.0**: traceability and dialogue using blockchain technology
  - **Navigation and systems**: based on autonomous vehicles and associated systems.
  - **Autonomy and weight**: an approach inspired by the automotive industry: standalone chassis architecture, large battery volume, four high-power BRUSHLESS motors (4-wheel drive)

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LIDAR
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Biocide atomisation
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Litter aerator / Scarifier
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- Cameras
- Volumetric sensor
- Embedded intelligence

- Temp/H.R, CO₂... sensors
Zero competition

Competitors offering only limited equipment and systems

Static units or fixed installations, costly and ineffective for treating large-volume areas:

- A very poor "sphere of effectiveness", limited to 300 m³
- Systems that cannot be operated 24/7 and require unnecessary human intervention
- Effectiveness highly dependent on air flow and temperature gradients
- Using fixed equipment, the surfaces treated in large volumes are not exposed – either enough or at all – to the biocides intended to eliminate micro-organisms (multi-resistant bacteria and other pathogens)

Immobility constitutes a serious handicap:

- Totally ineffective in the event of a pandemic or bio-terrorism attack

Other solutions developed but not in direct competition with the OCTOPUS ROBOTS innovation.
Other key markets

Robots with a great potential for use in other areas

- The agri-food industry (animal husbandry, production, transformation, storage, distribution, etc.)
- Human health (establishments open to the public including airports, shopping centres, etc.)
- Pharmaceutical laboratories (vaccine production, research units, etc.)
- Defence and civil protection (restricted areas)
- etc.
Markets driven by strategic health issues
A priority market: aviculture, affected by two global health issues

**Poultry: No.1 meat consumed worldwide**

**ANTIBIOTICS**
- 50% of antibiotics produced are intended for animal use
- Transfer of antibiotic resistance from animals to humans
- Research and development in new antibiotics at a standstill
- Increase in the number of emerging infectious diseases
- Risks of global pandemic

**AMMONIA**
- A statutory requirement: to reduce ammonia emissions
- 15% of emissions are from poultry farms (droppings in contact with air)
- Solution: drying the litter reduces emissions by 90%
- Ammonia has an impact on poultry health (weight loss) and consequently the overall yield

**Microbial resistance,**
No.1 cause of mortality in humans
in 2050 with 10 millions deaths per year

**New European Directive:**
13% reduction in ammonia emissions by 2030

Octopus Robots: a response to this global health issue

Key benefits for poultry farmers

- Limited impact of antibiotics
- Gains in productivity
- Increased animal weight
- Greater workplace security
- Improved animal wellbeing
- Preparedness for future regulations

Strong potential for deployment with one million buildings to be equipped worldwide
The poultry market

A fast-growing market

- **No.1 MEAT MARKET IN THE WORLD** *(Source: FAO)*
  Global production in 2015: 112 million tonnes +1.4%
  Global turnover in 2016: $196.6 billion +2.8%
  Global turnover in 2021: $226.9 billion

- **FRANCE, THE LEADING PLAYER IN EUROPE**
  European production in 2015: 14.4 million tonnes +2.1%
  French production in 2015: 0.8 million tonnes
  7,116 poultry buildings in France vs. 6,333 in Italy and 5,724 in the UK.

- **STRATEGIC PARTNERS IN FRANCE FOR THE TESTING PHASE**

In France, the equipment potential between now and 2019 is 2.5% of the total number of buildings

On the export market, the equipment potential between now and 2019 could be as much as 40% of activity
The strong boom in AgTechs

A fast-growing market

- **Main Agricultural Sectors for Robotisation**
  - Driverless tractors
  - Animal management (rearing, feeding, monitoring)
  - Management of dairy production
  - Soil management

- **Growth Factors**
  - Growing pressure on competitiveness
  - Availability of labour
  - Loss of agricultural land
  - Climate change

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**Breakdown of income from agricultural robots in $billion**

**Evolution du marché de la robotique agricole 2015-2024p**

**OCTOPUS ROBOTS is well-positioned in a fast-developing market**
The service robotics market

Professional service robotics: a fast-growing market

**SERVICE ROBOTICS**

- Agricultural robotics (+12%)
- Ground robotics (other than agriculture)
- Domestic/task robotics
- Medical robotics
- Leisure robotics (+7%)
- Logistics systems (+52%)
- Other

