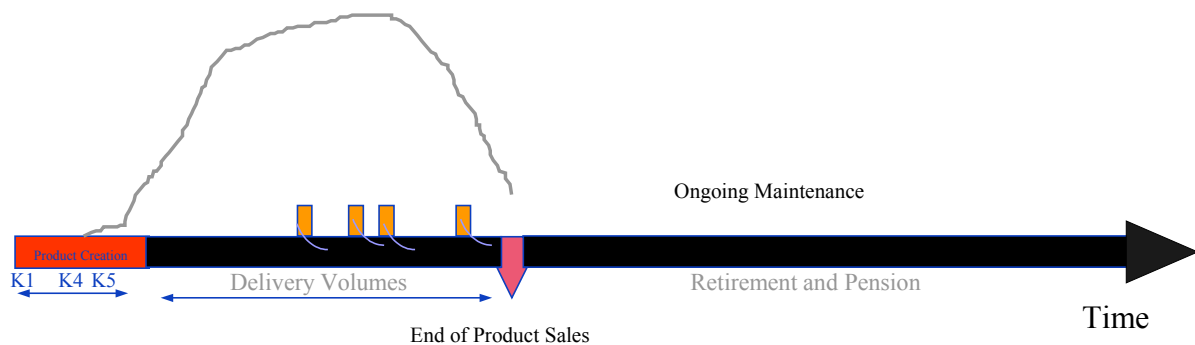


Long Term Support of Customer Equipment

Your equipment has been designed for use in building systems, where long lifetimes are expected, and are the norm. Robust equipment designs, supported by replacement parts from KONE Spares, and your maintenance programs, ensure that installed systems will continue to operate reliably for many years. KONE Spares understands and supports Life Cycle Management of all equipment designs.

Life Cycle Management

Life Cycle Management is based on the understanding that products must be managed through several stages of their life as they evolve. These stages are product creation, product healthcare, product retirement, and product pensioning, as defined within KONE Spares Operations.



Equipment Evolution and Support

Through the Life Cycle management processes it is understood that specific equipment types and components will evolve over time. This is due to ever changing technology, parts availability, manufacturing technology, and innovation. However, the intent of the LCM process is to ensure that all equipment is supported properly in customer sites, for the respectable lifetime of that equipment. In order to do this LCM engineering teams are responsible for maintaining component designs at replacement parts levels during all phases of the Lifecycle process. This ensures that KONE Spares customers will continue to receive genuine OEM replacement parts long after the systems they are part of are no longer manufactured.

Product Lifetimes and Obsolescence

One of the issues to be resolved in maintaining support of a product is how long should support be given. Generally, KONE Spares customers expect viable equipment operation for

as many as 25 years from original manufacture date, before modernization. However, there are many owners who wish to maintain their equipment for even longer periods of time. Our Life Cycle Management group strives to provide this viability in the following way.

Current replacement components will be manufactured by KONE Spares as long as all sub components are available. LCM teams may re-engineer a component if it becomes economically cost prohibitive to continue the current supply. This may be due to vendor changes in supply, or a problem in maintaining continued manufacturing support.

The main difficulty with electrical and electronic component parts is that they typically have life cycles that are much less than elevator controller lifecycles. In order to maintain service supply of boards, etc., KONE Spares LCM recognizes the need to provide engineering support to redesign component parts as time passes. This requires planning, and attention to notifications made by vendors regarding obsolescence of components used on assemblies. At some time it may require the reengineering of a complete replacement module.

Despite these efforts, at some point in time certain components can no longer be economically manufactured, and will become unavailable. KONE Spares will try to give customers a 3 year notification of this approaching Obsolescence if possible. However, this is not always possible.

Special Considerations

Software Support

Software support must be maintained for products for a defined period of time after the product is no longer manufactured. This is typically application software for controllers. Firmware does not require changing, so will not require support after product obsolescence. The following policy will be followed by Spares LCM.

- Firmware operational changes to boards will not be made after products are retired from manufacturing.
- Firmware files must be maintained as part of the engineering file system to allow reproduction of the firmware file if needed.
- The ability to make changes to software operational features (like Fire Service) will be maintained for 7 years after product retirement.
- The current operating software for all equipment will be archived after the 7 years of active support, so that it may be duplicated after that time, if required.