



Department
for Environment
Food & Rural Affairs

MMO
Lancaster House
Hampshire Court
Newcastle upon Tyne
NE4 7YH

T: 03459 335577
helpline@defra.gsi.gov.uk
www.gov.uk/defra

[REDACTED]
ThermaGenix, Inc
16 Tech Circle
Natick
MA 01760

Our Ref: 31381
Date: 19/03/2021

Dear [REDACTED],

Award of Contract for the Provision of a Fish Species ID Reference Library and a Portable PCR

Following your proposal for the Provision of a Fish Species ID Reference Library and a Portable PCR to MMO, we are pleased to award this contract to you.

This letter (Award Letter) sets out the terms of the Agreement between MMO as the Customer and ThermaGenix Inc as the Contractor for the provision of the Goods.

Unless the context otherwise requires, capitalised expressions used in this Award Letter have the same meanings as in the terms and conditions of contract set out in Annex One (1) to this Award Letter (the “**Conditions**”).

In the event of any conflict between this Award Letter and the Conditions, this Award Letter shall prevail. Please do not attach any Contractor’s terms and conditions to this Award Letter as they will not be accepted by the Customer and may delay conclusion of the Agreement.

For the purposes of the Agreement, the Customer and the Contractor agree as follows:

- 1) The Goods shall be Delivered in accordance Annex Three, Specification Section 5.
- 2) The charges for the Goods shall be as set out in Annex Two, Charges.
- 3) The specification of the Goods to be Delivered is as set out in Annex Three, Specification.
- 4) The Term shall commence on 26/03/2021 and the Expiry Date shall be 25/03/2023 the date on which the contract will end unless extended or subject to early termination.

The Authority may extend the term of the Contract until 25th March 2026. The terms of the Contract will apply throughout the period of any Extension.

- 5) The address for notices of the Parties are:

Customer

MMO
Lancaster House
Hampshire Court
Newcastle upon Tyne
NE4 7YH

Attention: [REDACTED]

Email: [REDACTED]

Contractor

ThermaGenix, Inc
16 Tech Circle
Natick
MA 01760

Attention: [REDACTED]

Email: [REDACTED]

- 6) The Customer may require the Contractor to ensure that any person employed in the supply of the Goods has undertaken a Disclosure and Barring Service check. The Contractor shall ensure that no person who discloses that he / she has a conviction that is relevant to the nature of the Agreement, relevant to the work of the Customer, or is of a type otherwise advised by the Customer (each such conviction a "**Relevant Conviction**"), or is found by the Contractor to have a Relevant Conviction (whether as a result of a police check, a Disclosure and Barring Service check or otherwise) is employed or engaged in the provision of any part of the supply of the Goods.

Payment

All invoices should be sent, quoting a valid purchase order number (PO Number), to: MMO - finance.mmo@marinemanagement.org.uk

Within ten (10) Working Days of receipt of your acceptance of this letter via Bravo, we will send you a unique PO Number. You must be in receipt of a valid PO Number before submitting an invoice.

To avoid delay in payment it is important that the invoice is compliant and that it includes a valid PO Number, PO Number item number (if applicable) and the details (name and telephone number) of your Customer contact (i.e. Contract Manager). Non-compliant invoices will be sent back to you, which may lead to a delay in payment.

If you have a query regarding an outstanding payment please contact the MMO by email to finance.mmo@marinemanagement.org.uk between 09:00-17:00 Monday to Friday.

Liaison

For general liaison your contact will continue to be [REDACTED].


We thank you for your co-operation to date, and look forward to forging a successful working relationship resulting in a smooth and successful supply of the Goods and Services.

Acceptance of the award of this contract will be made by electronic signature carried out in accordance with the 1999 EU Directive 99/93 (Community framework for electronic signatures) and the UK Electronic Communications Act 2000.

Acceptance of the offer comprised in this Agreement must be made within seven (7) days from the date of this Award Letter and the Agreement is formed on the date on which the Contractor communicates acceptance on the Customer's electronic contract management system ("Bravo"). No other form of acknowledgement will be accepted.

Please remember to quote the reference number above in any future communications relating to this contract.

Yours sincerely


Senior Category Officer | Environment Good and Services | Vets and Labs
Defra Group Commercial
Department for Environment, Food and Rural Affairs





Department
for Environment
Food & Rural Affairs

Conditions of Contract

Contract for Provision of a Fish Species ID Reference Library and a Portable PCR

Contract Reference: 31381

March 2021

Annex 1

Terms and Conditions of Contract for Goods

1 Interpretation

1.1 In these terms and conditions:

“Agreement”	means the contract between (i) the Customer acting as part of the Crown and (ii) the Supplier constituted by the Supplier’s countersignature of the Award Letter and includes the Award Letter and Annexes;
“Award Letter”	means the letter from the Customer to the Supplier printed above these terms and conditions;
“Central Government Body”	means a body listed in one of the following sub-categories of the Central Government classification of the Public Sector Classification Guide, as published and amended from time to time by the Office for National Statistics: (a) Government Department; (b) Non-Departmental Public Body or Assembly Sponsored Public Body (advisory, executive, or tribunal); (c) Non-Ministerial Department; or (d) Executive Agency;
“Charges”	means the charges for the Goods as specified in the Award Letter;
“Confidential Information”	means all information, whether written or oral (however recorded), provided by the disclosing Party to the receiving Party and which (i) is known by the receiving Party to be confidential; (ii) is marked as or stated to be confidential; or (iii) ought reasonably to be considered by the receiving Party to be confidential;
“Corrective Maintenance”	means a visit conducted by the contractor to undertake repairs when required by, and as requested by, MMO;
“Customer”	means the person identified in the letterhead of the Award Letter;
“Date of Delivery”	means that date by which the Goods must be Delivered to the Customer, as specified in the Award Letter.

