

# **NATEP Awareness**

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# **Lifting Off with Technology - NATEP**



Invest £39.5 M in Aerospace Technology development

\* Including £23M government funding



Committed over 3.5 years



To create and/or safeguard jobs...

• 1,200 jobs through 100 projects



To support technology development throughout the supply chain















## About the UK civil aerospace industry

Present

The global civil aerospace industry has been growing consistently since 1970. The UK has enjoyed a healthy share of that growth based on historic investmen

# World air travel history 1970-2010\*







INTHEWORLD



The UK aerospace industry is in a leadin global market position with world-class technology and manufacturing capability in wings, engines, aircraft systems and structures. opportunities for UK serospace. Th positions UK government and inducapitalise on these opportunities and continue to grow our market share.

Future

Forecasted air traffic and increased

By 2020, global demand will require an additional 9,500 helicopters worth \$50bn

By 2020, global demand will require

27,000 large civil airliners worth \$3.2tr - 24,000 business jets worth \$600bn

- 5,900 regional aircraft worth \$215bn.

## Source: Airbus 'Delivering The Future Nation Market Forecast 2010, 2020

WHAT **WE NEED** TO DO

WORKING **GROUP** AIMS



We're here to set out what

## The work of the AGP aims technological excellence we have in the UK throug focused investment in long-term technology



The manufacturing group is identifying the key manufacturing capabilities maintain and develop its

# FINMECCANICA ADS









## The sky's the limit for the UK civil aerospace industry

As an industry, we have a heritage of which we can be proud. The AGP is taking the neccessary steps to ensure future generations enjoy the same success for years to come.



## About the Aerospace Growth Partnership (AGP)

### Who we are

The AGP is industry, government whose role is to support activity in the Aerospace, Defence, Security and Space sectors

### Our purpose

We are working in partnership a shared vision and plan for the UK aerospace industry for the next 15 years and beyond.

### Our strategy

Our strategy is to take action now to protect our capabilities, exploit emerging to beologies and obsition the industry for technologies and position the industry sustained growth for all new aircraft.

EXPLOIT

POSITION





is prepared towork collectively and with overnment to tackle barriers to growth, boost exports and grow the number of high value job





aerospace industry and the government Our aim is to secure and develop sustainable

globally competitive and technologically capable whilst providing the critical skillsets for success.









Focus on single aiste market

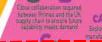








Protect #1 position through Improved















For government enquiries call

020 7091 7834 | 020 7215 1128

www.natep.org.uk

www.aerospace4growth.org.uk

# National Aerospace Technology Programme (NATEP)





Department for Business Innovation & Skills

Delivered by UK Aerospace supply chain companies
Supported by the UK's regional aerospace alliances
Programme managed by ADS, the UK national aerospace body
Funded by BIS as part of AMSCI

















# **Objectives of NATEP**

- Deliver 100 technology capabilities in the UK aerospace supply chain
- Develop the technology and business capabilities and capacities of
   250 UK aerospace supply chain companies
- Create/sustain 1200 high value jobs in the UK aerospace supply chain
- Align aerospace OEMs, mid-caps, SMEs and HEIs/Catapults within 'Lifting Off' Strategy and its Implementation
- Deploy developed technologies in global aerospace platforms by 2020/25
- Using a proven model
  - (Midlands Aerospace Alliance Aerospace Technology Exploitation Programme (ATEP) (2006-12) -- 11 successful projects funded)



# **Achieving the NATEP Objectives**

- Supply chain technology partnership of at least 2 entities
- Industrially led and involving the UK aerospace supply chain
- Pulling through new technology or process
- Showing clear benefit technically and have a clear path to exploitation
- Have wider exploitation possibilities
- Fundamental research is not suitable, TRL 4 6

£50,000 to £150,000 grant funding with duration up to 18 months

Direct financial support - to a maximum of 50% of spend.

Any arising IP will be owned by the collaborating partnership.

Aerospace Growth Partnership

## Aerospace Technology Exploitation Programme

# High temperature heat exchanger

**Lead:** HS Marston Aerospace Ltd

## **Partners:**

Advanced Chemical Etching (SME technology provider) and Rolls-Royce (end user)

## Objective

 application of new material and processes to extend operating temperature of heat exchangers by ~ 300C.

## Deliverables

- new manufacturing process specs and designs and report demonstrating higher temperature capability.
- etching of high temp corrosion free alloys demonstrated.

## Outcomes

- learned how to work with higher temp material; led to successful application in new market prototype.
- new laboratory for ACE (HF free etching of Ti) now used in major new business.















