

# National Strategy for Additive Manufacturing

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In news

Recently, Shri Ashwini Vaishnaw, Union Minister of Electronics & Information Technology, Communications & Railways and Shri Rajeev Chandrasekhar, Minister of State for Electronics & Information Technology and Skill Development and Entrepreneurship announced “National Strategy on Additive Manufacturing”.

## About National Strategy on Additive manufacturing (AM) –

- The National Strategy on Additive manufacturing (AM) will aim to create a conducive ecosystem for design, development, and deployment, and to overcome technical and economic barriers for Global AM leaders to set up their operations with supporting ancillaries in India.
- The mission is to ensure creation of a sustainable ecosystem for the AM industry to compete globally, encourage AM transformation and driving capabilities in the country for developing core competencies, and position India as a global Innovation and Research hub for AM.
- It aims to ensure AM manufactured end-user functional components for domestic and export markets, and promote creation of Indian IPR.
- The Ministry of Electronics and Information Technology (MeitY) **aims to increase India’s share in global additive manufacturing to 5 per cent by 2025, with hopes that it could likely add \$ 1 billion to the GDP** by that time.
- As per the Strategy, by 2025, India will aim to achieve

certain targets such as 50 India specific technologies for material, machine and software, 100 new startups for additive manufacturing, 500 new products and jobs to at least 1 lakh new skilled workers.

- An apex body which has subject matter experts and leaders from local and global industries could be established to lead the mission.

### What is additive manufacturing?

- Additive manufacturing (**popularly known as 3D printing**) refers to the construction of a three-dimensional object from a digital 3D model by adding materials layer by layer.
- It uses computer-aided designing to make prototypes or working models of objects by laying down successive layers of materials such as plastic, resin, thermoplastic, metal, fiber or ceramic.
- With the help of software, the model to be printed is first developed by the computer, which then gives instructions to the 3D printer.
- These are built layer by layer which is in contrast to traditional manufacturing that often requires machining or other techniques to remove surplus material.

### Key challenges to additive manufacturing

- High cost of equipment and material due to dependence on import
- Lack of formal industry standards
- Lack of skilled manpower, and
- Uncertainty in the regulatory and legal framework