“Deliver”	means hand over the Goods to the Customer at the address and on the date specified in the Award Letter, which shall include unloading and any other specific arrangements agreed in accordance with Clause 6. Delivered and Delivery shall be construed accordingly.
“Equipment”	means one (1) portable PCR;
“DPA”	means the Data Protection Act 1998;
“FOIA”	means the Freedom of Information Act 2000;
“Goods”	means the goods to be supplied by the Supplier to the Customer under the Agreement;
“Information”	has the meaning given under section 84 of the FOIA;
“MMO”	means the Marine Management Organisation;
“Party”	the Supplier or the Customer (as appropriate) and “Parties” shall mean both of them;
“PCR”	means Polymerase chain reaction which is a method widely used to rapidly make millions to billions of copies of a specific DNA sample, allowing scientists to take a very small sample of DNA and amplify it to a large enough amount to study in detail;
“Processed”	means seafood that has been gutted, frozen or skinned but not canned, pickled or salted.
“Purchase Order Number”	means the Customer’s unique number relating to the order for Goods to be supplied by the Supplier to the Customer in accordance with the terms of the Agreement;
“Request for Information”	has the meaning set out in the FOIA or the Environmental Information Regulations 2004 as relevant (where the meaning set out for the term “request” shall apply);
“Service Cover”	means a Corrective Maintenance program;
“Species Identification Library”	means a bespoke method of identifying the fish species listed in Table A;
“Specification”	means the specification for the Goods to be supplied by the Supplier to the Customer (including as to quantity, description and quality) as specified in the Award Letter;
“Staff”	means all directors, officers, employees, agents, consultants and

contractors of the Supplier and/or of any sub-contractor of the Supplier engaged in the performance of the Supplier's obligations under the Agreement;

"Staff Vetting Procedures" means vetting procedures that accord with good industry practice or, where applicable, the Customer's procedures for the vetting of personnel as provided to the Supplier from time to time;

"Supplier" means the person named as Supplier in the Award Letter;

"Term" means the period from the start date of the Agreement set out in the Award Letter to the Expiry Date and any extension period;

"UK" means United Kingdom;

"VAT" means value added tax in accordance with the provisions of the Value Added Tax Act 1994; and

"Working Day" means a day (other than a Saturday or Sunday) on which banks are open for business in the City of London.

1.2 In these terms and conditions, unless the context otherwise requires:

- 1.2.1 references to numbered clauses are references to the relevant clause in these terms and conditions;
- 1.2.2 any obligation on any Party not to do or omit to do anything shall include an obligation not to allow that thing to be done or omitted to be done;
- 1.2.3 the headings to the clauses of these terms and conditions are for information only and do not affect the interpretation of the Agreement;
- 1.2.4 any reference to an enactment includes reference to that enactment as amended or replaced from time to time and to any subordinate legislation or byelaw made under that enactment; and
- 1.2.5 the word 'including' shall be understood as meaning 'including without limitation'.

2 Basis of Agreement

- 2.1 The Award Letter constitutes an offer by the Customer to purchase the Goods subject to and in accordance with the terms and conditions of the Agreement.
- 2.2 The offer comprised in the Award Letter shall be deemed to be accepted by the Supplier on receipt by the Customer of a copy of the Award Letter countersigned by the Supplier within 7 days of the date of the Award Letter.

3 Supply of Goods

- 3.1 In consideration of the Customer's agreement to pay the Charges, the Supplier shall supply the Goods to the Customer subject to and in accordance with the terms and conditions of the Agreement.
- 3.2 In supplying the Goods, the Supplier shall co-operate with the Customer in all matters relating to the supply of Goods and comply with all the Customer's instructions.
- 3.3 The Supplier shall supply the Goods in accordance with the Specification. The Supplier warrants, represents, undertakes and guarantees that the Goods supplied under the

Agreement shall:

- 3.3.1 be free from defects (manifest or latent), in materials and workmanship and remain so for 12 months after Delivery;
- 3.3.2 be of satisfactory quality (within the meaning of the Sale of Goods Act 1979) and comply with any applicable statutory and regulatory requirements relating to the manufacture, labelling, packaging, storage, handling and delivery of the Goods;
- 3.3.3 conform with the specifications (including the Specification), drawings, descriptions given in quotations, estimates, brochures, sales, marketing and technical literature or material (in whatever format made available by the Supplier) supplied by, or on behalf of, the Supplier;
- 3.3.4 be free from design defects;
- 3.3.5 be fit for any purpose held out by the Supplier or made known to the Supplier by the Customer expressly or by implication, and in this respect the Customer relies on the Supplier's skill and judgement. The Supplier acknowledges and agrees that the approval by the Customer of any designs provided by the Supplier shall not relieve the Supplier of any of its obligations under this sub-clause; and
- 3.3.6 and the Supplier itself shall, comply with all applicable laws.

4 Charges, Payment and Recovery of Sums Due

- 4.1 The Charges for the Goods shall be as set out in the Award Letter and shall be the full and exclusive remuneration of the Supplier in respect of the supply of the Goods. Unless otherwise agreed in writing by the Customer, the Charges shall include every cost and expense of the Supplier directly or indirectly incurred in connection with the supply of the Goods, including but not limited to the costs of packaging, insurance, delivery, unloading, stacking and carriage.
- 4.2 All amounts stated are exclusive of VAT which shall be charged at the prevailing rate. The Customer shall, following the receipt of a valid VAT invoice, pay to the Supplier a sum equal to the VAT chargeable in respect of the Goods.
- 4.3 Following Delivery of the Goods, the Supplier shall invoice the Customer as specified in the Agreement. Each invoice shall include such supporting information required by the Customer to verify the accuracy of the invoice, including the relevant Purchase Order Number and a breakdown of the Goods supplied in the invoice period.
- 4.4 In consideration of the supply of the Goods by the Supplier, the Customer shall pay the Supplier the invoiced amounts no later than 30 days after verifying that the invoice is valid and undisputed and includes a valid Purchase Order Number.
- 4.5 If the Customer fails to consider and verify an invoice in a timely fashion the invoice shall be regarded as valid and undisputed for the purpose of paragraph 4.4 after a reasonable time has passed.
- 4.6 If there is a dispute between the Parties as to the amount invoiced, the Customer shall pay the undisputed amount. The Supplier shall not suspend the supply of the Goods unless the Supplier is entitled to terminate the Agreement for a failure to pay undisputed sums in accordance with clause 17.3. Any disputed amounts shall be resolved through the dispute resolution procedure detailed in clause 20.

