

INDUSTRIAL ADDITIVE MANUFACTURING HACKATHON CHALLENGE

The Alberta Additive Manufacturing Network (AAMN), the Manufacturing & Export Enhancement Cluster (MEE) and Red Deer Polytechnic's Centre for Innovation in Manufacturing (CIM-TAC) are partnering to host an industrial additive manufacturing hackathon challenge.

What is the IAM hackathon challenge?

In this industry-focused design hackathon, teams of engineers will design their selected project for additive manufacturing in context of:

- Design
- Simulation
- Materials selection
- Post processing
- Quality control

The teams' designs will be fabricated and tested, the business case for the additive manufacturing design changes will be developed, and the knowledge gained from the projects will be shared publicly. Participants can register as a team or be mixed with engineers from other companies.

Hosted by:



With support from:



Who is it for?

Are you an **engineer** wanting to learn about design for additive manufacturing? Can you spend 3-8 hours per week over a 2 month period to learn a new skill?

Register as a participant by FEBRUARY 23 to:

- Gain exposure to digital tools in design, engineering, AM, etc. (from ideation to testing)
- Develop your understanding around the concept of design for AM
- Receive hands-on experience with the above
- Connect with industry peers and develop collaborative relationships
- Raise your industry profile through a project presentation at SmartMTX May 15-16, 2024
- Potentially develop a relationship with the end-user
- Earn APEGA PD credits

Are you a **company** wanting to take advantage of additive manufacturing, but don't have the time or resources? Do you have a problem that could be solved with the re-engineering of complex parts with a part count reduction, or by having replacement components fabricated with a faster turnaround to reduce production downtime?

Submit a project by FEBRUARY 23 to:

- Receive a reduced or potentially free solution development cost
- Support local industry and develop digital skills and AM expertise in local industry
- Better solution / value added vs. traditionally designed / developed / existing solution
- Raise your ESG profile with clients and the public

What does it cost?

The cost of participants' time is covered in-kind by the participating company. Teams will meet regularly to progress their design and manufacturing project and it is suggested that companies allow participants to allocate 3-8 hours per week of their time towards the project.

Manufacturing costs and access to software, including training, is covered by the hackathon project committee. Each team will provide a manufacturing budget to the committee so that funding can be appropriately allocated.

What are the timelines?

An info session will be held in February 2024 to give participants information on what to expect and provide companies with strategies for selecting a project. Registration deadline for participants and projects is February 23, 2024 and the hackathon will kickoff at the end of that month. Total duration of project work will be no more than 2 months, including printing of iterations for fit and function. Final designs are due by April 30, 2024 and will be fabricated in time for teams to showcase their work at the SmartMTX conference May 15 -16, 2024. In addition to the physical object, a case study report will be the deliverable for each team.

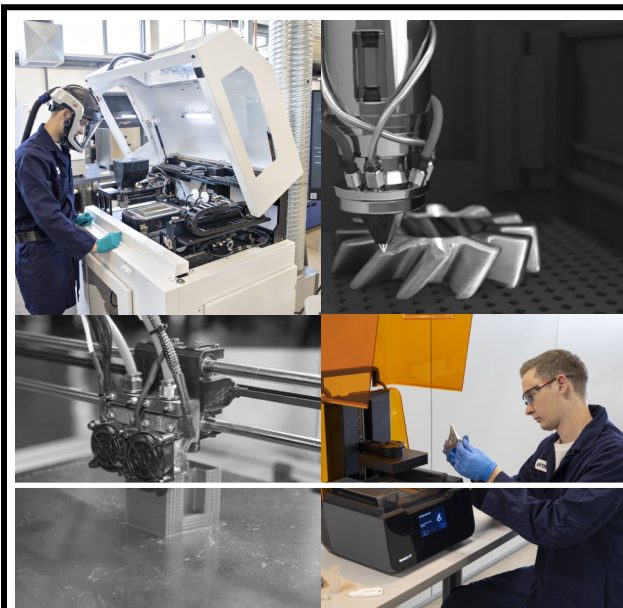
The hackathon committee will oversee the progress of the projects to ensure that milestones are met, including ideation, engineering and design, simulation, materials selection, manufacturing, post processing and validation.

What are the benefits of taking part in the hackathon?

The project outcome will result in technical and business knowledge sharing across companies, as well as the ability for each team members' individual company to internalize the learning. Teams will be trained on and have access to appropriate design and simulation software for the duration of the project, which will involve building partnerships with various software providers. The full suite of Altair software products will be available to all participants.

Parent companies who participate in the hackathon, and more importantly in the sharing of information within their companies, will benefit greatly. Depending on how the company applies the knowledge to their business, a transformation could occur and be realized in new revenue or an increase in both direct and indirect jobs.

Companies will gain the understanding and capacity to hire highly qualified people in the areas of design and manufacturing for additive manufacturing. Furthermore, the partnerships developed between team members in the hackathon project may yield further financial gains in terms of enhanced productivity.



How to Get Involved

If you want to submit a project or register as a participant, contact the hackathon committee by email:

info@albertaamn.com

**Registration Deadline:
February 23, 2024**