



SCSWG Presentation 15 July 21 Additive Manufacturing

Mr Richard Hamber
Def SpTx Innovation Team Leader



....undertake pre-discovery work to test the feasibility of pursuing 'Additive Manufacturing (AdM) as a Service' through an Industry provider(s).



Acknowledging several related but independent internal MOD investments in AdM, mainly focused on technical demonstrators in last-mile/ deployed space.



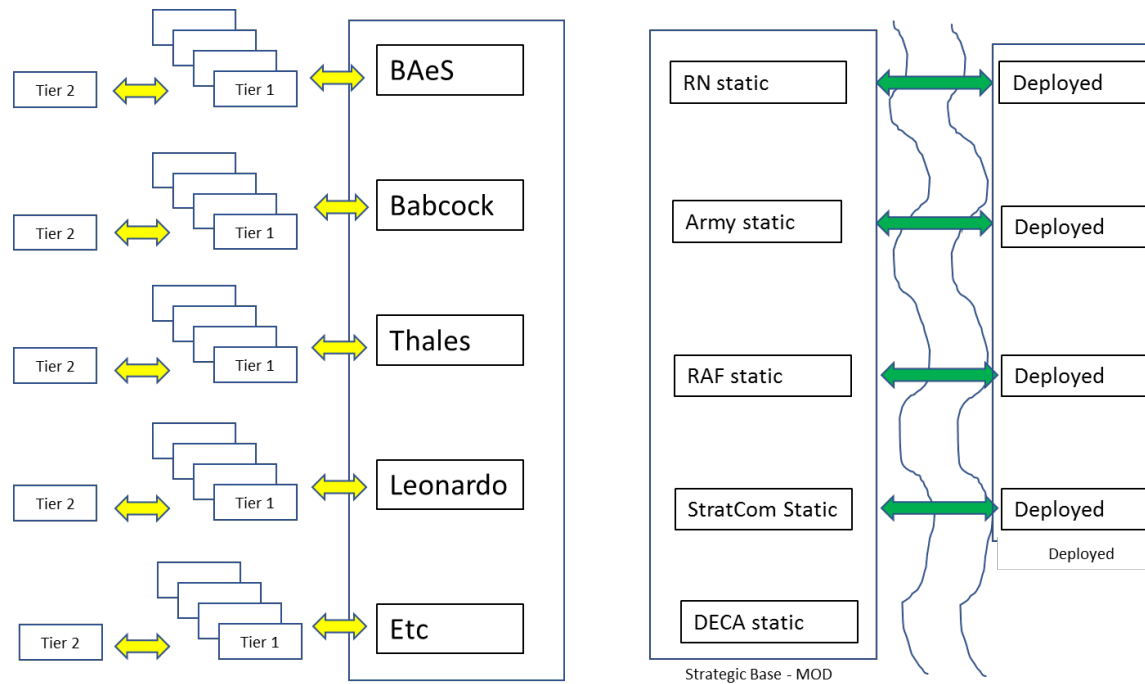
This pre-discovery work will investigate the feasibility of an AdM service provided from within the strategic base (in part to address the potential Supply Chain issues with AdM materials) while allowing the more tactical trials to continue.



The work will examine the choices available in the marketplace in respect of who should produce components in the context of a centralised strategic base capability, and establish the degree to which the model can be extended into the MOD Supply Chain, building on the work underway in the FLCs/ StratCom.

Outcome

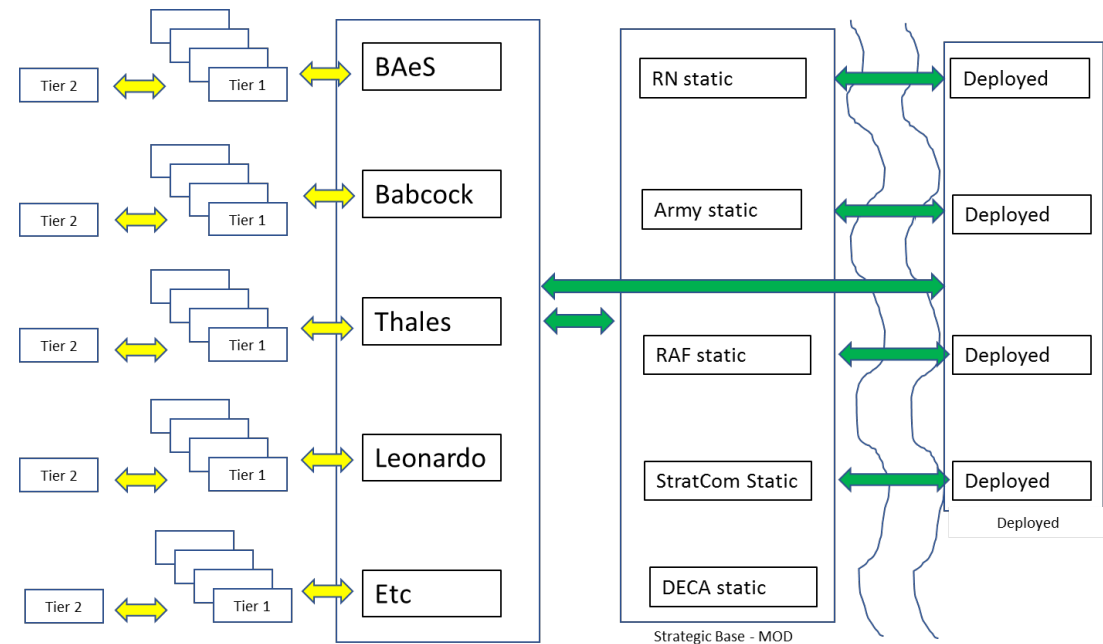
The aim of the task set upon the Supply Chain SWG is to provide input to DefSp Innovation Team Leader to inform the subsequent direction of travel



