

## RESEARCH AND SERVICES CONTRACT

No. \_\_\_\_\_ /2018

Effective this 29th MAY 2018 between the State Treasury: the Minister of National Defense, represented by Mr. Antoni Macierewicz - Chairman of the Sub-Committee to re-investigate the aircraft accident, Al. Niepodległości 218, 00-911 Warszawa NIP: 525-209-54-97 on the basis of the power of attorney No. 8 / MON of the Minister of National Defense from February 22, 2018, hereinafter referred to as the Ordering Party.

and

Wichita State University, a state educational institution of Kansas, located at 1845 Fairmount St. Wichita, Kansas 67260-0093 represented by John S. Tomblin, PhD, Vice President for Research and Technology Transfer, hereinafter referred to as the Contractor, and both parties hereby agree as follows:

### § 1.

1. The Ordering Party entrusts performance, and the Contractor undertakes to perform a service consisting of conducting an accident reconstruction crashworthiness investigation for flight PL101 using numerical methods, hereinafter referred to as "Research".
2. The result of the Research and subject of final acceptance will be:
  - 1) CAD Model for Tu-154M aircraft
  - 2) Numerical Model for Tu-154M aircraft
  - 3) Report and extended report that provide an independent assessment of the Tu-154M aircraft crashworthiness under the impact conditions for flight PL101.
3. The documents listed in paragraph 2 should be made in 3 copies in A4 paper format in a compact manner, with an identical electronic version attached on a CD / DVD. The documentation in electronic form should be in the MS Word / LaTeX, CAD and PDF file format. Documents for PDF format should be created from electronic source documents.

### § 2.

1. The Contractor undertakes as part of the contract to cooperate with persons, entities or organizational units indicated by the Ordering Party, including those belonging to the Polish Ministry of National Defense.
2. The Contractor declares that it:
  - a. has adequate research facilities, including: endurance testing laboratory, crash test laboratory, reverse engineering laboratory, virtual reality laboratory;
  - b. has appropriate software for collision analysis of aircraft (LS-DYNA or equivalent);
  - c. has appropriate software for building numerical models of aircraft (CATIA V5 R25 or equivalent);

- d. has appropriate measuring equipment used at the stage of building the aircraft's numerical model: Leica AT960 scanners, T-Scan 5;
- e. has experience in experimental and numerical crash tests of air seats;
- f. using reverse engineering methods and software to support the accident investigation;
- g. employs people capable of performing the contract, having appropriate long-term experience, knowledge and education in the implementation of programs / projects, scientific works, development works, orders for the implementation of works related to the subject of the contract, in particular with the use of strength testing methodologies, including methods finite elements in relation to aircraft constructions;
- h. has well-established international achievements and achievements in the area covering the subject of the project;
- i. has the scientific and research equipment required to conduct a full analysis of the impact of external factors on the flight in the event of the reconstruction of aircraft collisions.

§ 3.

- 1. The Parties agree that the execution of the subject of the contract referred to in § 1 will take place in stages, in accordance with the adopted Schedule provided in the Statement of Work (SOW), attached hereto and incorporated herein as Exhibit A. The SOW must be agreed and signed separately by both parties.
- 2. The Contractor shall perform the subject of the contract according to the following Schedule:
  - 1) Development of an aircraft model for the needs of numerical crash analyzes by:
    - a. Developing guidelines for the technology being developed;
    - b. Analysis of possessed data necessary to build the aircraft's numerical model;
    - c. Adaptation of the airplane geometric model;
    - d. Development of an airplane model for the needs of numerical crash analyzes
  - 2) Performing numerical crash analyzes by:
    - a. Definition of boundary conditions and external loads;
    - b. Numerical analysis of collision of particular parts of the structure of the aircraft with ground objects;
    - c. Numerical analysis of the collision of an airplane with the ground; and
    - d. Evaluate occupant safety.
  - 3) The Parties allow for the performance of a separate stage of the Research separated from the Schedule at the request of the Ordering Party, and, in such case, the parties shall mutually agree on an adjusted Schedule and compensation.

§ 4.