## Aerospace Technology Exploitation Programme

# **Aerospring**

Lead: G&O Springs (SME)

## **Partners:**

Alloy Wire (SME), Reliable Spring Manufacturing (SME), Institute of Spring Technology (research provider), Aero Engine Controls, BAE Systems (end users)

## Objective

- to manufacture springs in novel materials chosen by the end users, eg titanium and nickel alloys
- testing the springs
- update existing design packages with test data, allowing lower mass designs

## Deliverables

- CAD design package with new test data
- Validated test data accurate fatigue predictions for the first time
- Cross-sector applications identified
- Engineers from new customers have access to software

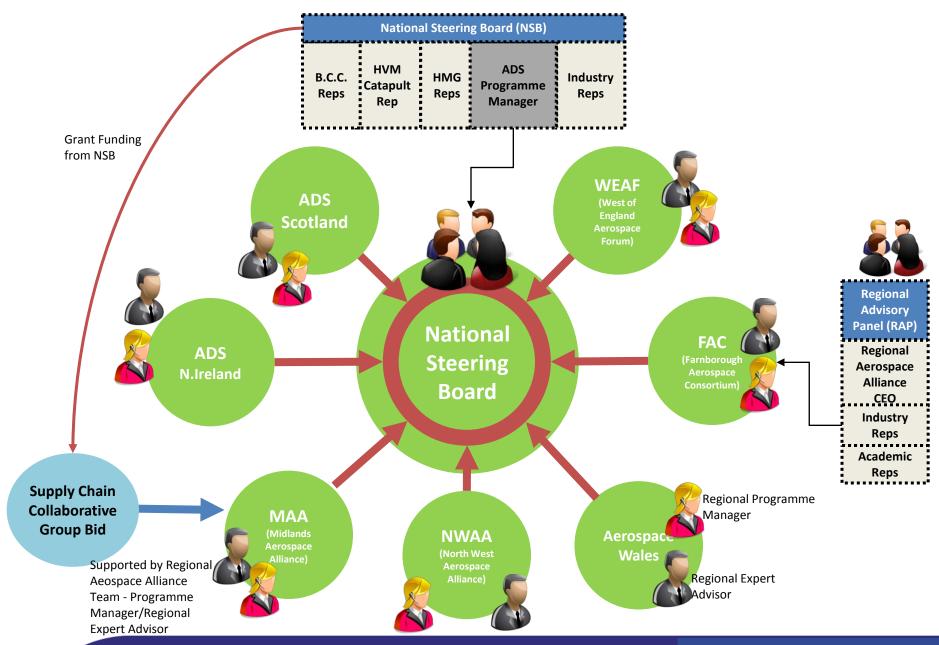








# **NATEP Governance**



## **Role of RAP Members**

- To help market the opportunity in their supply chain and network
- To provide technology speakers at promotion events
- To be end users in proposed NATEP projects
- To score and take part in decisions to recommend projects in the bid and selection process
- During project delivery to help with interventions when flagged up by the technology managers e.g. Help with project management, risk assessment etc
- To help disseminate results of projects, provide speakers at dissemination events

