

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

ADVANCED ACCELERATOR APPLICATIONS S.A.
(Exact Name of Registrant as specified in its charter)

France
(State or other jurisdiction of
incorporation or organization)

N/A
(I.R.S. Employer
Identification No.)

**20 rue Diesel
01630 Saint Genis Pouilly, France**

(Address including zip code of Principal Executive Offices)

**Advanced Accelerator Applications S.A 2016 Warrant Plan
Advanced Accelerator Applications S.A 2015 Stock Option Plan
Advanced Accelerator Applications S.A. 2013 Free Share Plan
Advanced Accelerator Applications S.A 2010 Free Share Plan**
(Full title of the plans)

**Edward Sturchio
Global General Counsel
Advanced Accelerator Applications S.A.
The Empire State Building
350 Fifth Avenue, Suite 6902
New York, NY, 10118, USA**

**National Registered Agents, Inc.
111 Eighth Avenue,
New York,
New York 10011
(888-579-0286)**

(Name, address and telephone number, including area code, of agent for service)

Copies to:
John Crowley
Davis Polk & Wardwell LLP
450 Lexington Avenue
New York, NY 10017

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)

Accelerated filer
Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered⁽¹⁾	Proposed Maximum Offering Price Per Share⁽²⁾	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee⁽³⁾
Ordinary Shares, par value €0.10 each, reserved for issuance pursuant to the Advanced Accelerator Applications S.A. 2016 Warrant Plan ⁽⁴⁾	149,800	\$17.11	\$2,563,078.00	258.10
Ordinary Shares, par value €0.10 each, reserved for issuance pursuant to the Advanced Accelerator Applications S.A. 2015 Stock Option Plan ⁽⁴⁾	12,204,561	\$17.11	\$208,820,038.71	21,028.18
Ordinary Shares, par value €0.10 each, reserved for issuance pursuant to the Advanced Accelerator Applications S.A. 2013 Free Share Plan ⁽⁴⁾	500,000	\$17.11	8,555,000.00	861.49
Ordinary Shares, par value €0.10 each, reserved for issuance pursuant to the Advanced Accelerator Applications S.A. 2010 Free Share Plan ⁽⁴⁾	547,500	\$17.11	9,367,725.00	943.33
Total Ordinary Shares	13,401,861	\$17.11	229,305,841.71	23,091.10

- (1) This Registration Statement on Form S-8 (this "Registration Statement") covers ordinary shares of €0.10 each par value ("Ordinary Shares"), of Advanced Accelerator Applications S.A. (the "Registrant") issuable pursuant to the plans set forth in this table (collectively, the "Plans"). Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional Ordinary Shares that become issuable under the Plans by reason of any share dividend, share split or other similar transaction.
- (2) Computed solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and 457(h) under the Securities Act on the basis of the average high and low sale price on the NASDAQ Global Select Market on September 14, 2016.
- (3) Rounded up to the nearest penny.
- (4) The Ordinary Shares being registered hereby may be represented by the Registrant's American Depositary Shares, evidenced by American Depositary Receipts. One of the Registrant's American Depositary Shares corresponds to two Ordinary Shares.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Item 1 and Item 2 of Part I of Form S-8 will be sent or given to participants as specified by Rule 428(b)(1) under the Securities Act. In accordance with the rules and regulations of the U.S. Securities and Exchange Commission (the "Commission") and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents are incorporated herein by reference:

- (a) The Registrant's Annual Report on Form 20-F for the fiscal year ended December 31, 2015 and filed on April 29, 2016.
- (b) All other reports filed by the Registrant pursuant to Sections 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Annual Report on Form 20-F referred to in Item 3(a) above.
- (c) The description of the Registrant's American Depositary Shares evidenced by American Depositary Receipts, each representing two Ordinary Shares, and Ordinary Shares contained in the Registrant's Registration Statement on Form F-1/A dated November 2, 2015, filed under the Exchange Act, including any amendment thereto or report filed for the purpose of updating such description.

In addition, all documents subsequently filed by the Registrant with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, including any Reports of Foreign Private Issuers on Form 6-K submitted during such period (or portion thereof) that is identified in such form as being incorporated by reference into this Registration Statement, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of the filing of such documents. The Registrant is not incorporating by reference any documents or portions thereof, whether specifically listed above or filed in the future, that are not deemed "filed" with the Commission.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein, (or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein), modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable, see Item 3(c).

Item 5. Interests of Named Experts and Counsel.

Mr. Edward Sturchio, who is giving an opinion on the validity of the securities being registered, is Global General Counsel for the Company and may hold equity interest in the Company from time to time.

Item 6. Indemnification of Directors and Officers.

Under French law, provisions of by-laws that limit the liability of directors are prohibited. However, French law allows *sociétés anonymes* to contract for and maintain liability insurance against civil liabilities incurred by any of their directors and officers involved in a third-party action, provided that they acted in good faith and within their

capacities as directors or officers of the company. Criminal liability cannot be indemnified under French law, whether directly by the company or through liability insurance.

We maintain liability insurance for our directors and officers, including insurance against liability under the Securities Act of 1933, as amended, and we may enter into agreements with our directors and executive officers to provide contractual indemnification.

With certain exceptions and subject to limitations on indemnification under French law, these agreements provide for indemnification for damages and expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding arising out of his or her actions in that capacity. We believe that this insurance and these agreements are necessary to attract and maintain qualified directors and executive officers.

These agreements may discourage shareholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and executive officers, even though such an action, if successful, might otherwise benefit us and our shareholders. Furthermore, a shareholder's investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these insurance agreements.

Certain of our non-employee directors may, through their relationships with their employers or partnerships, be insured against certain liabilities in their capacity as members of our board of directors.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit
Number

- | | |
|------|---|
| 4.1 | English Translation of Advanced Acceleration Applications S.A. Articles of Association (incorporated herein by reference to the annual report on Form 20-F, filed on April 29, 2016) |
| 4.2 | Form of Deposit Agreement among Advanced Accelerator Applications S.A., The Bank of New York Mellon, as depositary, and owners and holders of American Depositary Shares (incorporated by reference to our Registration Statement on Form F-6 (File No. 333-201502) filed with the SEC on January 14, 2015) |
| 4.3 | Form of American Depositary Receipt (included in Exhibit 4.2) |
| 5 | Opinion of Edward Sturchio, counsel of Advanced Accelerator Applications S.A. (filed herewith) |
| 23.1 | Consent of Edward Sturchio, counsel of Advanced Accelerator Applications S.A. (included in Exhibit 5) |
| 23.2 | Consent of KPMG Audit, independent registered public accounting firm (filed herewith) |
| 24 | Powers of Attorney (included in the signature pages hereto) |
| 99.1 | Advanced Accelerator Applications S.A. 2016 Warrant Plan |
| 99.2 | Advanced Accelerator Applications S.A. 2015 Stock Option Plan (incorporated herein by reference to Exhibit 10.11 to the Company's Registration Statement on Form F-1 (File No. 333-207223) filed with the SEC on October 1, 2015) |
| 99.3 | Advanced Accelerator Applications S.A. 2013 Free Share Plan |
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Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;

(iii) To include any material information with respect to the Plans not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing this Registration Statement and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Saint Genis Pouilly, France, on this 21st day of September, 2016.