1. The Ordering Party shall make available to the Contractor all materials, objects and documents at its disposal, necessary for the Contractor to carry out the Research, in accordance with the Schedule, but no later than 10 days from the date of Contractor requests such materials, objects or documents. If such materials, objects or documents are not produced within the 10-day period, Contractor may, in its discretion, reasonably adjust the Schedule accordingly.
2. Documents and materials referred to in paragraph 1 at the request of the Contractor shall be made available to all employees cooperating with the Contractor, after obtaining the consent of Mr. Antoni Macierewicz.
3. Except as required by law, the Contractor is obliged to keep confidential all information and data, as well as documents that directly concern the subject of the contract or are related to the subject of the contract even indirectly. All information received from the Ordering Party, persons and entities for which it will operate within the framework of the contract specified in § 1, will be treated as sensitive by the Contractor.
4. Ordering Party agrees to keep as confidential all documents, materials, data and results of the Research ("confidential information") and shall refrain from publishing, presenting or disclosing such confidential information to the public except to "authorized third parties" until a report is completed by Contractor. For purposes of this section, "authorized third parties" shall include Ordering Party, the Polish government, Polish armed forces, Military University of Technology in Warsaw, Poland, and any other affiliated governmental, educational or military entity designated by Ordering Party. However, Ordering Party may publish and disclose such confidential information following the completion of a report or extended report as long as: (1) Contractor is notified in advance of such publication or disclosure; (2) the publication or disclosure is consistent with all reports and findings by Contractor; and (3) any use of Contractor's name, logo or marks is approved in writing in advance by Contractor.
5. Due to the confidential, proprietary and sensitive nature of all reports and findings, Contractor shall not publish or disclose any reports or findings to any third party unless such publication and disclosure is approved in advance and in writing by Ordering Party.
6. Any declaration of the Contractor related to the implementation of the contract requires the consent of Mr. Antoni Macierewicz.

§ 5.

1. The Contractor's remuneration for the execution of all expert services covered by this contract is determined on the basis of a firm fixed negotiated contract price as set forth in the Statement of Work at Exhibit A. Ordering Party shall pay for all Research completed as invoiced by Contractor monthly. Contractor shall provide, with its monthly invoice, a Schedule showing the Research completed during that billing period. The remuneration covers all receivables related to the performance of the contract, including in particular the price of individual devices, the price of packaging, customs duties, transport costs, insurance costs, and local taxes.
2. The ordering part agrees to pay the contract in the following manner:

- 1) The first payment of up to five hundred thousand U.S. dollars (\$500,000 USD) will be paid no later than 30<sup>th</sup> June 2018 after the signature of this contract based on the invoice forwarded by contractor. Invoice should state: "For the realization of the activities described on the SOW for the 1<sup>st</sup> phase".
- 2) Subsequently, the Contractor will bill monthly according to the schedule exhibit on the Statement of Work.
3. The Parties allow the possibility of contractor postponing deadlines for completing the stages of specified Research in the set Schedule in the event Ordering Party is reasonably delayed in payment of remuneration or in providing required technical data.
4. Any services performed or expenses incurred by Contractor at the request of Ordering Party outside of the Statement of Work shall be paid pursuant to a quote approved by the parties.
5. Ordering Party shall remit, no later than forty-five (45) days of signature of this contract by the parties, payment of remuneration for all services and deliverables completed through the effective date of this contract.

**§ 6.**

1. Financial service on behalf of the Ordering Party will be performed by the Administrative Department of the Ministry of National Defense, REGON 014872806, NIP 5252095497, Al. Niepodległości 218, 00-911 Warsaw, hereinafter referred to as "Payer". Invoices will be issued to the Ordering Party with an indication of the Payer and sent to the address of the Ordering Party. The invoice should contain the number and subject of the contract / stage of the contract.
2. The remuneration due for the Research will be paid in accordance with the Schedule.

**§ 7.**

1. Payment of remuneration for completing the Research phase will take place no later than thirty (30) days (due date) from the date of receipt by the Ordering Payer, in the form of a transfer order to the Contractor's account.
2. In the case of performing a certain stage and the whole of the Research before the date specified in the Schedule, remuneration may be paid before the deadline resulting from the Schedule, but without the obligation to keep the 30-day payment deadline.

**§ 8.**

As stated in the Statement of Work a report will be issued before 1<sup>st</sup> of October 2019 and followed by the extended report. The following procedure will apply for both cases.

The reports of the Research will take place after a commission acceptance of the Research as completed and reports received by Mr. Antoni Macierewicz and Dr. Wieslaw Binienda based on the protocol of the final acceptance of the Research.

**§ 9.**

1. The acceptance procedure of the Research:



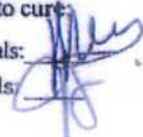
- 1) Transmission by the Contractor of the results of the Research prepared in writing, for the purpose of acceptance by the Ordering Party, shall be effective on the basis of the mutually agreed Transfer Protocol;
- 2) The Contractor shall be obliged to submit the results of tests in the form of a Report from the stage of research and final report to be collected at the place and time indicated by the Ordering Party;
- 3) Reports will be provided in the number of copies and form specified in § 1 para. 3.
- 4) If the Reports contain defects, errors or raise objections, the Ordering Party shall set an additional deadline of not more than 14 days for the Contractor to remedy the reported defects of the Report and re-present them for collection; and
- 5) The Report is confirmed by the parties to be an independent report prepared by Contractor without any influence or persuasion from Ordering Party.