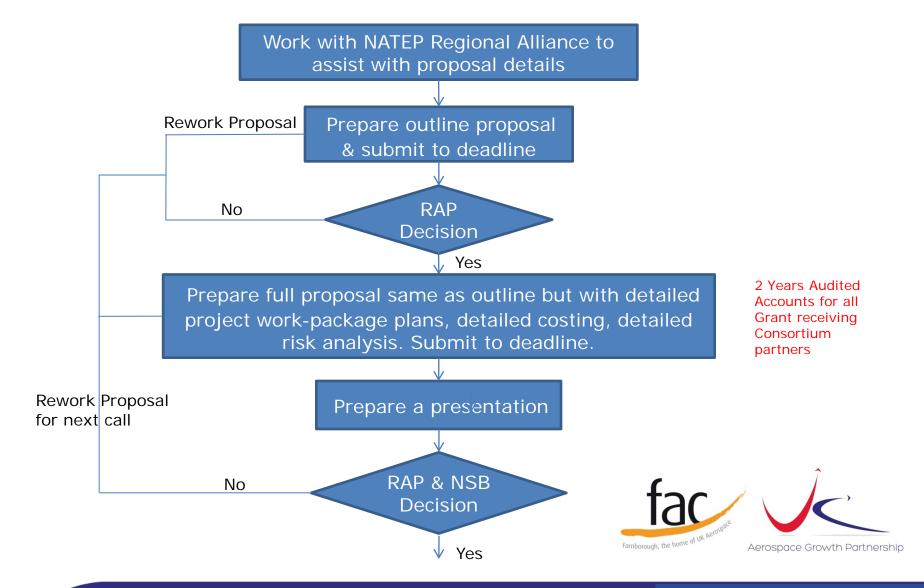


# **South-East Regional Deadlines**

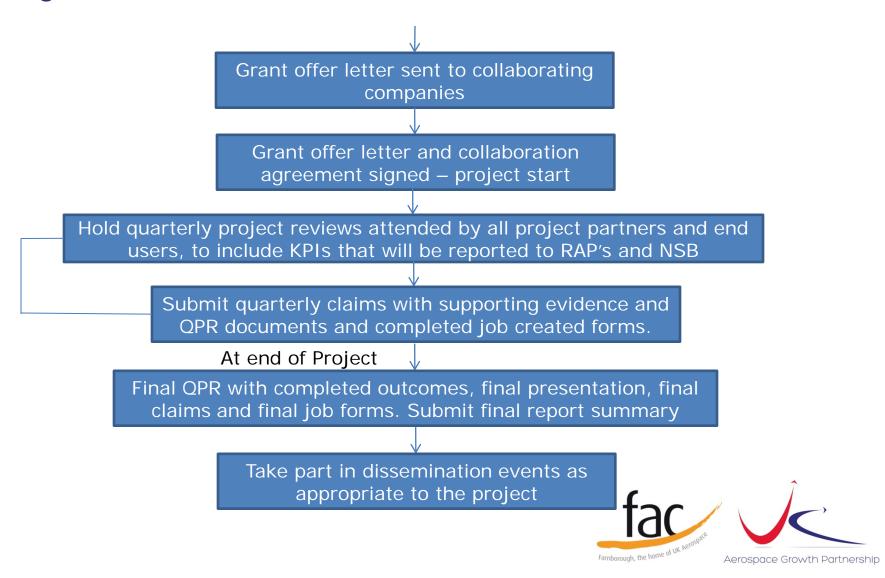
| NATEP                            | CALL 1        | CALL 2          | CALL 3         | CALL 4          | CALL 5        |
|----------------------------------|---------------|-----------------|----------------|-----------------|---------------|
|                                  |               |                 |                |                 |               |
| OUTLINE APPLICATION REQUIRED BY: |               | 20th March 2014 | 22nd Aug 2014  | Mid Nov 2014    | Mid May 2015  |
|                                  |               |                 |                |                 |               |
| RAP REVIEW:                      |               | 10th April 2014 | 11th Sept 2014 | 8th Jan 2015    | 4th June 2015 |
|                                  |               |                 |                |                 |               |
| FULL APPLICATION:                |               | 23rd May 2014   | 14th Nov 2014  | Mid Jan 2015    | Mid July 2015 |
|                                  |               |                 |                |                 |               |
| RAP PRESENTATION & REVIEW:       | 9th Jan 2014  | 12th June 2014  | 20th Nov 2014  | 12th March 2015 | 3rd Sept 2015 |
|                                  |               |                 |                |                 |               |
| NSB APPROVAL MEETING:            | 20th Jan 2014 | 30th June 2014  | 8th Dec 2014   | 13th April 2015 | 12th Oct 2015 |
|                                  |               |                 |                |                 |               |
| PROJECT LAUNCH:                  | Beg Feb 2014  | Beg Aug 2014    | Beg Jan 2015   | Beg May 2015    | Beg Nov 2015  |



# **Project Application Process**



# **Project Start and Reviews**



# Questions to address when thinking of applying for NATEP funding

- 1. What are our products?
- 2. What new ideas are we working on?
- 3. What are our customers asking for that we are unable to supply?
- 4. Which partners could we work with, designers, tooling, material suppliers, testing facilities, etc?
- 5. Which end users could we approach to support the project?
- 6. Could we manage if the project was 50% funded? i.e. Could we support the other 50% ourselves?
- 7. Does this result in a potential project?