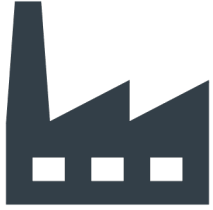
Considerations

- The maturity of Industry strategies to adopt Additive Manufacturing as a component within their supply chains, the maturity of their implementation plans; and the extent of their current capabilities and planned capabilities. Within this the degree to which they are addressing:
 - Certification
 - IPR
 - cost models
 - information architecture
 - information integrity.

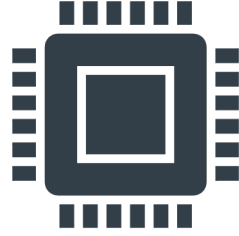
- Views on where these issues may preclude the strategic base model being extended into the MOD supply chain (to include fixed sites in MOD locations and deployed facilities).
- And what needs to be delivered to make the model extensible.



The SWG is requested to provide reports

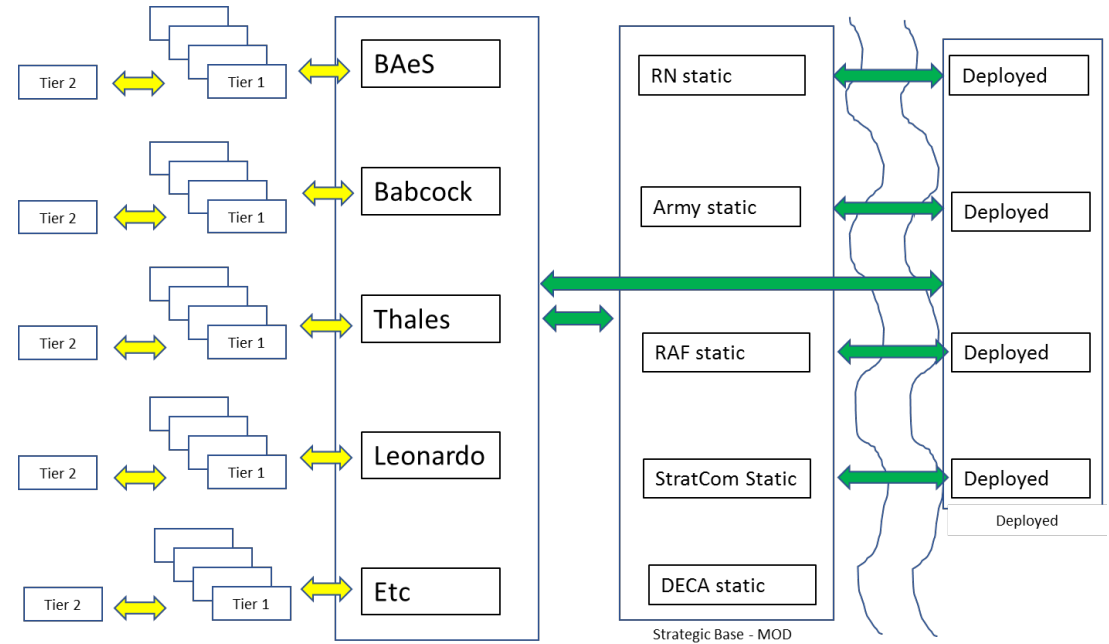


Illustrating the maturity levels of the industry participants supply chain strategies as it reflects the adoption of Additive Manufacturing technologies, the specific technologies being pursued and the range of inventory items being considered. This for both In-Service and pre-production phases, by platform or service.