- 4.7 If a payment of an undisputed amount is not made by the Customer by the due date, then the Customer shall pay the Supplier interest at the interest rate specified in the Late Payment of Commercial Debts (Interest) Act 1998.
- 4.8 Where the Supplier enters into a sub-contract, the Supplier shall include in that sub-contract:
- 4.8.1 provisions having the same effects as clauses 4.3 to 4.7 of this Agreement; and
 - 4.8.2 a provision requiring the counterparty to that sub-contract to include in any sub-contract which it awards provisions having the same effects as 4.3 to 4.8 of this Agreement.
 - 4.8.3 In this clause 4.8, "sub-contract" means a contract between two or more suppliers, at any stage of remoteness from the Authority in a subcontracting chain, made wholly or substantially for the purpose of performing (or contributing to the performance of) the whole or any part of this Agreement.
- 4.9 If any sum of money is recoverable from or payable by the Supplier under the Agreement (including any sum which the Supplier is liable to pay to the Customer in respect of any breach of the Agreement), that sum may be deducted unilaterally by the Customer from any sum then due, or which may come due, to the Supplier under the Agreement or under any other agreement or contract with the Customer. The Supplier shall not be entitled to assert any credit, set-off or counterclaim against the Customer in order to justify withholding payment of any such amount in whole or in part.

5 Cancellation

- 5.1 The Customer shall have the right to cancel the order for the Goods, or any part of the Goods, which have not yet been Delivered to the Customer. The cancellation shall be made in writing. Without prejudice to the generality of the foregoing, the Customer shall pay such Charges or that part of the Charges for Goods which have been Delivered to the Customer or, on the deemed date of service of the notice of cancellation, are already in transit and the costs of materials which the Supplier has purchased to fulfil the order for the Goods and which cannot be used for other orders or be returned to the supplier of those materials for a refund. For the avoidance of doubt the Customer shall not be liable for any loss of anticipated profits or any consequential loss.

6 Delivery

- 6.1 The Supplier shall Deliver the Goods to the Customer on or by the Date of Delivery. Unless otherwise agreed in writing by the Customer, Delivery shall be on the date and to the address specified in the Award Letter. Delivery of the Goods shall be completed once the completion of unloading the Goods from the transporting vehicle at the Delivery address has taken place and the Customer has signed for the Delivery.
- 6.2 Any access to the Customer's premises and any labour and equipment that may be provided by the Customer in connection with Delivery of the Goods shall be provided without acceptance by the Customer or the Crown of any liability in respect of any actions, claims, costs and expenses incurred by third parties for any loss of damages to the extent that such loss or damage is not attributable to the negligence or other wrongful act of the Customer or its servant or agent. The Supplier shall indemnify the Customer and the Crown in respect of any actions, suits, claims, demands, losses, charges, costs and expenses, which the Customer or the Crown may suffer or incur as a result of or in connection with any damage or injury (whether fatal or otherwise) occurring in the course of Delivery or installation to the extent that any such damage

or injury is attributable to any act or omission of the Supplier or any of his sub-Suppliers.

- 6.3 Delivery of the Goods shall be accompanied by a delivery note which shows the Purchase Order Number and the type and quantity of the Goods and, in the case of part Delivery, the outstanding balance remaining to be Delivered.
- 6.4 Unless otherwise stipulated by the Customer in the Award Letter, Deliveries shall only be accepted by the Customer on Working Days and during normal business hours.
- 6.5 Where (i) the Supplier fails to Deliver the Goods or part of the Goods or (ii) the Goods or part of the Goods do not comply with the provisions of clause 3, then without limiting any of its other rights or remedies implied by statute or common law, the Customer shall be entitled:
 - 6.5.1 to terminate the Agreement;
 - 6.5.2 request the Supplier, free of charge, to deliver substitute Goods within the timescales specified by the Customer;
 - 6.5.3 to require the Supplier, free of charge, to repair or replace the rejected Goods, or to provide a full refund of the price of the rejected Goods (if paid);
 - 6.5.4 to reject the Goods (in whole or part) and return them to the Supplier at the Supplier's own risk and expense and the Customer shall be entitled to a full refund on those Goods or part of Goods duly returned;
 - 6.5.5 to buy the same or similar Goods from another supplier and
to recover any expenses incurred in respect of buying the goods from another supplier which shall include but not be limited to administration costs, chargeable staff time and extra delivery costs.

7 Property and Guarantee of Title

- 7.1 Without prejudice to any other rights or remedies of the Customer, title and risk in the Goods shall pass to the Customer when Delivery of the Goods is complete (including off-loading and stacking)
- 7.2 The Supplier warrants that:
 - 7.2.1 it has full clear and unencumbered title to all the Goods;
 - 7.2.2 at the date of Delivery of any of the Goods it shall have full and unrestricted right, power and authority to sell, transfer and deliver all of the Goods to the Customer. On Delivery the Customer shall acquire a valid and unencumbered title to the Goods.

8 Staff

- 8.1 If the Customer reasonably believes that any of the Staff are unsuitable to undertake work in respect of the Agreement, it may, by giving written notice to the Supplier:
 - 8.1.1 refuse admission to the relevant person(s) to the Customer's premises;
 - 8.1.2 direct the Supplier to end the involvement in the provision of the Goods of the relevant person(s); and/or
 - 8.1.3 require that the Supplier replace any person removed under this clause with another suitably qualified person and procure that any security pass issued by the Customer to the person removed is surrendered,and the Supplier shall comply with any such notice.

8.2 The Supplier shall:

- 8.2.1 ensure that all Staff are vetted in accordance with the Staff Vetting Procedures and if requested, comply with the Customer's Staff Vetting Procedures as supplied from time to time;
- 8.2.2 if requested, provide the Customer with a list of the names and addresses (and any other relevant information) of all persons who may require admission to the Customer's premises in connection with the Agreement; and
- 8.2.3 procure that all Staff comply with any rules, regulations and requirements reasonably specified by the Customer.

9 Assignment and Sub-Contracting

- 9.1 The Supplier shall not without the written consent of the Customer assign, sub-contract, novate or in any way dispose of the benefit and/ or the burden of the Agreement or any part of the Agreement. The Customer may, in the granting of such consent, provide for additional terms and conditions relating to such assignment, sub-contract, novation or disposal. The Supplier shall be responsible for the acts and omissions of its sub-contractors as though those acts and omissions were its own.
- 9.2 Where the Customer has consented to the placing of sub-contracts, the Supplier shall, at the request of the Customer, send copies of each sub-contract, to the Customer as soon as is reasonably practicable.
- 9.3 The Customer may assign, novate, or otherwise dispose of its rights and obligations under the Agreement without the consent of the Supplier provided that such assignment, novation or disposal shall not increase the burden of the Supplier's obligations under the Agreement.