**PROFESSIONAL SERVICE ROBOTICS**

- Agricultural robotics (+12%)
- Ground robotics (other than agriculture)
- Personal assistance robotics
- Medical robotics (+10%)
- Sanitation robotics (+116%)
- Logistics systems (+50%)
- Other
A structure set for hyper-growth
AN EXCELLENT TRACK RECORD
2004: acquisition of MCAI (metrology) by Olivier Somville
2012: design and development of Twincruiser, the airborne surface disinfection device
2014: launch of the Octopus Robots project
2015: around €223k funds raised by friends and family shareholders
2016: additional fundraising of around €300k
2017: €2.7m funds raised from Family Office, various shareholders and a crowdfunding campaign
2018: listed on the Euronext market

A TEAM OF SPECIALISTS
16 employees
550 m² of office space

IN-HOUSE SKILLS
Total technological expertise
In-house design office for key components (circuit boards, mechanical elements)
Development of software bricks
Production of sensitive and proprietary components using 3D printing
Projects and support

Responsive and effective R&D

3 PCT patents (2 of which pending)
3 years of R&D
circa €3.2m invested

Commercial partners who are world-leading in their markets

OCTOPUS is supported by Bpifrance
OCTOPUS is assisted by the CCI of Maine & Loire
OCTOPUS is a member of VEGEPOLYS, a plant InterCluster consortium
OCTOPUS is a member of SAFE CLUSTER, a risk management InterCluster consortium
OCTOPUS is a member of PROXINNOV, innovation and robotics
OCTOPUS ROBOTS is a member of ELINNOVE, InterCluster for poultry buildings and facilities
OCTOPUS is a partner of SYMOP, representing the professional service robotics sector
OCTOPUS is a partner of the Fonderephar test lab, DSVA standards developer - University of Toulouse
OCTOPUS is a partner of the La Forêt veterinary clinic (Dr Pascal Aillery)
Business model and strategy
A comprehensive offering

A diverse business model with four additional sources of revenue

1. Sale of robots: 100% of units produced in 2018
   - Octopus robots marketed directly in France and via distributors for the export market
   - Revenue supplemented by provision of maintenance services

2. Rental of robots
   - Recurring turnover and optimisation of margins

3. Sale of consumables
   - Biocides, phytosanitary products

4. Service offerings
   - On-site installation
   - Training
   - System updates
   - Technical support
   - Hardware support
   - Preventive maintenance and corrective maintenance
   - Extended warranty
   - Decontamination services
Octopus Robots aims to become the market leader. It plans to open OCTOPUS CENTERS throughout the world by 2021 with sufficient capital. The OCTOPUS CENTERS will oversee the procurement, assembly and marketing of products and services at "regional" level: US/Canada (UN), Middle East (MENA), Latin America (LATAM), Russia (CIS), Asia-Pacific (APAC).
An industrial process that can be easily duplicated internationally (Latin American example)

1. Proprietary electronic components and frame manufactured by a sub-contractor in France

2. Additional parts and patented elements manufactured using 3D printer by OCTOPUS CENTER (Brazil, USA, Russia, etc.)

3. Robot assembly by OCTOPUS CENTER (Brazil, USA, Russia, etc.) (2 man days)

4. delivery and training

An optimised production & marketing chain, for cost control

15 days

20 days

30 days
Investment priorities and growth data
**Strategy**

International marketing as a growth driver

**R&D**
Maintaining technological progress and R&D effort
Development of four other robots, on the same basis, to complete the offer

**Industrialisation**
Test phase finalised
3D printers in operation
Manufacture of specific parts to be assembled on the frame

**Internationalisation**
Launch of subsidiaries (Octopus Center) in Latin America and the Middle East in the medium term
Recruitment and training of on-site teams (technical, service and sales system)

**Sales & Marketing**
Aggressive commercial strategy in place since late 2017 (sale and rental of solutions)
Pursue and develop key partnerships
Increase the visibility of OCTOPUS (media, trade shows)
## International marketing as a growth driver

<table>
<thead>
<tr>
<th></th>
<th>2017p (18 months)</th>
<th>2018e (12 months)</th>
<th>2019e (12 months)</th>
<th>2020e (12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td></td>
<td>n.s.</td>
<td>178%</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>5,314</td>
<td>14,791</td>
<td>29,334</td>
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<tr>
<td><strong>Capitalised production</strong></td>
<td>1,038</td>
<td>190</td>
<td>220</td>
<td>240</td>
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<tr>
<td><strong>EBITDA</strong></td>
<td></td>
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<td></td>
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<tr>
<td><strong>EBITDA margin</strong></td>
<td>ns</td>
<td>30%</td>
<td>26%</td>
<td>31%</td>
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<tr>
<td></td>
<td>-347</td>
<td>1,584</td>
<td>3,809</td>
<td>9,182</td>
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<tr>
<td><strong>EBIT</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>EBIT margin</strong></td>
<td>ns</td>
<td>23%</td>
<td>24%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>-367</td>
<td>1,219</td>
<td>3,488</td>
<td>8,886</td>
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</table>
# Orders taken and promising outlook

