The Canadarm is a Canadian invention created by Canadian engineers invited by NASA to participate in the creation of a new project to be installed in the space shuttles. In 1975, NASA and the NRC signed a declaration stating that Canada would oversee the creation of the arm, making it a Canadian invention. Due to previous success, it was determined that a company known as DSMA Atcon would oversee the creation of the arm. The original motivation behind the arm was a need to manipulate large pieces of technology in space and perform this task with precision.

After the moon landing in 1969, NASA had decided to create an orbiting space shuttle with the purpose of carrying payloads to space. The Canadarm was developed with this space shuttle in mind, fulfilling the requirement that the space shuttle must be able to manipulate its large payloads in space. The arm was designed to have 3 joints to mimic the human arm (shoulder, elbow and wrist). On top of this there were many requirements that would have to be met in order for the aram to operate in space. These included being rigid enough to manipulate the payloads with ease and having an outer layer to protect the inner arm from the harsh conditions of space.

The Canadarm was so widely successful that in 2002 Canada and the CSA were contracted to create a second arm denoted as the Canadarm2. This would be a more flexible and lighter version of the original Canadarm. Canadarm2 would be up to date with modern engineering technologies that weren't available at the time of the creation of the original Canadarm. Canadarm2 was significantly longer than the original Canarm, spanning the entire length of the Space Station.

The Canadarm was debatable one of the more important accomplishments in space engineering. Due to its versatility and wide range of applications, it has been well used over the years it has been deployed. Being utilized in over 90 operations during its lifespan it is clear that the Canadarm is a keystone in Canadian engineering. In 2011, Canarm was retired along with NASA’s use of the Space Shuttle. Arms are now on display in Ottawa, ON and The Johnson Space Center in Houston.

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