10 Intellectual Property and Indemnity

- 10.1 The Supplier grants the Customer a perpetual, royalty-free, irrevocable, non-exclusive licence (with the right to sub-licence) to use all intellectual property rights in the Goods or in any materials accompanying the Goods to the extent that it is necessary to fulfil its obligations under this Agreement.
- 10.2 The Supplier shall indemnify, and keep indemnified, the Customer in full against all cost, expenses, damages and losses (whether direct or indirect), including any interest, penalties, and reasonable legal and other professional fees awarded against or incurred or paid by the Customer as a result of or in connection with any claim made against the Customer for actual or alleged infringement of a third party's intellectual property arising out of, or in connection with, the supply or use of the Goods, to the extent that the claim is attributable to the acts or omission of the Supplier or any Staff.
- 10.3 The Customer shall promptly notify the Supplier of any infringement claim made against it relating to any Goods and, subject to any statutory obligation requiring the Customer to respond, shall permit the Supplier to have the right, at its sole discretion to assume, defend, settle or otherwise dispose of such claim. The Customer shall give the Supplier such assistance as it may reasonably require to dispose of the claim and shall not make any statement which might be prejudicial to the settlement or defence of the claim.

11 Governance and Records

11.1 The Supplier shall:

- 11.1.1 attend progress meetings with the Customer at the frequency and times

specified by the Customer and shall ensure that its representatives are suitably qualified to attend such meetings; and

11.1.2 submit progress reports to the Customer at the times and in the format specified by the Customer.

11.2 The Supplier shall keep and maintain until 6 years after the end of the Agreement, or as long a period as may be agreed between the Parties, full and accurate records of the Agreement including the Goods supplied under it, and all payments made by the Customer. The Supplier shall on request afford the Customer or the Customer's representatives such access to those records as may be reasonably requested by the Customer in connection with the Agreement.

12 Confidentiality, Transparency and Publicity

12.1 Subject to clause 12.2, each Party shall:

12.1.1 treat all Confidential Information it receives as confidential, safeguard it accordingly and not disclose it to any other person without the prior written permission of the disclosing Party; and

12.1.2 not use or exploit the disclosing Party's Confidential Information in any way except for the purposes anticipated under the Agreement.

12.2 Notwithstanding clause 12.1, a Party may disclose Confidential Information which it receives from the other Party:

12.2.1 where disclosure is required by applicable law or by a court of competent jurisdiction;

12.2.2 to its auditors or for the purposes of regulatory requirements;

12.2.3 on a confidential basis, to its professional advisers;

12.2.4 to the Serious Fraud Office where the Party has reasonable grounds to believe that the other Party is involved in activity that may constitute a criminal offence under the Bribery Act 2010;

12.2.5 where the receiving Party is the Supplier, to the Staff on a need to know basis to enable performance of the Supplier's obligations under the Agreement provided that the Supplier shall procure that any Staff to whom it discloses Confidential Information pursuant to this clause 12.2.5 shall observe the Supplier's confidentiality obligations under the Agreement; and

12.2.6 where the receiving Party is the Customer:

(a) on a confidential basis to the employees, agents, consultants and contractors of the Customer;

(b) on a confidential basis to any other Central Government Body, any successor body to a Central Government Body or any company to which the Customer transfers or proposes to transfer all or any part of its business;

(c) to the extent that the Customer (acting reasonably) deems disclosure necessary or appropriate in the course of carrying out its public functions; or

(d) in accordance with clause 13.

and for the purposes of the foregoing, references to disclosure on a confidential basis shall mean disclosure subject to a confidentiality

agreement or arrangement containing terms no less stringent than those placed on the Customer under this clause 12.

- 12.3 The Parties acknowledge that, except for any Information which is exempt from disclosure in accordance with the provisions of the FOIA, the content of the Agreement is not Confidential Information and the Supplier hereby gives its consent for the Customer to publish the Agreement in its entirety to the general public (but with any Information that is exempt from disclosure in accordance with the FOIA redacted) including any changes to the Agreement agreed from time to time. The Customer may consult with the Supplier to inform its decision regarding any redactions but shall have the final decision in its absolute discretion whether any of the content of the Agreement is exempt from disclosure in accordance with the provisions of the FOIA.
- 12.4 The Supplier shall not, and shall take reasonable steps to ensure that the Staff shall not, make any press announcement or publicise the Agreement or any part of the Agreement in any way, except with the prior written consent of the Customer.

13 Freedom of Information

- 13.1 The Supplier acknowledges that the Customer is subject to the requirements of the FOIA and the Environmental Information Regulations 2004 and shall:
- 13.1.1 provide all necessary assistance and cooperation as reasonably requested by the Customer to enable the Customer to comply with its obligations under the FOIA and the Environmental Information Regulations 2004;
 - 13.1.2 transfer to the Customer all Requests for Information relating to the Agreement that it receives as soon as practicable and in any event within 2 Working Days of receipt;
 - 13.1.3 provide the Customer with a copy of all Information belonging to the Customer requested in the Request for Information which is in its possession or control in the form that the Customer requires within 5 Working Days (or such other period as the Customer may reasonably specify) of the Customer's request for such Information; and
 - 13.1.4 not respond directly to a Request for Information unless authorised in writing to do so by the Customer.
- 13.2 The Supplier acknowledges that the Customer may be required under the FOIA and the Environmental Information Regulations 2004 to disclose Information concerning the Supplier or the Goods (including commercially sensitive information) without consulting or obtaining consent from the Supplier. In these circumstances the Customer shall, in accordance with any relevant guidance issued under the FOIA, take reasonable steps, where appropriate, to give the Supplier advance notice, or failing that, to draw the disclosure to the Supplier's attention after any such disclosure
- 13.3 Notwithstanding any other provision in the Agreement, the Customer shall be responsible for determining in its absolute discretion whether any Information relating to the Supplier or the Goods is exempt from disclosure in accordance with the FOIA and/or the Environmental Information Regulations 2004.

14 Protection and Security of Data

- 14.1 The Supplier shall, and shall procure that all Staff shall, comply with any notification requirements under the DPA and both Parties shall duly observe all their obligations under the DPA which arise in connection with the Agreement.

14.2 When handling Customer data, the Supplier shall ensure the security of the data is maintained in line with the security requirements of the Customer as notified to the Supplier from time to time.