Advanced Accelerator Applications S.A.

By: /s/Heinz Mäusli
Name: Heinz Mäusli
Title: Chief Financial Officer

Advanced Accelerator Applications USA, Inc.
(Authorized Representative in the United States)

By: /s/ Edward A. Sturchio
Name: Edward A. Sturchio
Title: Global General Counsel

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Stefano Buono, Heinz Mäusli, Jordan Silverstein and Edward Sturchio, as his or her true and lawful attorneys-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact and agent full power and authority to do and perform each and every act in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Stefano Buono</u> Stefano Buono	Chief Executive Officer, Director (Principal Executive Officer)	September 21, 2016
<u>/s/ Heinz Mäusli</u> Heinz Mäusli	Chief Financial Officer (Principal Financial and Accounting Officer)	September 21, 2016
<u>/s/ Claudio Costamagna</u> Claudio Costamagna	Director	September 21, 2016
<u>/s/ Kapil Dhingra</u> Kapil Dhingra	Director	September 19, 2016
<u>/s/ Steve Gannon</u> Steve Gannon	Director	September 21, 2016
<u>/s/ Yvonne Greenstreet</u> Yvonne Greenstreet	Director	September 21, 2016
<u>/s/ Christian Merle</u> Christian Merle	Director	September 21, 2016
<u>/s/ Francois Nader</u> Francois Nader	Director	September 19, 2016
<u>/s/ Leopoldo Zambeletti</u> Leopoldo Zambeletti	Director	September 21, 2016

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99.4	Advanced Accelerator Applications S.A. 2010 Free Share Plan

September 19, 2016



Ladies and Gentlemen:

I am Global General Counsel of Advanced Accelerator Applications S.A. (the "Company"), and I offer this opinion in connection with the Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission on or about September 19, 2016, in connection with the registration under the Securities Act of 1933, as amended, of 13,401,861 Ordinary Shares of the Company, par value €0.10 (the "Shares"), of which (i) 149,8000 are issuable pursuant to the terms of the Advanced Accelerator Applications S.A. 2016 Warrant Plan, (ii) 12,204,561 are issuable pursuant to the terms of the Advanced Accelerator Applications S.A. 2015 Stock Option Plan, (iii) 500,000 are issuable pursuant to the terms of the Advanced Accelerator Applications S.A. 2013 Free Share Plan and (iv) 547,500 are issuable pursuant to the terms of the Advanced Accelerator Applications S.A. 2010 Free Share Plan.

I have examined such documents and such matters of fact and law as I have deemed necessary to examine relating to the issuance of the Shares. It is my opinion that the Shares, when delivered pursuant to the terms of the applicable Plan, will be validly issued, fully paid and nonassessable.

I consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to myself in the Registration Statement and any amendments thereto.

Very truly yours,

/s/ Edward Sturchio

Edward Sturchio
Global General Counsel

Page 1 of 1

Advanced Accelerator Applications USA, Inc.
The Empire State Building – 350 Fifth Avenue, Suite 6902 – New York, New York 10118 – USA
www.adacap.com - Tel. +1 (212) 235-2380 – Fax +1 (212) 235-2381

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated April 28, 2016, with respect to the consolidated statements of financial position of Advanced Accelerator Applications S.A. and its subsidiaries as of December 31, 2015, 2014 and 2013, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2015, which report appears in the Annual Report on Form 20-F of Advanced Accelerator Applications S.A. for the year ended December 31, 2015 filed with the Securities and Exchange Commission, and to the reference to our firm under the headings “Presentation of Financial and Other Information – Financial Statements”, and “Key Information – Selected Financial Data” in such Annual Report.

Lyon, September 20, 2016

KPMG Audit
Department of KPMG S.A.

/s/ Stéphane Devin
Stéphane Devin
Partner

September 20, 2016

ADVANCED ACCELERATOR APPLICATIONS S.A.

Company with share capital of 7.855.621,10 Euros
 Head Office : 20, rue Diesel – 01630 Saint Genis Pouilly
 441 417 110 RCS Bourg en Bresse
 (the « Company »)

SUBSCRIPTION FORM

1. MODALITIES FOR WARRANTS 2016 ISSUANCE

As per the first resolution of the Extraordinary Shareholder Meeting held on May 26, 2016, the Company's shareholders have delegated authority to the Board of Directors (BoD) to put in place a warrant plan, and this in accordance with Articles L.225-129-2, L.225-138 and L.228-91 of Commercial Code, and to issue up to a maximum of 149'800 warrants of the Company (the « **Warrants 2016** ») to a category of persons who enter into a specific category of beneficiaries that meet the criteria of article L.225-138 of the Commercial Code (the "**Delegation Of Authority**"). In our case this means persons who, at the warrant issuance date are the Non-Executive Board Members of the Company ("**Specified Category**").

On May 26, 2016, the BoD has decided by virtue of the delegation of authority granted to make use of the shareholder authorization. A maximum total of 149'800 Warrants 2016 with a nominal value of € 0.1 per warrant will become available once the subscription period is opened. Beneficiaries of this plan shall be the below listed non-executive Directors of AAA:

- Mrs. Yvonne Greenstreet;
- Mr. Claudio Costamagna;
- Mr. Kapil Dhingra;
- Mr. Steven Gannon;
- Mr. Christian Merle;
- Mr. François Nader;
- Mr. Leopoldo Zambeletti.

By default every beneficiary shall have the right to subscribe to 21'400 warrants. However, final allocation numbers shall be matched to so accommodate the individual subscription interests. Beneficiaries are therefore asked to communicate in writing to the secretary of the BoD their individual subscription interests.

