Cost Efficient Production of Radiation Protective Germents

Background
Radiation protective garments are often used by the surgical staff during surgical procedures. If the surgery require X-ray imaging to navigate inside the patient, it is necessary for the staff to protect themselves from scatter radiation as the accumulated dose may cause great harm to the body. Radiation garments are heavy (5-8 kg) and uncomfortable, which are drawbacks for a person that often uses the product for a full day. Ten Medical Design (10MD) has developed a radiation protective textile, which is breathable and comfortable for the wearer in order to enable full focus on the surgical procedure.

Scope
10MD has recently established a production line for manufacturing of radiation protective garments. The process includes extrusion, coating, winding, weaving and assembly, all steps operated by business partners in a value chain.

A new production line is currently under development, which will improve cost as well as throughput significantly.

The cost effectiveness of the current production has room for improvement and the diploma work should focus on analyzing the product cost of the existing value chain as well as the line in development. The work may also include an analysis of cost drivers and bottlenecks in production and potential solutions.

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