15 Liability

15.1 The Supplier shall not be responsible for any injury, loss, damage, cost or expense suffered by the Customer if and to the extent that it is caused by the negligence or wilful misconduct of the Customer or by breach by the Customer of its obligations under the Agreement.

15.2 Subject always to clause 15.3

15.2.1 the aggregate liability of the Supplier in respect of all defaults, claims, losses or damages howsoever caused, whether arising from breach of the Agreement, the supply or failure to supply of the Goods, misrepresentation (whether tortious or statutory), tort (including negligence), breach of statutory duty or otherwise shall in no event exceed a sum equal to 125% of the Charges paid or payable to the Supplier; and

15.2.2 except in the case of claims arising under clauses 10.1.2 and 19.3, in no event shall either Party be liable to the other Party for any:

- (a) loss of profits;
- (b) loss of business;
- (c) loss of revenue;
- (d) loss of or damage to goodwill;
- (e) loss of savings (whether anticipated or otherwise); and/or
- (f) any indirect, special or consequential loss or damage.

15.3 Nothing in the Agreement shall be construed to limit or exclude either Party's liability for:

15.3.1 death or personal injury caused by its negligence or that of its Staff;

15.3.2 fraud or fraudulent misrepresentation by it or that of its Staff;

15.3.3 breach of any obligation as to title implied by section 12 of the Sale of Goods Act 1979 or section 2 of the Supply of Goods and Services Act 1982; or

15.3.4 any other matter which, by law, may not be excluded or limited.

15.4 The Supplier's liability under the indemnity in clauses 10.2 and 19.3 shall be unlimited.

16 Force Majeure

Neither Party shall have any liability under or be deemed to be in breach of the Agreement for any delays or failures in performance of the Agreement which result from circumstances beyond the reasonable control of the Party affected. Each Party shall promptly notify the other Party in writing when such circumstances cause a delay or failure in performance and when they cease to do so. If such circumstances continue for a continuous period of more than 30 days, either Party may terminate the Agreement by written notice to the other Party.

17 Termination

17.1 Without prejudice to any other right or remedy it might have, the Customer may

terminate the Agreement in whole or in part before Delivery or after Delivery (where only part of Goods have been Delivered) by written notice to the Supplier with immediate effect if the Supplier:

- 17.1.1 (without prejudice to clause 17.1.5), is in material breach of any obligation under the Agreement which is not capable of remedy;
 - 17.1.2 repeatedly breaches any of the terms and conditions of the Agreement in such a manner as to reasonably justify the opinion that its conduct is inconsistent with it having the intention or ability to give effect to the terms and conditions of the Agreement;
 - 17.1.3 is in material breach of any obligation which is capable of remedy, and that breach is not remedied within 30 days of the Supplier receiving notice specifying the breach and requiring it to be remedied;
 - 17.1.4 undergoes a change of control within the meaning of section 416 of the Income and Corporation Taxes Act 1988;
 - 17.1.5 breaches the provisions of clauses 8.2, 12, 13, 14 and 18;
 - 17.1.6 becomes insolvent, or if an order is made or a resolution is passed for the winding up of the Supplier (other than voluntarily for the purpose of solvent amalgamation or reconstruction), or if an administrator or administrative receiver is appointed in respect of the whole or any part of the Supplier's assets or business, or if the Supplier makes any composition with its creditors or takes or suffers any similar or analogous action (to any of the actions detailed in this clause 17.1.6) in consequence of debt in any jurisdiction; or
 - 17.1.7 fails to comply with legal obligations in the fields of environmental, social or labour law.
- 17.2 The Supplier shall notify the Customer as soon as practicable of any change of control as referred to in clause 17.1.4 or any potential such change of control.
- 17.3 In addition to the Supplier's statutory rights, the Supplier may terminate the Agreement by written notice to the Customer if the Customer has not paid any undisputed amounts within 90 days of them falling due.
- 17.4 Termination or expiry of the Agreement shall be without prejudice to the rights of either Party accrued prior to termination or expiry and shall not affect the continuing rights of the Parties under clauses 2, 3.2, 3.3, 8, 10, 11.2, 12, 13, 14, 15, 17.5, 18.4, 19.3, 20 and 21.7 and any other term or condition of the Agreement that either expressly or by implication has effect after termination.
- 17.5 Upon termination or expiry of the Agreement, the Supplier shall:
- 17.5.1 give all reasonable assistance to the Customer and any incoming supplier of Goods; and
 - 17.5.2 return all requested documents, information and data to the Customer as soon as reasonably practicable.

18 Compliance

- 18.1 The Supplier shall promptly notify the Customer of any health and safety hazards which may arise in connection with the performance of its obligations under the Agreement. The Customer shall promptly notify the Supplier of any health and safety hazards which may exist or arise at the Customer's premises and which may affect the Supplier in the performance of its obligations under the Agreement.
- 18.2 The Supplier shall:
- 18.2.1 comply with the reasonable requirements of the Customer's security

arrangements;

18.2.2 comply with all the Customer's health and safety measures;

18.2.3 notify the Customer immediately in the event of any incident occurring in the performance of its obligations under the Agreement on the Customer's premises where that incident causes any personal injury or damage to property which could give rise to personal injury;

18.2.4 perform its obligations under the Agreement in accordance with all applicable equality Law and the Customer's equality and diversity policy as provided to the Supplier from time to time;

18.2.5 take all reasonable steps to secure the observance of clause 18.2.4 by all Staff; and

18.2.6 supply the Goods and any packaging in accordance with the Customer's environmental policy as provided from time to time.

18.3 The Goods shall be packed and marked in a proper manner and in accordance with any instructions specified in the Award Letter, any statutory requirements and any requirements of the carriers. All packaging materials shall be considered non-returnable. The Supplier shall indemnify the Customer against all actions, suits, claims, demands, losses, charges, costs and expenses which the Customer may suffer or incur as a result of, or in connection with, any breach of this clause 18.3.

18.4 The Supplier shall comply with, and shall ensure that its Staff shall comply with, the provisions of:

18.4.1 the Official Secrets Acts 1911 to 1989; and

18.4.2 section 182 of the Finance Act 1989.

19 Prevention of Fraud and Corruption

19.1 The Supplier shall not offer, give, or agree to give anything, to any person an inducement or reward for doing, refraining from doing, or for having done or refrained from doing, any act in relation to the obtaining or execution of the Agreement or for showing or refraining from showing favour or disfavour to any person in relation to the Agreement.

