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Achieving sustainment: from daily operations to long-term strategic planning

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Particle accelerator facilities support a wide array of applications and vary greatly in type, purpose, size, construction cost, and both the sources and levels of operational funding. While the lifespan of each accelerator is shaped by a range of technical and organizational factors, many continue to operate well beyond their originally projected lifetimes. Sustaining long-term operations requires organizations to bridge the gap between the immediate demands of daily activities and broader strategic goals. This includes aligning short-term actions with long-term objectives, fostering a culture of continuous improvement, and implementing a clear, well-communicated strategic plan. Although each facility faces its own unique challenges, this article offers an initial framework for supporting operational sustainability. It also seeks to inspire facilities to define and pursue their own paths toward lasting success in beam delivery—while encouraging collaboration and knowledge exchange across the accelerator community. The framework presented here draws on ongoing efforts within the Accelerator Operations & Technology Division, which oversees the operation and maintenance of the Los Alamos Neutron Science Center (LANSCE) accelerator and is further illustrated through examples from Control and Instrumentation systems.

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