## Sales pipeline over 5 years

<table>
<thead>
<tr>
<th>Market</th>
<th>Zone</th>
<th>Prospect / Customer</th>
<th>Target potential (units)</th>
<th>Target market share N+2-to N+5</th>
<th>Target objective N+2-to N+5 (units sold and rented)</th>
<th>Deployment time (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Domestic</td>
<td>Customer 1</td>
<td>22,000</td>
<td>9.5%</td>
<td>1,500</td>
<td>5</td>
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<tr>
<td>France</td>
<td>Domestic</td>
<td>Customer 2</td>
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<tr>
<td>France</td>
<td>Domestic</td>
<td>Customer 3</td>
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<td>9.5%</td>
<td>1,500</td>
<td>5</td>
</tr>
<tr>
<td>International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>International</td>
<td>Customer 4</td>
<td>33,000</td>
<td>1.5%</td>
<td>500</td>
<td>5</td>
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<tr>
<td>Italy</td>
<td>International</td>
<td>Customer 5</td>
<td>7,300</td>
<td>2.1%</td>
<td>150</td>
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<td>USA</td>
<td>International</td>
<td>Customer 6</td>
<td>32,000</td>
<td>1.6%</td>
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<td>5</td>
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<td>USA</td>
<td>International</td>
<td>Customer 7</td>
<td>10,000</td>
<td>8.0%</td>
<td>800</td>
<td>5</td>
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<td>Latvia</td>
<td>International</td>
<td>Customer 8</td>
<td>110</td>
<td>100.0%</td>
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<td>2</td>
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<td>United Arab Emirates</td>
<td>International</td>
<td>Customer 9</td>
<td>300</td>
<td>100.0%</td>
<td>50</td>
<td>5</td>
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<td>Saudi Arabia</td>
<td>International</td>
<td>Customer 10</td>
<td>109</td>
<td>100.0%</td>
<td>109</td>
<td>3</td>
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<tr>
<td>UK</td>
<td>International</td>
<td>Customer 11</td>
<td>6,600</td>
<td>3.0%</td>
<td>200</td>
<td>5</td>
</tr>
<tr>
<td>Canada</td>
<td>International</td>
<td>Customer 12</td>
<td>3,000</td>
<td>3.3%</td>
<td>100</td>
<td>5</td>
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<tr>
<td>Netherlands</td>
<td>International</td>
<td>Customer 13</td>
<td>5,000</td>
<td>2.4%</td>
<td>120</td>
<td>5</td>
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<tr>
<td>Other export</td>
<td>International</td>
<td>Customer 14</td>
<td>220,000</td>
<td>0.9%</td>
<td>2,000</td>
<td>5</td>
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<tr>
<td>customers</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>339,419</td>
<td>6,739</td>
<td></td>
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Initial public offering
A strong presence on the world stage

- To improve the legibility of OCTOPUS ROBOTS on the "AgTech" stage on a global scale
- To access new investors in the long term
- To gain additional funding leverage
- To consolidate target markets and target networks

Objective: to transfer Octopus Robots from the Access compartment to Access+, then to Euronext Growth in the longer term
<table>
<thead>
<tr>
<th>Corporate name</th>
<th>OCTOPUS ROBOTS SA</th>
<th>Share capital</th>
<th>882,972 euros</th>
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<tr>
<td>Listing market</td>
<td>Euronext Paris</td>
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<td>MLOCT</td>
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<td>CFI code</td>
<td>ESVUFN</td>
<td>Number of shares sold</td>
<td>15,000</td>
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<td>1,765,944</td>
<td>Notional amount of the sale</td>
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<td>Sale price per share</td>
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<td>First listing</td>
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<td>Value adopted for listing</td>
<td>€26,608k</td>
<td>Eligible for SME PEA</td>
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<tr>
<td>Eligible for PEA (equity savings plan)</td>
<td>YES</td>
<td>Contact</td>
<td><a href="mailto:ipo@octopusrobots.com">ipo@octopusrobots.com</a></td>
</tr>
<tr>
<td>Information</td>
<td>octopusrobots.com/en/investors</td>
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