19.2 The Supplier shall take all reasonable steps, in accordance with good industry practice, to prevent fraud by the Staff and the Supplier (including its shareholders, members and directors) in connection with the Agreement and shall notify the Customer immediately if it has reason to suspect that any fraud has occurred or is occurring or is likely to occur.

19.3 If the Supplier or the Staff engages in conduct prohibited by clause 19.1 or commits fraud in relation to the Agreement or any other contract with the Crown (including the Customer) the Customer may:

19.3.1 terminate the Agreement and recover from the Supplier the amount of any loss suffered by the Customer resulting from the termination, including the cost reasonably incurred by the Customer of making other arrangements for the supply of the Goods and any additional expenditure incurred by the Customer throughout the remainder of the Agreement; or

19.3.2 recover in full from the Supplier any other loss sustained by the Customer in consequence of any breach of this clause.

20 Dispute Resolution

- 20.1 The Parties shall attempt in good faith to negotiate a settlement to any dispute between them arising out of or in connection with the Agreement and such efforts shall involve the escalation of the dispute to an appropriately senior representative of each Party.
- 20.2 If the dispute cannot be resolved by the Parties within one month of being escalated as referred to in clause 20.1, the dispute may by agreement between the Parties be referred to a neutral adviser or mediator (the “**Mediator**”) chosen by agreement between the Parties. All negotiations connected with the dispute shall be conducted in confidence and without prejudice to the rights of the Parties in any further proceedings.
- 20.3 If the Parties fail to appoint a Mediator within one month, or fail to enter into a written agreement resolving the dispute within one month of the Mediator being appointed, either Party may exercise any remedy it has under applicable law.

21 General

- 21.1 Each of the Parties represents and warrants to the other that it has full capacity and authority, and all necessary consents, licences and permissions to enter into and perform its obligations under the Agreement, and that the Agreement is executed by its duly authorised representative.
- 21.2 A person who is not a party to the Agreement shall have no right to enforce any of its provisions which, expressly or by implication, confer a benefit on him, without the prior written agreement of the Parties.
- 21.3 The Agreement cannot be varied except in writing signed by a duly authorised representative of both the Parties.
- 21.4 The Agreement contains the whole agreement between the Parties and supersedes and replaces any prior written or oral agreements, representations or understandings between them. The Parties confirm that they have not entered into the Agreement on the basis of any representation that is not expressly incorporated into the Agreement. Nothing in this clause shall exclude liability for fraud or fraudulent misrepresentation.
- 21.5 Any waiver or relaxation either partly, or wholly of any of the terms and conditions of the Agreement shall be valid only if it is communicated to the other Party in writing and expressly stated to be a waiver. A waiver of any right or remedy arising from a breach of contract shall not constitute a waiver of any right or remedy arising from any other breach of the Agreement.
- 21.6 The Agreement shall not constitute or imply any partnership, joint venture, agency, fiduciary relationship or other relationship between the Parties other than the contractual relationship expressly provided for in the Agreement. Neither Party shall have, nor represent that it has, any authority to make any commitments on the other Party's behalf.
- 21.7 Except as otherwise expressly provided by the Agreement, all remedies available to either Party for breach of the Agreement (whether under the Agreement, statute or common law) are cumulative and may be exercised concurrently or separately, and the exercise of one remedy shall not be deemed an election of such remedy to the exclusion of other remedies.
- 21.8 If any provision of the Agreement is prohibited by law or judged by a court to be unlawful, void or unenforceable, the provision shall, to the extent required, be severed from the Agreement and rendered ineffective as far as possible without modifying the remaining provisions of the Agreement, and shall not in any way affect any other circumstances of or the validity or enforcement of the Agreement.

22 Notices

- 22.1 Any notice to be given under the Agreement shall be in writing and may be served by personal delivery, first class recorded or, subject to clause 22.3, e-mail to the address of the relevant Party set out in the Award Letter, or such other address as that Party may from time to time notify to the other Party in accordance with this clause.
- 22.2 Notices served as above shall be deemed served on the Working Day of delivery provided delivery is before 5.00pm on a Working Day. Otherwise delivery shall be deemed to occur on the next Working Day. An email shall be deemed delivered when sent unless an error message is received.
- 22.3 Notices under clauses 16 (Force Majeure) and 17 (Termination) may be served by email only if the original notice is then sent to the recipient by personal delivery or recorded delivery in the manner set out in clause 22.1.

23 Governing Law and Jurisdiction

- 23.1 The validity, construction and performance of the Agreement, and all contractual and non contractual matters arising out of it, shall be governed by English law and shall be subject to the exclusive jurisdiction of the English courts to which the Parties submit.

24 Supply of Services

- 24.1 In consideration of the Customer's agreement to pay the Charges, the Supplier shall supply the Services to the Customer for the Term subject to and in accordance with the terms and conditions of the Agreement.
- 24.2 In supplying the Services, the Supplier shall:
- 24.2.1 co-operate with the Customer in all matters relating to the Services and comply with all the Customer's instructions;
 - 24.2.2 perform the Services with all reasonable care, skill and diligence in accordance with good industry practice in the Supplier's industry, profession or trade;
 - 24.2.3 use Staff who are suitably skilled and experienced to perform tasks assigned to them, and in sufficient number to ensure that the Supplier's obligations are fulfilled in accordance with the Agreement;
 - 24.2.4 ensure that the Services shall conform with all descriptions and specifications set out in the Specification;
 - 24.2.5 comply with all applicable laws; and
 - 24.2.6 provide all equipment, tools and vehicles and other items as are required to provide the Services.
- 24.3 The Customer may by written notice to the Supplier at any time request a variation to the scope of the Services. In the event that the Supplier agrees to any variation to the scope of the Services, the Charges shall be subject to fair and reasonable adjustment to be agreed in writing between the Customer and the Supplier.

Annex 2 – Charges

The following pricing shall apply for the provision of the Species Identification Library and Equipment including software, consumables and training.