**§ 10.**

1. The Contractor shall provide Mr. Antoni Macierewicz and Dr. Wieslaw Binienda with full and unlimited access to the process of Research implementation in all phases.
2. Change of persons referred to in paragraph 1 of this section does not constitute a change to the content of the contract, however, it requires written notice to the Contractor signed by both Mr. Antoni Macierewicz and Dr. Wieslaw Binienda. Each of the mentioned persons can authorize a substitute to step in his own place in the event he is unable to fulfill his function.

**§ 11.**

1. If the Ordering Party finds that the Research is carried out in a manner inconsistent with the contract and the Schedule, the documents referred to in §1 para. 2, or the Contractor is delaying the performance of the Research due to no fault of the Ordering Party, the Ordering Party shall set a specific deadline for changing the manner of performing the Research or an additional deadline for its performance, but not longer than 60 days. The Contractor is obliged to follow the instructions and deadline set by Mr. Antoni Macierewicz.
2. After the expiration of the set time limit referred to in paragraph 1, within 60 days, the Ordering Party may withdraw from the contract and, in its discretion, entrust the performance to another contractor at the sole expense of Ordering Party. However, in the event of such termination by Ordering Party, Contractor shall remain under contract with Ordering Party as a consultant for the Research and shall review the final report, and, if such report satisfies established scientific standards and is substantiated by the technical data, Contractor agrees to endorse the Report.
3. Neither party shall terminate this contract except: (1) by either party upon Contractor delivery of all Research, report, findings and other deliverables as set forth in the Statement of Work attached as Exhibit A and full and final payment made by Ordering Party; (2) mutual agreement of the parties; (3) by Ordering Party as set forth in this § 11; or (4) by Contractor upon a "for cause event". For purposes of this § 11, a "for cause event" shall include the following: (a) failure by Ordering Party to pay when due all monies owed following Contractor's written demand and a fifteen (15) days right to cure;



(b) material breach by Ordering Party of any material term or condition of this contract; (c) Ordering Party's failure to timely provide complete and accurate technical data, or access to facilities, equipment or specimens that are material and integral to the Research or reports, upon written notice and fifteen (15) days right to cure; or (d) circumstances or events which create an actual or perceived imminent threat or grave danger to Contractor or Contractor's agents, subcontractors or employees and such threat or danger cannot be mitigated by a reasonable delay in the performance of the Research as determined in the sole discretion of Contractor, except that Contractor shall make every effort to complete the Research or, in the alternative, to serve as a Consultant as set forth in paragraph 2 in this § 11 before termination of this contract.

§ 12.

1. The Contractor is obliged to notify the Ordering Party about the completion of individual stages and the whole of the Research, no later than on the date of their implementation specified in the Schedule.
2. The Contractor is obliged to provide the Ordering Party with the report on the implementation of the research stages (and in the final stage also the extended report.) The Contractor submits to the Ordering Party three copies of the Report, referred to in § 1, paragraph 2, together with a factual report together with its electronic version as well as an electronic version from each of the completed stages. The documents should be prepared in accordance with the requirements set out in § 1 paragraph 3.

§ 13.

1. The right to dispose of the results Research in the form of documentation, research models, utility and industrial models, methodologies and procedures aimed at applying in practice and other results has only the Ordering Party. This means the right to exclusive use and disposal, within the limits of the applicable law: documentation, research models, utility and industrial models, methodologies and procedures of conduct aimed at applying in practice and other results of the Research.
2. Test results should be free of any Contractor's license obligations.
3. The right to obtain patents for inventions and protective certificates for utility models obtained in connection with the performance of the Research covered by this contract shall be vested by the Contractor, however inventions and utility models relating to defense or State security - to the State Treasury represented by the Ordering Party, without additional compensation for the Contractor.
4. The Ordering Party reserves the exclusive right to disclose and disseminate any information about the subject of the Research but shall not publicly disclose or disseminate such information except as set forth in § 4.