In its meetings of May 26 and August 30, 2016 the BoD has set the exercise price and the subscription price for the warrants. Each Warrant2016 entitles to subscribe to one (1) ordinary New Share of the Company. The subscription price is set at €5.67 per warrant (US\$6.33) and the exercise price is set at €14.58 (US\$16.288) per ordinary share. The exercise price is composed of €0.1 nominal value and €14.48 issuance premium. The terms and conditions of the warrant plan 2016 are attached hereto.

Subscription to Warrants 2016 shall be received at the headquarters of the Company from (the Subscription Period). Payment of the subscription price must have been received by the end of the Subscription Period at the designated bank account with Banque Populaire des Alpes.

(Account with IBAN: FR76 1680 7000 2132 6203 5840 289; SWIFT/BIC: CCBPFRPPGRE).

Please remember that this is a Euro denominated account and to make sure that all bank fees are paid by you so that the full and required amount is credited to this account.

The Warrants 2016 shall be issued at the time of the subscription.

2.

SUBSCRIPTION FORM

I, [.....], hereby undersigned

Taking notice of:

- (i) the last version of the Company's Article of Association;
- (ii) the minutes of the Company's shareholder held at May 26, 2016;
- (iii) the minutes of the Board of Directors dated May 26, 2016 and August 30, 2016 that approve the issuance and allocation of a total of 149'800 Warrants 2016 with a unit price of € 5.67 and more especially according to the Warrants 2016 terms and conditions;
- (iii) the Warrants 2016 terms and conditions attached in appendix hereto;

Beneficiary, as a result to (i) waive of the preferential right of subscription of the Shareholders of the company and (ii) of the resolutions taken by the Company Board of Direction on May 26, 2016 allowing the right to subscribe to Warrants 2016,

Declare, by the present subscription form, to subscribe to Warrants 2016, with a unit price of €5.67,

Declare to fully pay the entire subscription price to the Warrants 2016 subscribed, this is to say the amount of €, representing the global value amount of the Warrants 2016 subscribed, on the bank account with:

BANQUE POPULAIRE DES ALPES, Agency of Annemasse, France

(account details: IBAN: FR76 1680 7000 2132 6203 5840 289; SWIFT/BIC: CCBPFRPPGRE).

Made in two (2) original copies.

On _____ 2016, at _____,

Signature [.]^[1]

¹ Before your signature, please hand-write: "Agreement to subscribe to (.....) Warrants2016 for a global subscription price of [.] ([.]) euros, with a unit price per Warrant2016 of euros (.....€)".

APPENDIX – Warrants 2016 terms and conditions

1. Subscription to Warrants 2016

1.1 Issuance price of the Warrants 2016

Each Warrant 2016 will be issued at a subscription price of €5.67 (US\$6.33) (the “**Subscription price of Warrants 2016**”).

1.2 Subscription period of the Warrants 2016

The Subscription to the Warrants 2016 will start from, 2016 until, 2016 included. It shall be sent to the headquarters of the Company.

For each subscription of the Warrants 2016 each subscriber shall provide the subscription form with:

- A copy of the wire transfer

The amount of which will be equal to the Subscription price of Warrants 2016 multiplied by the number of Warrants 2016 requested by the subscriber.

2. Terms of Warrants 2016

2.2 General Terms of Warrants 2016

2.1.1 Form of the Warrants 2016

The Warrants 2016 will be issued exclusively in the form of registered shares. They will be registered in an account.

2.1.2 Transfer of Warrants 2016

Each Warrant 2016 is freely transferable pursuant to what is stated in the Company’s Articles of Associations.

2.1.3 Fractional Warrants 2016

The Warrants 2016 will be exercised only for a whole number of New Shares.

Each Warrant 2016 can be exercised just once.

2.1.4 Rights on the New Shares

The New Shares, delivered after the exercise of the Warrants 2016, will be subject to Articles of Associations provisions and to general statutory provisions. The New Shares shall be ranked with the existing ordinary shares of the company. They will give right to the holder from the issuance date with and with regards to the dividend coupon, entitle to receive dividends at the first day of such exercise.

2.1.5 Body of holders of Warrants 2016 and protection of the rights of the holders of the Warrants 2016

The Holders of the Warrants 2016 will be considered as a collective group (masse) which shall have legal personality pursuant to article L.228-103 du Commercial Code.

Each Warrant 2016 entitles its holder to one vote at meetings of the body. The representative will be appointed by the general meeting of the body. Those representatives will have the power without restriction, or reservation to carry out, separately or collectively on behalf of the body all the acts to protect their common interests.

Pursuant to articles L. 228-98 of the commercial Code, provided that the Warrants 2016 remain in existence:

- The Company shall not change its legal form or its object unless it is authorized to do so by the issuance contract or as provided for in Article L. 228-103;
- The Company shall neither change the rules for allocating its profits nor write off its capital unless it is authorized to do so by the issuance contract or as provided for in Article L. 228-103, and subject to its taking the necessary steps to. Maintain the rights of the holders of Warrants 2016 giving access to the capital in the manner described in article L. 228-99. Subject to those same restrictions, however, it may create preference shares;
- In the event of its capital being reduced, on account of losses, through a reduction in the nominal value or the number of the securities comprising the capital, the rights of the holders of Warrant 2016 giving access to the capital are consequently reduced, as if they had exercised them before the date on which the reduction of capital became definitive;
- if Company decides to proceed, regardless of their form, with the issue of new capital securities with a preferential subscription right reserved for its shareholders, to distribute reserves, in cash or in kind, or share premiums, or to change the allocation of its profits through the creation of preference shares, the company will have to take all the necessary measures to protect the interests of the holders of Warrants 2016 pursuant to the conditions stated in article L 228-99 of the commercial code. To that end, it shall:

1° Permit the holders of Warrants 2016 those rights to exercise Warrants 2016, if the period stipulated for the exercise has not yet commenced, to enable them to participate immediately in the operations referred to in the first paragraph or to benefit therefrom;

2° Take provisions which will allow them, should they exercise their Warrants 2016 subsequently, to irrevocably subscribe the new transferable securities issued, or to obtain a free allotment thereof, or to receive cash or goods similar to those which would have been distributed to them, in the same quantities or proportions and under the same conditions, save for possession, had they been shareholders when those operations took place;

3° Change the conditions of subscription, the bases of conversion, or the terms and conditions of exchange or allotment initially laid down, in order to take account of the impact of the operations referred to in the first paragraph.

The Company may simultaneously take the measures indicated under 1° and 2° above. It may, in all cases, replace them with the adjustment authorized in 3°.

In the event of its capital being reduced, not due to losses, but through a reduction in the nominal value of the shares issued by the Company, the Exercise Price of the New Shares will be reduced proportionally.