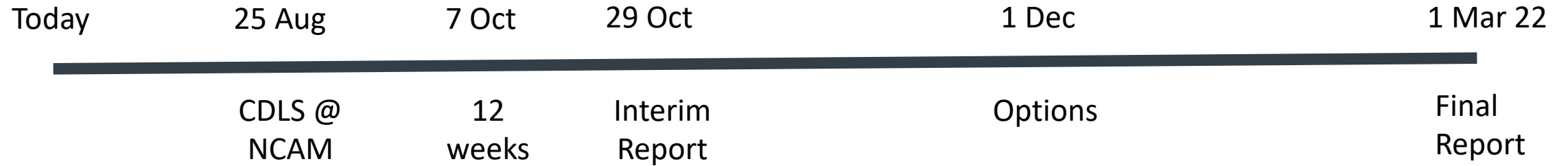


Illustrating the progress being made in addressing the perceived constraints associated with: certification, IPR, cost models, information architecture and information integrity. The report should high-light progress made in addressing these issues and views on where these issues may preclude the strategic base model being extended into the MOD supply chain (to include fixed sites in MOD locations and deployed facilities). And what needs to be delivered to make the model extensible.

- They will provide a key evidential basis to underpin the emerging strategy



Timelines





Strategic Command
Defence Support



Phil Dickens

phill.dickens@addedsscientific.com



Process



- Produce a group of willing volunteers to help
- Develop the structured interview from the questions
- Identify specific individuals in companies for the interviews
- Allocate interviewers to interviewees
- Collate the interview reports
- Produce an initial report and discuss with interviewers
- Check with interviewers any attributions to them
- Produce final report

The Questions



- Illustrate level of investment thus far in adopting Additive Manufacturing technologies within their supply chains and specific technologies and materials that they have invested in, providing also examples illustrating the range and scale of parts being produced?
- Illustrate their future supply chain strategies, and within these indicate the degree to which Additive Manufacturing is expected to complement or supersede traditional manufacturing, and whether seeking to in-source or out-source (or a mixture of both) Additive Manufacturing?
- Illustrate the degree to which Additive Manufacturing is being applied retrospectively to existing inventory and to new parts?
- Are there organisational (e.g. whether AM fits into manufacturing remit or another area), technical (e.g. access to CAD data, lack of material data) or commercial challenges which will have an impact on the use of Additive Manufacturing?
- Illustrate the progress being made with achieving certification of parts produced through Additive Manufacturing and how this is being achieved. i.e. in-house or through a 3rd party?
- Illustrate, if using 3rd party provision of Additive Manufacturing services, the issues that have needed to be addressed and also the business models that are being pursued?

Possible structure of Interview Report

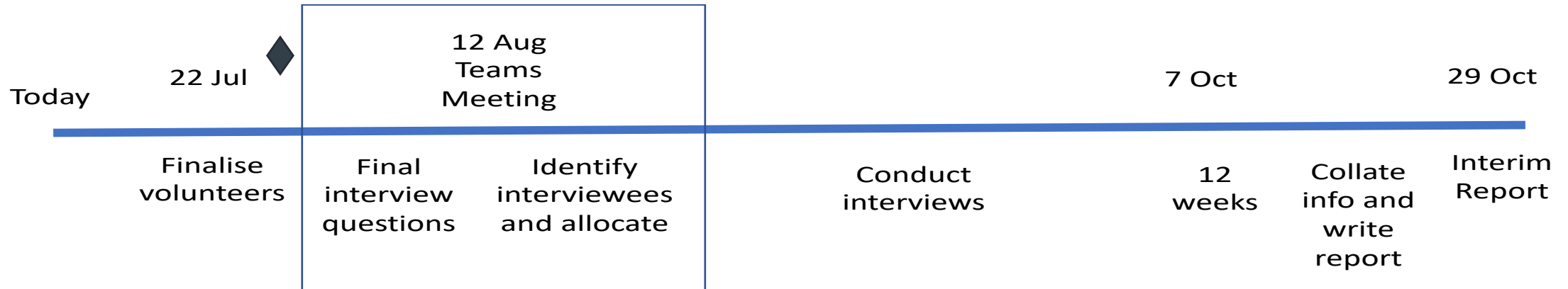


- Details of Interviewer (name, affiliation, contact details)
- Details of Interviewee (name, affiliation, contact details)
- Brief description of company (name, typical defence products, size of company, turnover)
- Brief description of expertise in Additive Manufacturing
 - Applications (types of parts, size, criticality, new parts/spares)
 - Approximate value of investment within the company
 - Extent of use within their supply chain with examples
 - AM processes and materials used
- Description of their AM supply chain strategy
- Fit of AM within manufacturing (e.g. separate facility or integrated within a manufacturing unit, in-house or out-sourced, both)
- Organisational (e.g. whether AM fits into manufacturing remit or another area), technical (e.g. access to CAD data, lack of material data) or commercial challenges which will impact on the use of AM.
- Progress with certification of AM parts (in-house or through a 3rd party)
- If using 3rd party provision of Additive Manufacturing services, the issues that have needed to be addressed and also the business models that are being pursued.

Get Involved



Express your interest in joining the task group email phill.dickens@addedsscientific.com



Task Group MS Teams Meeting:

1400-1500hrs Wed 28 July 21. [Join the meeting](#)

Then touch point progress meeting repeating weekly through the task

Output will be briefed to all at next SWG