§ 14

1. The Contractor shall, subject to any licenses held by third parties in the model, grant to the Ordering Party an indefinite, exclusive, not territorially limited license, without any future fees, of the Tu154M aircraft electronic model in the form of CAD and FE presentation, which was used for LsDyna simulation and developed by NIAR as part of the

implemented project referred to in § 2, as well as all input data and output related to the execution of the project, giving authorization to:

- 1) conduct any further research work aimed, among others, at its development, improvement, widening the scope of its application and development of implementation methods;
  - 2) execution of all factual activities related to the development, improvement, widening of its scope of application and implementation, including solutions based on obtaining new technology and obtaining in this regard by the Ordering Party, and for its benefits, all exclusive rights;
  - 3) market, use, perform marketing and distribution of all products and services resulting from the use of input and output data;
  - 4) granting third parties sub-licenses or other types of rights to the actions described under points (1-3) above or any other type of making the licensed data available.
2. The Contractor, as the only party entitled, due to proprietary copyrights, to the results of the Research specified under §2, shall grant an exclusive, unlimited territorially without any future fees license, at home and abroad, and authorizes to dispose of and use all fields of exploitation known on the day the contract is concluded to the research results specified in § 2, in particular:
- 1) in the scope of preservation and reproduction of the research results - the production of a copies of the research results with the use of a particular technique, including printing, reprographic, magnetic recording and digital technique;
  - 2) in the scope of consolidation and multiplication of materials - production by any technique, including printing, reprographic, magnetic recording and digital technology;
  - 3) the possibility of joining together or in part with other works and studies;
  - 4) possibilities of translation into all foreign languages;
  - 5) publishing, presenting, displaying in mass media, including on television, radio, newspapers or magazines, subject to and as set forth in § 4.
  - 6) in the scope of trade of the original version or copies, on which the results of the Study were recorded – especially to market in the country or abroad, lending or rental of the original version or copies of the research results; and
  - 7) in the scope of dissemination of research results in a way other than specified in point 2 - public performance, presentation, display, reproduction and broadcasting and re-broadcasting, as well making the research public in such a way that everyone can have access in a place and time chosen by them.
3. The Ordering Party will inform every time about the Contractor's property right to the original FE and CAD airplane model or place information on the manufactured materials, in the scope of use described in paragraph. 1 and par. 2.

§ 15.



1. The Contractor is required to prepare a detailed list of measurable results of the Research, i.e. documentation and items created during the Research, and hand it over to the Ordering Party no later than 15 days following the completion of the tests.
2. The results of the Research produced in the field covered by this contract are licensed free of charge to the Ordering Party.
3. The Contractor shall promptly provide the results of the Research specified in the list of measurable results of the Research, to the initial / final recipients indicated by the Ordering Party, including the date resulting from § 3 para. 2.

§ 16.

1. To perform the Research, the Contractor has the right to include domestic and foreign institutions and entrepreneurs provided that the requirements set out in the Act on the protection of confidential are fulfilled. Responsibility for carrying out the Research shall be carried only by the Contractor.
2. The Ordering Party may request the Contractor to submit a list of entities, referred to in paragraph 1, and express an opinion on this matter. The Ordering Party might not give consent for particular entities to participate in the research and specify the reasons for such decision.
3. The Contractor and his subcontractors and suppliers may not employ or commission, regardless of the form of the legal relationship, soldiers and employees of the defense department to perform of any activities related to the subject of the contract.
4. The contractor will oblige subcontractors and suppliers to add to their contracts a cooperative clause regarding the prohibition referred to in paragraph 3.
5. In the event of failure to comply with the obligation referred to in para. 3 or 4, the Ordering Party may terminate the contract without the notice period.

§ 17.

1. Amendments to the provisions of this contract are admissible if they result from circumstances, which could not have been foreseen at the time the contract was concluded and such amendments are approved in writing by the parties.
2. The change of the contract requires a written form under sanction of nullity.

§ 18

In the event of necessity to change the requirements in the performed Research, the Ordering Party will provide the Contractor with the necessary substantive basis for this purpose and will cover the costs resulting from the changes introduced and will take into account possible adjustment of deadlines for the Research covered by the contract. The Contractor undertakes to implement changes at the Ordering Party's written request.

§ 19.

Any disputes arising during the implementation of this contract, the Parties will try to settle amicably in the event of unresolvable disputes in an amicable manner, and arising from the contract, they will in good faith pursue resolution through binding arbitration mutually agreed to by the parties. Any arbitration proceedings will be conducted in English.






§ 20.


The contract has been prepared in three identical copies, one for the Contractor and two for the Ordering Party.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS CONTRACT AND/OR AUTHORIZED THE SAME TO BE EXECUTED BY THEIR DULY AUTHORIZED REPRESENTATIVES TO BE EFFECTIVE AS OF THE DATE SHOWN ABOVE IN THE OPENING PARAGRAPH.

**ORDERING PARTY**

**CONTRACTOR**

  
SIGNATURE

  
SIGNATURE

Antoni Macierewicz  
NAME

JOHN TOMBLIN  
NAME

29 05 2018.  
DATE

5-29-2018  
DATE