In the event of its capital being reduced, not due to losses, but through a reduction in the nominal value of shares issued by the Company, the holders of Warrants 2016, if they exercise their rights, may require the redemption of their New Shares in the same conditions in which they would have been if they were holders of New Shares at the redemption date by the company of its own shares.

In addition, in the event of new capital securities or new transferable securities giving access to the capital being issued, and likewise in the event of a merger or demerger of the company issuing such securities, the Board Of Directors may suspend the option to obtain an allotment of Warrants 2016 through exercise of the right referred to in Article L. 225-149-1 during a maximum period of three months pursuant to article R.225-133 French Commercial Code.

2.2 Specific terms of Warrants 2016

2.2.1 Price and the exercise ratio of Warrant 2016

Each Warrant 2016 gives a right to subscribe to one (1) New Share at a subscription price of €14.58 (the “**Exercise Price**”) per New Share comprised of €0.10 of nominal value and €14.48 of issuance premium, provided that, in the event of operations on the share capital of the company, the Exercise Price will be adjusted in accordance with paragraph 2.1.5 above and pursuant to the adjustments realized on the existing ordinary shares.

2.2.2 Conditions of exercise of Warrants 2016

Warrants 2016 may be exercised freely and unconditionally any time during the Exercise Period by the Holders.

2.2.3 Exercise Period of the Warrants 2016

Each Warrant 2016 may be exercised for a period of thirty six (36) months from the subscription date (the “**Exercise Period**”).

At the expiration of the exercise period, the Warrants 2016 shall lapse automatically without further formalities whatsoever for the Company or the Holders of the Warrants 2016.

2.2.4 Notification of the exercise of the Warrant 2016

At the subscription date of the Warrants 2016, the request of subscription of New Shares per exercise of Warrants 2016 (“**Exercise Notification**”) (i) shall be sent to the Company during the Exercise Period by simple letter, letter with acknowledgement of receipt or hand-delivered letter and (ii) attached to it, shall (a) be joined a subscription allotment of New Shares to which the Warrants 2016 gives right and (b) an indication whether payment will be made by either:

- wire transfer; or
- A request for set-off with unquestionable, liquid and due claims on the company owned by the holders of Warrants 2016;

2.2.5 Release on the Exercise Price related to the issuance of New Shares on exercises of Warrants 2016

For each Warrant 2016, exercised by the holders of the Warrants 2016, and once the Exercise Price is paid by the Company; the Chief Executing Officer of the company pursuant to the delegation authority granted herein shall note the definitive realization of the issuance of the New Shares and to proceed to all the modifications in the Articles of Association necessary for the exercise of Warrants 2016.

2.2.6. Disposition applicable to the Warrants 2016

Warrants 2016 especially its exercise and transfer are subject to the provision of the Company's Articles of Association.

2.2.7. Applicable law

The Warrants 2016 shall be governed by the French law.

**ADVANCED ACCELERATOR APPLICATIONS (AAA)
S.A. with capital of €5.279.592,60
Headquarters at: 20, rue Diesel – 01630 Saint Genis Pouilly
Registered with RCS BOURG-EN-BRESSE 441 417 110**

**Free share plan for the benefit of designated AAA employees
Terms and conditions**

Free translation of the original French text

Introduction

AAA shareholders decided on June 19, 2006 in an Extraordinary General Meeting (EGM) to allocate company shares for free to certain of its employees. And this according to articles L 225-197-1 to L 225-197-6 of the French Commercial Code (Code de Commerce). This was the first free employee share plan.

The EGM of June 22, 2010 approved a second employee share plan. The Board of Directors (BoD) was authorized to allocate shares to designated employees of the company. The authorization is valid for a period of 38 months following the EGM and expired on August 21, 2013.

1. – PLAN PRINCIPLES

1.1 – The third employee share plan was approved by the shareholders in the course of the EGM of October 18, 2013.

1.2 – The purpose of this plan is to allocate, at predetermined conditions, AAA shares to certain of the Company's employees (the word "Company" includes all subsidiaries of AAA) and to incentivize and retain them.

1.3 – Every beneficiary of the plan shall therefore be closer associated to the Company and its economic success and eventually the value the Company's shares.

1.4 – The terms and conditions of the plan are explained hereafter.

2. – SHARE CLASS – WAIVER OF THE PREFERENTIAL SUBSCRIPTION RIGHT

2.1 – Allocated shares are nominative for the entire period during which they must not be sold. They are inscribed in the Company share register as is required by applicable law.

2.2 – Shareholders have approved this share plan in the EGM and have, as a consequence of their approval, waived their preferential subscription right in favor of the Beneficiaries of this plan (law n° 2006-1770 of December 30, 2006 updated on May 14, 2009).

3. – SHARE ALLOCATION FORMALITIES

3.1 – Terms and criteria for share allocation

Based on shareholder approval in the course of the EGM of October 18, 2013, a total of 500.000 shares was made available for allocation in one or several times to designated Beneficiaries. Shareholders have authorized the Board of Directors (BOD) to execute the plan. Every Beneficiary is to be informed of the allocation and shall receive a copy of this plan and a personalized allocation letter which shall mention:

- The terms and conditions and criteria of the allocation decision, i.e.:
 - The employment contract type (full- or part time, limited duration contract)
 - Employer name, place and function of the employee
 - General positive performance observations
- Number of shares allocated
- Period during which the shares can be acquired (acquisition period)
- Period during which the shares must be held after acquisition (holding period)
- ..

3.2 – Period to acquire shares and holding period

- Allocated shares can only be acquired after a minimum waiting period of 2 years following allocation date and this as per the below conditions. No acquisition is possible if the Beneficiary has notified the employer to leave during this initial 2 year waiting period.
- Acquired shares cannot be sold by the Beneficiary for another minimum period of 2 years following acquisition date.

The sales of the shares prior to the end of the minimum acquisition and holding periods would cause unfavorable fiscal and social consequences and in particular:

- The capital gain on the acquisition of the shares would be treated as income and taxed as such;
- The capital gain on the sale is subject to the below tax reductions by the duration of the holding period:
 - 20% reduction for a holding period of between 2 to 4 years
 - 30% reduction for a holding period of between 4 to 6 years
 - 40% reduction for a holding period above 6 years

3.3 – Identification of the Beneficiaries

3.3.1. – Quality of the Beneficiaries

Collectively called « **Beneficiaries** » and individually the « **Beneficiary** ».