Delivery before 26/03/21

	Quantity	£ (ex.VAT)
Total cost of the Species Identification Library for 7 species (including variations) to include (Atlantic Cod (3 variants); Atlantic Salmon (3 Variants); Haddock (2 Variants), Atlantic Halibut (2 variants); Atlantic Pollack (1 variant); Mako Shark (3 variants), Dogfish (3 variants))	■	■
Total cost of Equipment (including a two (2) year warranty and software *	■	■
Total costs of Consumables for 240 tests	■	■
Total Fixed Price		£9,716.00

* Note that the Authority reserves the right to purchase a further five (5) items of Equipment during the Contract term at the pricing submitted in the Tender Response, on acceptance of a CCN by the Supplier.

Additional Species lines** - Species Identification Library

Common Name	Scientific Name	Species (Inc Variations)	Price / Species	Total Cost
European Bass	<i>Dicentrarchus labrax</i>	■	■	■
Brill	<i>Scophthalmus rhombus</i>	■	■	■
Dover Sole	<i>Solea solea</i>	■	■	■
Haddock	<i>Melanogrammus aeglefinus</i>	■	■	■
European Hake	<i>Merluccius merluccius</i>	■	■	■
Herring	<i>Clupea harengus</i>	■	■	■
Lemon Sole	<i>Microstomus kitt</i>	■	■	■
Atlantic horse Mackerel	<i>Trachurus trachurus</i>	■	■	■
Atlantic Mackerel	<i>Scomber scombrus</i>	■	■	■
Monkfish (White)	<i>Lophius piscatorius</i>	■	■	■
Monkfish (Black bellied)	<i>Lophius budegassa</i>	■	■	■
European Plaice	<i>Pleuronectes platessa</i>	■	■	■
Sand Sole	<i>Pegusa lascaris</i>	■	■	■

Blonde Ray	<i>Raja brackyura</i>				
Cuckoo Ray	<i>Leucoraja naevus</i>				
Shagreen Ray	<i>Leucoraja fullonica</i>				
Smalleyed Ray	<i>Raja microocellata</i>				
Thornback Ray	<i>Raja clavata</i>				
Undulate Ray	<i>Raja undulata</i>				
Long nose Skate	<i>Dipturus oxyrinchus</i>				
White Skate	<i>Rostroraja alba</i>				
Ling	<i>Molva molva</i>				
Megrim	<i>Lepidorhombus whiffiagonis</i>				
Saithe (Atlantic Pollock)	<i>Pollachius virens</i>				
Whiting (Merling)	<i>Merlangius merlangus</i>				
Witch	<i>Glyptocephalus cynoglossus</i>				
Blue Skate	<i>Dipturus batis</i>				
Flapper skate	<i>Dipturus intermedia</i>				
Sandy Ray	<i>Leucoraja circularis</i>				
Starry Ray	<i>Amblyraja radiata</i>				
Angel Shark	<i>Squatina squatina</i>				
Porbeagle Shark	<i>Lamna nasus</i>				
Common Smooth hound	<i>Mustelus mustelus</i>				
Thresher Shark	<i>Alopias superciliosus</i>				
Tope (School) Shark	<i>Galeorhinus galeus</i>				

**The additional Species may be added to the Species Identification Library and may be purchased during the Contract term, at the pricing submitted in the Tender Response, on acceptance of a CCN by the Supplier.

Additional Service Cover

	Quantity	£ (ex.VAT)
Annual cost of Additional Service Cover for 2023/2024, 2024/2025 and 2025/2026 for all three (3) years for one (1) item of Equipment	1	
Total Fixed Price		£2,160.00

The payment for the additional Service Cover will be payable in advance at the end of the warranty period.

All prices are exclusive of VAT.

All prices are shown in £ Sterling.

All prices will remain fixed for the Contract period.

Annex 3 – Specification

This Section sets out the Authority's requirements.

1. Overview

- 1.1 The Authority is the UK Government Department responsible for the environment, food and farming and rural affairs. The Authority's priorities are to secure a healthy natural environment; a sustainable, low-carbon economy; a thriving farming sector and a sustainable, healthy and secure food supply. Further information on the Authority can be found at:

<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>

- 1.2 The MMO is an executive non-departmental public body in the United Kingdom established under the Marine and Coastal Access Act 2009, with responsibility for English waters. The MMO exists to make a significant contribution to sustainable development in the marine area, and to promote the UK government's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. Further information on MMO can be found on:

<https://www.gov.uk/government/organisations/marine-management-organisation>

2. Background

- 2.1 There is an increasing trend in seafood species substitution and mislabelling globally. In the UK a 2013 study found 7.4% of fish sold as cod was actually not cod, but cheaper species of fish such as pollock, cobbler and Vietnamese pangasius (Miller et al. 2011). DNA analysis, is now a well-established method for authenticity testing of fish species, which will aid the MMO in carrying out compliance activities to help ensure sustainable fish stocks.
- 2.2 MMO would like to make use of the technologies available which make it possible to conduct testing on-site, outside of a laboratory, and cross reference results with online databases which could enable greater application of DNA monitoring across the seafood industry.

3. Overview

- 3.1 MMO requires a portable PCR and a supporting Species Identification Library to enable rapid species identification of seafood samples.

4. Requirement

- 4.1 Species Identification Library

The MMO requires the Contractor to develop a Species Identification Library to be able to distinguish the forty-one (41) species (including any genetic variations) of fish which are of commercial or legislative importance to the UK listed in Table A below.

The library needs to be accessible in real time to enable the benefit of rapid analysis and present a result of the analysis in under three (3) hours without the need to outsource the extractions to a laboratory (see equipment specification as detailed at paragraph 4.3 of the Specification of Requirement).

