

# LRC Initiates Additive Manufacturing for Lighting Consortium

Additive manufacturing, also known as 3D printing, is poised to transform industries by increasing flexibility, speed, efficiency, responsiveness, and power across value chains and entire ecosystems. The value for lighting includes: designing custom fixtures that match the architectural features of a building and then “printing” them on site and on demand; reduced need to stock many type of parts; and custom designs for subcomponents such as heat sinks.

The LRC is creating a shared vision for the future of lighting practice. Key stakeholders are coming together to develop a roadmap for transforming the industry to provide custom lighting fixtures, on-site and on-demand, that will elevate the appearance, value, and experience of the built environment. The goal of the **Additive Manufacturing for Lighting Consortium**, an alliance of researchers and lighting, printer, and material manufacturers, is to collectively understand the state of the art of additive manufacturing, and in particular its impact on the solid-state lighting, building, and construction industries. The consortium’s collaborative process will seek major transformation toward custom, value-added lighting fixtures and enable all participants to be proactive and seize the opportunities to shape the future of lighting.



## Consortium Activities for 2019

In its first year, the consortium selected three projects: a market assessment, an information resource website, and pilot research to assess the additive manufacturing industry’s ability to cater to the lighting fixture industry’s needs. The consortium will investigate additively manufactured, LED-based lighting fixture components, including heat sink, optical lens and reflector, and mechanical holder assembly. These 3D-printed components will be characterized at the LRC and benchmarked against similar components manufactured using traditional processes, along with information about life-cycle cost, elimination or changes in manufacturing and assembling processes, and environmental impact.

New members are invited to help shape the group’s goals and research. For details on membership, contact N. Narendran, [narenn2@rpi.edu](mailto:narenn2@rpi.edu).

## For More Information

- *Consortium website:* <https://www.lrc.rpi.edu/programs/solidstate/3DConsortium.asp>
- *3D printing research:* <https://www.lrc.rpi.edu/programs/solidstate/3DPrinting.asp>

## Consortium Members



Lighting  
Research Center