The share acquisition must be done according to laws and regulations in force and in particular respect the below conditions:

- At the acquisition date, the Beneficiary must be an employee (full or part-time) of AAA S.A., AAA Switzerland, AAA Italy, Gipharma, AAA Iberica, AAA Canada, AAA Poland, AAA Portugal or any other of the Company's subsidiaries as per article L.225-197-2, I of the French Commercial Code;

or

- Be an officer (mandataire social) of AAA or one of its subsidiaries as per article L. 225-197-1, II - al.1 of the French Commercial Code.

The Beneficiaries who individually own more than 10% of the Company's shares cannot receive shares from this plan. The 10% limit will be determined by the BoD on the date when the decision allocation is made.

A share allocation must not result in the Beneficiary eventually owning more than 10% of the Company's shares (as stipulated by article L 225-197-1, II- al. 3 of the French Commercial Code).

3.3.1.1 - Condition to adhere to the shareholder agreement

The share acquisition is conditional to adhesion to the shareholder agreement. The currently in force agreement and all other required documents will be sent to the Beneficiary at the acquisition date.

3.3.2. – Personal events during the acquisition period

3.3.2.1 – Change of work/employer within the Company:

The Beneficiary retains his/her rights to acquire allocated shares in case of a change of work/employer provided the new employer is part of the Company.

3.3.2.2 - Retirement:

Beneficiaries who retire during the holding period can exercise their rights to sell.

3.3.2.3 – Invalidity of the Beneficiary:

Shares will be definitely acquired in case of invalidity of the second and third degree (as defined by ar. L 341-4 of the French Social Security Code) suffered by the Beneficiary. Acquisition date will be the date when the invalidity has been reported and prove of degree of invalidity has been provided (as by law n° 2006-1770 of December 30, 2006, updated on May 14, 2009). This then constitutes the date when the holding period starts. The minimum holding period of 2 years remains in force.

3.3.2.4 – Death of the Beneficiary:

In case of death of the Beneficiary, his/her heirs will be authorized to request acquisition of the shares within a maximum delay of 6 months following the death (article L 225-197-3, al. 2 of the French Commercial Code). A request beyond 6 months after the death is not possible.

3.4 – How to acquire the shares

Beneficiaries may acquire their shares by signing the respective allocation letter. To be added is in handwriting « *bon pour accord* ». The document is to be returned to the Company's headquarters by registered letter with acknowledgment of receipt.

4. – RIGHTS ASSOCIATED TO THE SHARES DURING ACQUISITION AND HOLDING PERIODS

4.1 – Any rights during the acquisition period must not be transferred (article L 225-197-3 al. 1 of the French Commercial Code).

4.2 – Shares acquired in this plan have nominative form and entitle to the rights accorded to other owners of the Company's shares of the same class. The rights are in force as of the acquisition date.

4.3 – Shares are registered in the account of the Beneficiary at the end of the acquisition period. The minimum required holding period after the acquisition date is mentioned in the Beneficiary’s account. Shares must not be sold during the holding period.

4.4 – Beneficiaries are shareholders during the holding period. They have voting and dividend rights, are invited to shareholder meetings and will receive the same communication as other shareholders

5. – FISCAL AND SOCIAL REGIMES

5.1 – Determination of share value at acquisition date

The fair value of the shares is determined by the BoD at the acquisition date. The usual and most appropriate valuation methods are applied (as per article L.225-177, 4^{ème} al. of the French Code of Commerce).

5.2 – Fiscal dispositions for Beneficiaries

The Beneficiary is the sole responsible for his/her personal tax declarations and the required tax payments.

5.2.1 – For Beneficiaries who reside in France

The capital gain for French fiscal residents is composed of:

- Acquisition gain (is the same as the price of the shares at the acquisition date since shares are allocated for free)
- and
- Sales gain (difference between realized share sales price and share price at acquisition date).

5.2.1.1 – Conditions to benefit from favorable tax regime

Two conditions must be respected to benefit from a favorable tax regime :

- 1) Acquired shares must assume the nominative form;
- 2) Acquired shares must not be sold for a minimum period of 2 years following the acquisition date.

5.2.1.2 – Taxation of capital gains

As of September 28, 2012 (Loi de finances for 2013 with date of December 30 2012), i.e. as per dispositions currently in force:

- The acquisition gain is subject to the progressive taxation that also applies to salaries.
- The sales gain is subject to the progressive taxation that also applies to salaries. However a reduction of the regular tax rate is applied and this depending on the duration of the holding period. Any price reduction between date of sale and acquisition can be deducted from the overall capital gain (i.e. acquisition and sales gain).

The taxation of acquisition and sales gain, is calculated in the year of the share sale only.

The sales gain regime for movable assets, as per articles 150-0 A and following the dispositions of the General Tax Code is not applicable to capital gains realized on the sale of free shares provided that the shares assume the nominative form with indication of origin (art. 150-0 A, III, 4° General Tax Code).

5.2.2 – For Beneficiaries residing abroad (outside of France)

The applicable fiscal conditions for the share plan will be different country by country.

Non-residents of France need to inform themselves on the applicable fiscal rules in their own countries.

5.3 – Social charges for the Beneficiaries

The Beneficiary is sole responsible for correctly declaring social obligations and making the required payments.

5.3.1 – For Beneficiaries residing in France

5.3.1.1 – Allocated shares are exonerated from social security charges. This applies to employees and officers.

5.3.1.2 – Declaration of the share allocation to the competent social security institution is precondition for benefitting from the favorable tax regime. To be declared are:

- Identify of the Beneficiary (employee or officer)
- Number and value of shares allocated by Beneficiary

The declaration must show all shares acquired in the prior calendar year. The Company is obligated to pay all social security contributions (art. L.242-1, al. 2 of the Code of the Social Security).

5.3.1.3 – At the same time, the Generalized Social Contribution « CSG » and Contribution to Reimbursement of the Social Debt « CRDS » are applicable. Acquisition gain and sales gain are subjected to social contributions (art. L.136-6 of the Code of the Social Security).

5.3.1 – For Beneficiaries outside of France

Social security charges and organizations will be different country by country.

Non-residents of France need to inform themselves on the applicable fiscal rules in their own countries.

5.4 – Declaration obligations for Beneficiaries

These obligations concern only fiscal residents of France.

- The Beneficiary must enclose the document received from AAA to his/her own revenue tax declaration
- In the year of selling shares:
 - To benefit from the fiscally favorable regime, the Beneficiary must declare the acquisition and the sales gain.
 - Other declaration obligations may have to be respected in case of joint tax declarations (le régime de droit commun).

5.5 - Sanctions

The non-respect of declaration obligations, be that by AAA SA or by the Beneficiary, may eliminate the favorable tax regime and the obtained advantages. AAA SA may be liable for fiscal sanctions in case it did not respect the rules.