# **NATEP Proposals – Scoring by RAP members**

## Does the project meet the criteria (Yes/No)

| Section 1       | New Technology or Process                     | Max Score |
|-----------------|---|-----------|
| Q 1.1           | The innovative technology or process involved | 10        |
| Q 1.2           | Project objective, outcome and deliverable    | 10        |
| Q 1.3           | Background and technical approach to be taken | 5         |
| Q1.4            | Why is grant support needed                   | 5         |
|                 | Sub Total Section 1                           | 30        |
| Section 2       | The Partnership                               | Max Score |
| Q 2.1 & 2.3     | Supply chain partners and roles               | 5         |
| Q 2.4           | In kind support offered                       | 5         |
|                 | Sub Total Section 2                           | 10        |
| Section 3       | Benefits and exploitation route               | Max Score |
| Q 3.2a & b      | Benefits to Partners and UK Aerospace         | 10        |
| Q 3.2c          | Jobs Created/Saved                            | 10        |
| Q 3.3, 3.4, 3.5 | Technology Strategy and exploitation route    | 10        |
| Q 3.6           | Alignment to National Strategy                | 5         |
| Q 3.7           | Cross-sector benefits                         | 5         |
|                 | Sub Total Section 3                           | 40        |
| Section 4       | Management and Costs                          | Max Score |
| Q 4.1, 4.2, 4.3 | Leader and Partners                           | 5         |
| Q 4.4           | Grant being sought                            | 5         |
| Q 4.6           | Value of in-kind support                      | 5         |
| Q 4.7           | Risks   | 5         |
|                 | Sub Total Section 4                           | 20        |
|                 | Overall Score                                 | 100       |





NATEP Project Delivery - indirect mentoring support - Technology Expert - prepared using the experience of ATEP

| Noticed office  |           |   | Support per project - number of days during 18mth project |                  |
|-----------------|-----------|---|---|------------------|
| National office |           | Type of Support   |   | half of projects |
| ry proj         | nan projs |   | every project   | man or projects  |
|                 |           | Assisting with documentation following the issue of NATEP grant offer letter, collaboration agreements                  | 3   | <u> </u>         |
| 1               |           | Training on protection of Intellectual Property   | 1   |                  |
| 1               |           | Training on state aid issues  | 1   |                  |
|                 |           | Assisting with the launch of NATEP project, arranging the meeting to best benefit the project                           | 1   |                  |
|                 |           | Getting to know the NATEP project partners, visits to facilities to assess future needs                                 | 3   |                  |
|                 |           | Assistance with preparation of the 6 Quarterly Progress Review report, arranging the meeting, materials necessary,      |   |                  |
|                 |           | maximising business opportunities   | 12  | !                |
|                 |           | Assistance with actions following the 6 QPRs, arranging visits to companies or from companies as appropriate, involving |   |                  |
|                 |           | RAP members   | 2   |                  |
|                 |           | Assistance with claim forms, evidence necessary and ensuring reporting versus plan                                      | 12  |                  |
|                 | 2         | Risk Management training  |   |                  |
| 4               |           | Introduction to a Catapult, meetings held at Catapult, possible future work in collaboration with Catapult              | 4   |                  |
|                 | 6         | Arranging meetings or visits to appropriate RTO   |   |                  |
|                 | 6         | Arranging visits or meetings with appropriate academic institutions, KTPs, student projects, research activity          |   |                  |
|                 | 6         | Arranging introductions to other companies in supply chain  |   |                  |
|                 | 2         | Arranging meetings or visits to potential customers   |   |                  |
| 3               |           | Assisting with awareness of other potential funding opportunities   | 3   |                  |
|                 | 4         | Links to companies, RTOs and academic institutions in other regions   |   |                  |
| 2               |           | Communicate national initiatives and how they might affect NATEP companies  | 2   |                  |
| 1               |           | Suggest companies actions to take part in regional and national initiatives   | 1   |                  |
|                 |           | Assistance in documentation relating to the required KPIs for the NATEP project   | 2   |                  |
|                 |           | Assistance with end of project documentation  | 2   |                  |
|                 |           | Assistance with preparing powerpoint slides etc to optimise new business opportunities                                  | F 100   |                  |
|                 |           | Arranging appropriate dissemination activities  |   |                  |
|                 |           | Representing their companies new technology at events   | 3   |                  |
| 9               |           | Technology Roadmap facilitation of 2 half day sessions  | 9   |                  |
|                 | 9         | Marketing planning, capability planning - two half day sessions   |   |                  |
|                 |           | Support with preparation of company presentation  |   |                  |
|                 | 1         | Introduction for possible membership to a KTN committee or similar  |   |                  |
| 21              | 36        |   | 61  |                  |
|                 |           | regions   | 40  |                  |
|                 |           | national office   | 21  |                  |

16

# **NATEP - Summary**

# £39.5M programme running until March 2017 Phased over five 6-monthly competitive calls

- the collaboration must involve a supply chain partnership
- technology developed must be exploitable with end user involvement – ie TRL 4 - 6
- grant, max. 50% of spend, ranging from £50k to £150k
- projects must have potential to create or safeguard jobs
- a duration of up to 18 months
- IP will be retained by the collaborating partners



# **Any Questions?**

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