Table A

Common Name	Scientific Name
European Bass	<i>Dicentrarchus labrax</i>
Brill	<i>Scophthalmus rhombus</i>
Atlantic Cod	<i>Gadus morhua</i>
Atlantic Salmon	<i>Salmo salar</i>
Dover Sole	<i>Solea solea</i>
Haddock	<i>Melanogrammus aeglefinus</i>
European Hake	<i>Merluccius merluccius</i>
Herring	<i>Clupea harengus</i>
Lemon Sole	<i>Microstomus kitt</i>
Atlantic horse Mackerel	<i>Trachurus trachurus</i>
Atlantic Mackerel	<i>Scomber scombrus</i>
Monkfish (White)	<i>Lophius piscatorius</i>
Monkfish (Black bellied)	<i>Lophius budegassa</i>
European Plaice	<i>Pleuronectes platessa</i>
Sand Sole	<i>Pegusa lascaris</i>
Turbot	<i>Scophthalmus maximus</i>
Blonde Ray	<i>Raja brackyura</i>
Cuckoo Ray	<i>Leucoraja naevus</i>
Shagreen Ray	<i>Leucoraja fullonica</i>
Smalleyed Ray	<i>Raja microocellata</i>
Thornback Ray	<i>Raja clavata</i>
Undulate Ray	<i>Raja undulata</i>

Long nose Skate	<i>Dipturus oxyrinchus</i>
White Skate	<i>Rostroraja alba</i>
Atlantic Halibut	<i>Hippoglossus hippoglossus</i>
Ling	<i>Molva molva</i>
Megrim	<i>Lepidorhombus whiffiagonis</i>
Saithe (Atlantic Pollock)	<i>Pollachius virens</i>
Whiting (Merling)	<i>Merlangius merlangus</i>
Witch	<i>Glyptocephalus cynoglossus</i>
Blue Skate	<i>Dipturus batis</i>
Flapper skate	<i>Dipturus intermedia</i>
Sandy Ray	<i>Leucoraja circularis</i>
Starry Ray	<i>Amblyraja radiata</i>
Angel Shark	<i>Squatina squatina</i>
Porbeagle Shark	<i>Lamna nasus</i>
Short fin Mako	<i>Isurus oxyrinchus</i>
Common Smooth hound	<i>Mustelus mustelus</i>
Spiny Dogfish	<i>Squalus acanthias</i>
Thresher Shark	<i>Alopias superciliosus</i>
Tope (School) Shark	<i>Galeorhinus galeus</i>

4.2 Species Location Identification

Information is required on population/sequence variations for any of these 41 species listed in Table A (paragraph 4.1) where available to allow for potential location identification.

4.3 Equipment and Software

MMO require the supply and delivery of one (1) Portable PCR System which works in conjunction with the Species Identification Library.

MMO also require an option to purchase a further five (5) items of Equipment during the Contract term at the pricing submitted in Annex 2 – Charges.

The Equipment will be able to:

- Establish the species of seafood, which is whole or Processed, matching on a minimum of 95% of occasions to distinguish the forty-one (41) species as detailed in Table A (in part 4.1 above).

- Establish the likely origin of the seafood as detailed in part 4.2 above.
- Allow testing away from a laboratory (likely to be a port or at sea).
- Achieve results in operational timescales to allow action to be taken in under three (3) hours, not including preparation time.
- Use sample preparation completed outside of a laboratory.
- Use testing materials that can be stored outside of a laboratory.
- Provide an output which is in a non-technical, easily viewed, accessible format which could easily be interpreted by a layman.

4.4 Consumables

- As part of this Contract, the Authority requires six (6) months' supply of the consumables required for specimen preparation and analysis. This will be sufficient to complete two hundred and forty (240) tests.

5. Delivery

- 5.1 The Species Identification Library, consumables and the Equipment are to be delivered by 26th March 2021 at the latest to the following address:

Marine Management Organisation,
Neville House
Central Riverside
Bell Street
North Shields
Tyne and Wear
NE30 1LJ

- 5.2 Deliveries shall be made within normal working hours 9am – 5pm Monday to Friday (excluding Public Holidays).
- 5.3 All freight costs, door-to-door, to be met by the Contractor.

6. Warranty

- 6.1 The Contractor shall supply, free of charge, any faulty Goods offering a replacement, unless the damage is caused by third parties or abuse or misuse whilst in use.
- 6.2 The Equipment supplied by the Contractor shall have a two (2) year warranty period from the date of Delivery. This includes all parts, labour, breakdown call-outs and servicing.

- 6.3 Following the initial warranty period, the Authority requires the option of up to a further three (3) years additional Service Cover as part of this Contract (for Equipment supplied by the Contractor).

7. Training

- 7.1 One-off, comprehensive training is required on the operation (sample preparation, DNA extraction) and maintenance of the Equipment and use of the reference library for up to five (5) MMO employees to be conducted at MMO North Shields within one (1) month of the Equipment being installed.
- 7.2 Due to current Coronavirus restrictions the training can be completed via video call or face-to-face. The Authority will supply Personal Protective Equipment (PPE) for any face-to-face training on entry into the laboratories and social distancing measures will need to be followed.

8. Additional Information

- 8.1 The contractor will ensure that APHA is aware of any communications or safety alerts applicable to the Equipment at any time.

9. Performance Management Framework

- 9.1 As part of the Authority's continuous drive to improve the performance of all Contracts, this Performance Management Framework (PMF) will be used to monitor, measure and control all aspects of the contractor's performance of contract responsibilities.
- 9.2 The purpose of the PMF is to set out the obligations on the contractor, to outline how the contractor's performance will be evaluated and to detail the sanctions for performance failure. The Contractor is responsible for the performance of any sub-contractors.
- 9.3 Key Performance Indicators (KPIs) are essential in order to align contractor performance with the requirements of the Authority and to do so in a fair and practical way. KPIs have to be realistic, measurable and achievable; they also have to be met otherwise indicating that the service is failing to deliver.
- 9.4 The proactive approach to correcting failures and addressing their cause improves the relationship and enables a partnership rather than a confrontational style of working. Its focus is on managing and improving service.
- 9.5 The Authority shall review performance against KPI's and, if appropriate, instigate meetings and work closely with the contractor to agree action plans. The Authority expects the contractor to agree and implement these plans.
- 9.6 The KPIs for this Contract are set out at Annex A.

Annex 4 – Commercially Sensitive Information

TENDERER'S COMMERCIALLY SENSITIVE INFORMATION	POTENTIAL IMPLICATION OF DISCLOSURE	DURATION OF COMMERCIALLY SENSITIVE INFORMATION
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

Annex A – Key Performance Indicators

KPI	Description	Measure	KPI Target
KPI 1 Delivery	The Species Identification Library and the Equipment is to be delivered by 26 th March 2021 at the latest.	Delivery against agreed timescales	100%
KPI 2 Quality	The Species Identification Library and the Equipment is accepted as suitable by MMO and performs to the manufacturer's specifications.	The Equipment meets the required standards as stated in the Specification of Requirements at Section 3 of this ITT.	100%
KPI 3 Training	Maximum of five (5) MMO employees, to be trained within one (1) month of Equipment delivery.	Training is provided to MMO staff, to the required standards and within the agreed timelines.	100%