6. – IMPLICATIONS IN CASE OF RESTRUCTURING OF THE COMPANY

6.1 – Beneficiaries of the plan have their interests protected as per the conditions stated in article L. 228-99 of the French Commercial Code, and assuming the Company realized a capital reduction, a

modification to benefit allocations, a free share allocation, a share reserve/profit or excess prime incorporation, distribution of reserves or any share issue or issue of instruments entitling to shares that are reserved for subscription by shareholders.

6.2 – The rights of beneficiaries are also protected in case of changes due to of mergers or demergers without balancing share adjustments realized during the acquisition and holding periods (see also article L225-197-1 III of the French Commercial Code). The rights of the Beneficiaries of the plan are protected in case of a public offering, a regrouping or restructuring during the holding period.

6.3 – In case of a contribution from a company or of an investment fund whose only assets are shares or instruments that give access to the capital of the issuing company or a company associated to it (as per the meaning of article L. 225-197-2 of the French Commercial Code) the conservation obligation remains in force.

6.4 – The respective acquisition and holding periods also remain in force in case of an IPO. In addition shares cannot be sold even after the end of the conservation period (art. L 225-197-1, I, al. 8 of the French Commercial Code) unless there is an open trading window as announced by the Company.

6.5 – In case of a fusion with absorption of *Advanced Accelerator Applications SA*:

6.5.1 – If the fusion foresees the assumption of the present share plan by the absorbing company, the absorbing company enters in place of AAA and assumes all obligations towards the Beneficiaries. Their rights are therefore transferred to shares of the absorbing company and this with respect to the terms of the fusion (ratio/number of shares and price).

6.5.2 – If the fusion does not foresee the assumption of the present share plan by the absorbing company, the acquisition period will end with the date of the EGM that approves the fusion. In this exceptional case it will be possible for the Beneficiary of the plan to acquire the shares in anticipation 30 days prior to the EGM date. The Company will inform all concerned Beneficiaries by registered letter with delivery receipt and allow the Beneficiaries within a delay of 20 days as of reception of the letter to acquire the shares.

6.6 – The same rules apply, *mutatis mutandis*, in case of a split/separation of *Advanced Accelerator Applications SA*.

7. – SHAREHOLDER INFORMATION

The BoD will provide annually the ordinary general shareholder assembly on operations realized with this share plan (articles L. 225-197-1 to L. 225-197-3 of the French Code of Commerce). This report will show Beneficiaries, the number of shares allocated, the value of the shares and the position occupied within the Company (article L. 225-197-4 of the French Code of Commerce).

ADOPTED on OCTOBER 18, 2013

The CEO

Stefano BUONO

Attachments: Shareholder Agreement and Adhesion form

ADVANCED ACCELERATOR APPLICATIONS (AAA)
S.A. with capital of €5.279.592,60
Headquarters at: 20, rue Diesel – 01630 Saint Genis Pouilly
Registered with RCS BOURG-EN-BRESSE 441 417 110

Personalized letter with share allocation information

To : ...
Company : ...

Saint-Genis-Pouilly, ...

Re: Allocation of free employee shares « Advanced Accelerator Applications »

Dear ...,

Shareholders approved in the course of the Extraordinary General Shareholder Meeting (EGM) of October 18, 2013 an employee share plan and authorized the Board of Directors (BoD) to execute this plan and to allocate shares to employees and officers of AAA.

The BoD used this authorization and decided in its meeting of ... to allocate such free shares to you and this according to the terms and conditions of the plan as described hereafter.

The maximum number of free shares allocated to you is ...

We remind you that these shares can be acquired at the earliest 2 years after the allocation date (acquisition period). This acquisition period starts with the date of the BOD meeting during which shares were allocated to you. To acquire the shares certain additional conditions ... must be respected.

Rights resulting from this allocation cannot be transferred during the acquisition period.

In case of your death, your heirs can request the acquisition of the shares allocated to you, within a maximum delay of 6 months following your death.

At the end of the acquisition period you become owner of the shares that were allocated to you.

You are not authorized to sell the shares for a period of at least 2 years following the acquisition date (holding period).

During this holding period you are nevertheless entitled to all the rights attached to these shares, in particular the right to be informed and to communicate, the preferential subscription right to share issues, the voting right and the right to receive dividends.

At the end of the holding period you are authorized to dispose of your allocated free shares in the conditions foreseen by law.

The here attached free employee share plan describes how the plan works and informs on fiscal implications and obligations.

In case you do not want to be a beneficiary of this free employee share plan we ask you to inform us accordingly by registered letter with acknowledgment of receipt within a delay of 30 days following reception of this information. Without such a letter from you within this delay, it is assumed that you have accepted the free share allocation.

With kind regards

Stefano BUONO
CEO AAA

Enclosure: Free share plan terms and conditions

ADVANCED ACCELERATOR APPLICATIONS (AAA)
S.A. with capital of € 4.027.000
Headquarters at: 20, rue Diesel – 01630 Saint Genis Pouilly
Registered with RCS BOURG-EN-BRESSE 441 417 110

Free share plan for the benefit of designated AAA employees
Terms and conditions

Free translation of the original French text

Introduction remarks

Reminder of the previous employee share plan:

- Authorization by the Extraordinary General Meeting (EGM) for the first plan
- Allocation and acquisition of free shares and corresponding capital increases
- Special reports on the use of that plan

1. – PLAN PRINCIPLES

1.1 – AAA shareholders decided on June 22, 2010 in an Extraordinary General Meeting (EGM) to approve a second free share plan for employees. The plan was adopted by the Board of Directors (BoD) on that same day.

1.2 – The purpose of this plan is to allocate, at predetermined conditions, AAA shares to certain of the Company's employees (the word "Company" includes all subsidiaries of AAA) and to incentivize and retain them.

1.3 – Every beneficiary of the plan shall therefore be closer associated to the Company and its economic success and eventually the value the Company's shares.

1.4 – The terms and conditions of the plan are explained hereafter.

2. – SHARE CLASS – WAIVER OF THE PREFERENTIAL SUBSCRIPTION RIGHT

2.1 – Allocated shares are nominative for the entire period during which they must not be sold. They are inscribed in the Company share register as is required by applicable law.

2.2 – Shareholders have approved this share plan in the EGM and have, as a consequence of their approval, waived their preferential subscription right in favor of the Beneficiaries of this plan (law n° 2006-1770 of December 30, 2006)).

3. – SHARE ALLOCATION FORMALITIES

3.1 – Terms and criteria for share allocation

Based on shareholder approval in the course of the EGM of June 22, 2010, a total of 2.000.000 shares was made available for allocation in one or several times to designated Beneficiaries. Shareholders have authorized the Board of Directors (BoD) to execute the plan. Every Beneficiary is to be informed of the allocation and shall receive a copy of this plan and a personalized allocation letter which shall mention:

- The terms and conditions and criteria of the allocation decision, i.e.:
 - The employment contract type (full- or part time, limited duration contract)
 - Employer name, place and function of the employee
 - General positive performance observations
- Number of shares allocated
- Period during which the shares can be acquired (acquisition period)
- Period during which the shares must be held after acquisition (holding period)
- ..

3.2 – Period to acquire shares and holding period

- Allocated shares can only be acquired after a minimum waiting period of 2 years following allocation date and this as per the below conditions. No acquisition is possible if the Beneficiary has notified the employer to leave during this initial 2 year waiting period.
- Acquired shares cannot be sold by the Beneficiary for another minimum period of 2 years following acquisition date.

The sales of the shares prior to the end of the minimum acquisition and holding periods would cause unfavorable fiscal and social consequences and in particular:

- The capital gain on the acquisition of the shares would be treated as income and taxed as such;
- The capital gain on the sale would be taxed at 29%

3.3 – Identification of the Beneficiaries

3.3.1. – Quality of the Beneficiaries

Collectively called « **Beneficiaries** » and individually the « **Beneficiary** ».

The share acquisition must be done according to laws and regulations in force and in particular respect the below conditions:

- At the acquisition date, the Beneficiary must be an employee (full or part-time) of AAA S.A., AAA Switzerland, AAA Italy, Giphama, AAA Iberica, AAA Canada and any other future Company subsidiaries as per article L.225-197-2, I of the French Commercial Code;

or

- Be an officer (mandataire social) of AAA or one of its subsidiaries as per article L. 225-197-1, II - al.1 of the French Commercial Code.

The Beneficiaries who individually own more than 10% of the Company's shares cannot receive shares from this plan. The 10% limit will be determined by the BoD on the date when the decision allocation is made.

A share allocation must not result in the Beneficiary eventually owning more than 10% of the Company's shares (as stipulated by article L 225-197-1, II- al. 3 of the French Commercial Code).

3.3.1.1 - Condition to adhere to the shareholder agreement

The share acquisition is conditional to adhesion to the shareholder agreement. The currently in force agreement and all other required documents will be sent to the Beneficiary at the acquisition date.

3.3.2. – Personal events during the acquisition period

3.3.2.1 – Change of work/employer within the Company:

The Beneficiary retains his/her rights to acquire allocated shares in case of a change of work/employer provided the new employer is part of the Company.

3.3.2.2 - Retirement:

Beneficiaries who retire during the holding period can exercise their rights to sell.

3.3.2.3 – Invalidity of the Beneficiary:

Shares will be definitely acquired in case of invalidity of the second and third degree (as defined by ar. L 341-4 of the French Social Security Code) suffered by the Beneficiary. Acquisition date will be the date when the invalidity has been reported and prove of degree of invalidity has been provided (as by law n° 2006-1770 of December 30, 2006). This then constitutes the date when the holding period starts. The minimum holding period of 2 years remains in force.

3.3.2.4 – Death of the Beneficiary:

In case of death of the Beneficiary, his/her heirs will be authorized to request acquisition of the shares within a maximum delay of 6 months following the death (article L 225-197-3, al. 2 of the French Commercial Code). A request beyond 6 months after the death is not possible.

3.4 – How to acquire the shares

Beneficiaries may acquire their shares by signing the respective allocation letter. To be added is in handwriting « *bon pour accord* ». The document is to be returned to the Company's headquarters by registered letter with acknowledgment of receipt.

4. – RIGHTS ASSOCIATED TO THE SHARES DURING ACQUISITION AND HOLDING PERIODS

4.1 – Any rights during the acquisition period must not be transferred (article L 225-197-3 al. 1 of the French Commercial Code).

4.2 – Shares acquired in this plan have nominative form and entitle to the rights accorded to other owners of the Company's shares of the same class. The rights are in force as of the acquisition date.

4.3 – Shares are registered in the account of the Beneficiary at the end of the acquisition period. The minimum required holding period after the acquisition date is mentioned in the Beneficiary's account. Shares must not be sold during the holding period.

4.4 – Beneficiaries are shareholders during the holding period. They have voting and dividend rights, are invited to shareholder meetings and will receive the same communication as other shareholders

5. – FISCAL AND SOCIAL REGIMES

5.1 – Determination of share value at acquisition date

The fair value of the shares is determined by the BoD at the acquisition date. The usual and most appropriate valuation methods are applied (as per article L.225-177, 4^{ème} al. of the French Code of Commerce).

5.2 – Fiscal dispositions for Beneficiaries

5.2.1 – For Beneficiaries who reside in France

The capital gain for French fiscal residents is composed of:

- Acquisition gain (is the same as the price of the shares at the acquisition date since shares are allocated for free)
- and
- Sales gain (difference between realized share sales price and share price at acquisition date).

5.2.1.1 – Conditions to benefit from favorable tax regime

Two conditions must be respected to benefit from a favorable tax regime :

- 1) Acquired shares must assume the nominative form;
- 2) Acquired shares must not be sold for a minimum period of 2 years following the acquisition date.

5.2.1.2 – Taxation of capital gains

In this favorable tax regime:

- The acquisition gain is taxed at a proportional 30% rate (the Beneficiary however has the option to choose taxation of this acquisition gain in the category of salary treatment: article 200 A, 6 bis of the General Tax Code);
- The sales gain is subject to the general rate of 18% (any value reduction finally realized is deducted from the taxable income according to the rules applicable to value reductions on movable assets: article 200A, 6 bis of the General Tax Code).

The taxation of acquisition and sales gain, is calculated in the year of the share sale only.

The sales gain regime for movable assets, as per articles 150-0 A and following the dispositions of the General Tax Code is not applicable to capital gains realized on the sale of free shares provided that the shares assume the nominative form with indication of origin (art. 150-0 A, III, 4° General Tax Code).

5.2.2 – For Beneficiaries residing abroad (outside of France)

The share allocation of such free shares to Beneficiaries not residing in France causes no taxation in France.

5.2.2.1 – Article 15, par.5 of the fiscal bilateral convention between France and Switzerland from September 9, 1966 states that capital gains from selling movable assets are to be taxed in the country of residence of the seller.

5.2.2.2 – Article 13, par.4 of the fiscal bilateral convention between France and Italy from October 5, 1989 states that capital gains from selling movable assets are to be taxed in the country of residence of the seller.

5.2.2.3 – Articles 10, par.1 and 10 par.4 of the fiscal bilateral convention between France and Spain from October 10, 1995 state that revenues from shares are to be taxed in the country of residence of the seller.

5.3 – Social charges for the Beneficiaries

5.3.1 - Allocated shares are exonerated from social security charges. This applies to employees and officers.

5.3.2 - Declaration of the share allocation to the competent social security institution is precondition for benefitting from the favorable tax regime. To be declared are:

- Identify of the Beneficiary (employee or officer)
- Number and value of shares allocated by Beneficiary

The declaration must show all shares acquired in the prior calendar year. The Company is obligated to pay all social security contributions (art. L.242-1, al. 11 of the Code of the Social Security).

5.3.3 - At the same time, the Generalized Social Contribution « CSG » and Contribution to Reimbursement of the Social Debt « CRDS » are applicable. Acquisition gain and sales gain are subjected to social contributions (art. L.136-6 of the Code of the Social Security).

5.4 – Declaration obligations for Beneficiaries

These obligations concern only fiscal residents of France.

- The Beneficiary must enclose the document received from AAA to his/her own revenue tax declaration
- In the year of selling shares:
 - o To benefit from the fiscally favorable regime, the Beneficiary must declare the acquisition and the sales gain.
 - o Other declaration obligations may have to be respected in case of joint tax declarations (le régime de droit commun).

5.5 - Sanctions

The non-respect of declaration obligations, be that by AAA SA or by the Beneficiary, may eliminate the favorable tax regime and the obtained advantages. AAA SA may be liable for fiscal sanctions in case it did not respect the rules.

6. – IMPLICATIONS IN CASE OF RESTRUCTURING OF THE COMPANY

6.1 – Beneficiaries of the plan have their interests protected as per the conditions stated in article L. 228-99 of the French Commercial Code, and assuming the Company realized a capital reduction, a modification to benefit allocations, a free share allocation, a share reserve/profit or excess prime incorporation, distribution of reserves or any share issue or issue of instruments entitling to shares that are reserved for subscription by shareholders.

6.2 –The rights of beneficiaries are also protected in case of changes due to of mergers or demergers without balancing share adjustments realized during the acquisition and holding periods (see also article L225-197-1 of the French Commercial Code). The rights of the Beneficiaries of the plan are protected in case of a public offering, a regrouping or restructuring during the holding period.

6.3 – In case of a contribution from a company or of an investment fund whose only assets are shares or instruments that give access to the capital of the issuing company or a company associated to it (as per the meaning of article L. 225-197-2 of the French Commercial Code) the conservation obligation remains in force.

6.4 – The respective acquisition and holding periods also remain in force in case of an IPO. In addition shares cannot be sold even after the end of the conservation period (art. L 225-197-1, I, al. 8

of the French Commercial Code) unless there is an open trading window as announced by the Company.

6.5 – In case of a fusion with absorption of *Advanced Accelerator Applications SA*:

6.5.1 – If the fusion foresees the assumption of the present share plan by the absorbing company, the absorbing company enters in place of AAA and assumes all obligations towards the Beneficiaries. Their rights are therefore transferred to shares of the absorbing company and this with respect to the terms of the fusion (ratio/number of shares and price).

6.5.2 – If the fusion does not foresee the assumption of the present share plan by the absorbing company, the acquisition period will end with the date of the EGM that approves the fusion. In this exceptional case it will be possible for the Beneficiary of the plan to acquire the shares in anticipation 30 days prior to the EGM date. The Company will inform all concerned Beneficiaries by registered letter with delivery receipt and allow the Beneficiaries within a delay of 20 days as of reception of the letter to acquire the shares.

6.6 – The same rules apply, *mutatis mutandis*, in case of a split/separation of *Advanced Accelerator Applications SA*.

7. – SHAREHOLDER INFORMATION

The BoD will provide annually the ordinary general shareholder assembly on operations realized with this share plan (articles L. 225-197-1 to L. 225-197-3 of the French Code of Commerce). This report will show Beneficiaries, the number of shares allocated, the value of the shares and the position occupied within the Company (article L. 225-197-4 of the French Code of Commerce).

ADOPTED on JUNE 22, 2010
The CEO
Stefano BUONO

Attachments: Shareholder Agreement and Adhesion form

ADVANCED ACCELERATOR APPLICATIONS (AAA)
S.A. with capital of € 4.027.000
Headquarters at: 20, rue Diesel – 01630 Saint Genis Pouilly
Registered with RCS BOURG-EN-BRESSE 441 417 110

Personalized letter with share allocation information

To : ...
Company : ...

Saint-Genis-Pouilly, ...

Re: Allocation of free employee shares « Advanced Accelerator Applications »

Dear ...,

Shareholders approved in the course of the Extraordinary General Shareholder Meeting (EGM) of June 22, 2010 an employee share plan and authorized the Board of Directors (BoD) to execute this plan and to allocate shares to employees and officers of AAA.

The BoD used this authorization and decided in its meeting of ... to allocate such free shares to you and this according to the terms and conditions of the plan as described hereafter.

The maximum number of free shares allocated to you is ...

We remind you that these shares can be acquired at the earliest 2 years after the allocation date (acquisition period). This acquisition period starts with the date of the BoD meeting during which shares were allocated to you. To acquire the shares certain additional conditions ... must be respected.

Rights resulting from this allocation cannot be transferred during the acquisition period.

In case of your death, your heirs can request the acquisition of the shares allocated to you, within a maximum delay of 6 months following your death.

At the end of the acquisition period you become owner of the shares that were allocated to you.

You are not authorized to sell the shares for a period of at least 2 years following the acquisition date (holding period).

During this holding period you are nevertheless entitled to all the rights attached to these shares, in particular the right to be informed and to communicate, the preferential subscription right to share issues, the voting right and the right to receive dividends.

At the end of the holding period you are authorized to dispose of your allocated free shares in the conditions foreseen by law.

The here attached free employee share plan describes how the plan works and informs on fiscal implications and obligations.

In case you do not want to be a beneficiary of this free employee share plan we ask you to inform us accordingly by registered letter with acknowledgment of receipt within a delay of 30 days following reception of this information. Without such a letter from you within this delay, it is assumed that you have accepted the free share allocation.

With kind regards

Stefano BUONO
CEO AAA

Enclosure: Free share plan terms and conditions