



LIFE CYCLE ASSESSMENT

BLUE WRAP VERSUS HARD CASES

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HEARRT Midwest
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WASTE MANAGEMENT HIERARCHY



U.S. Environmental Protection Agency

REUSABLE STERILIZATION CASES

- Reusable sterilization “hard” cases vs. disposable blue sterilization wrap
- Life cycle analysis & study completed in 2012
- Partnership:
 - Minnesota Technical Assistance Program
 - University of Minnesota
 - Environmental Protection Agency (EPA) Source Reduction Assistance Grant Program (EPA Region 5)
- Special thanks to Keir Stiegler (UMN), Jason Hill (UMN), Laura Babcock (MnTAP), A.J. Van den Berghe (MnTAP)
- Report: [Reducing Solid Waste in Surgical Centers by Replacing Blue Wrap](#)



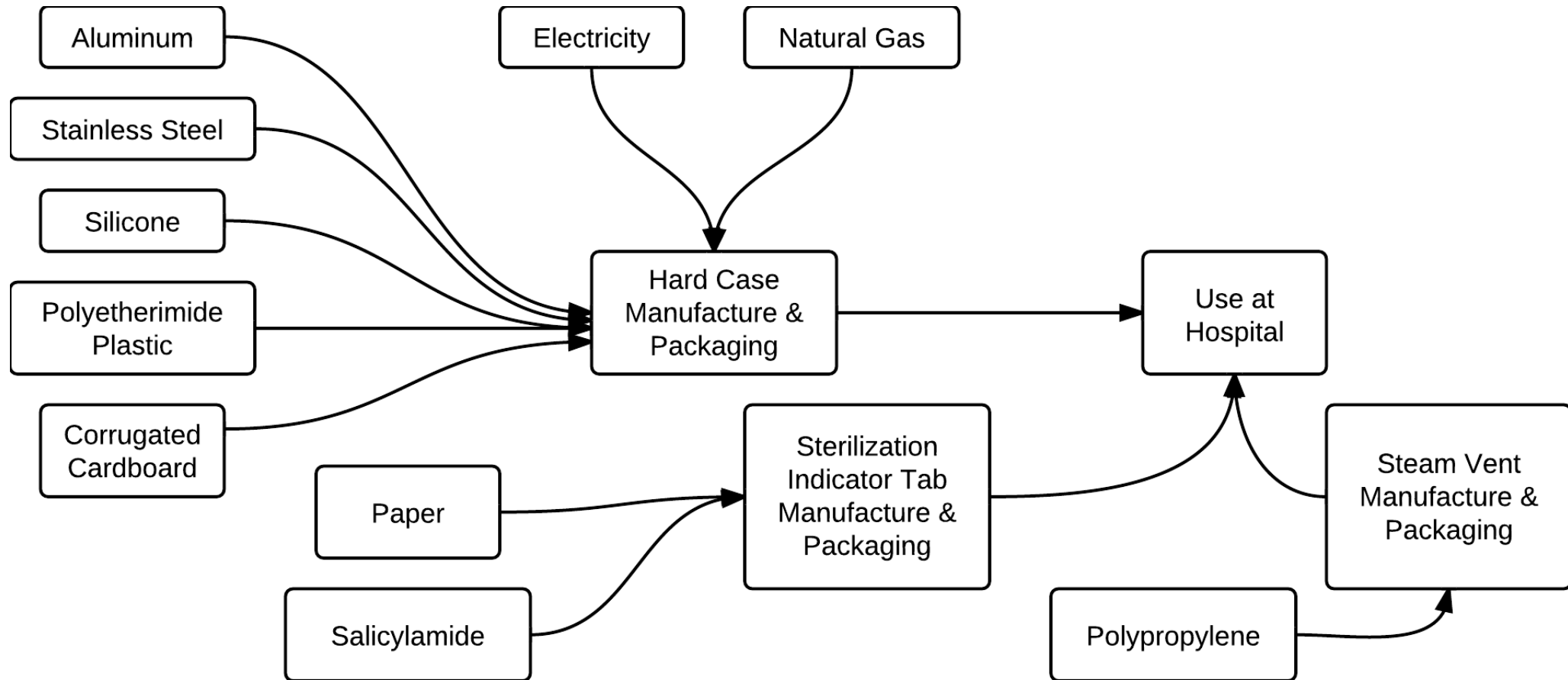
LIFE CYCLE ASSESSMENT OVERVIEW

HARD CASES VS. BLUE WRAP



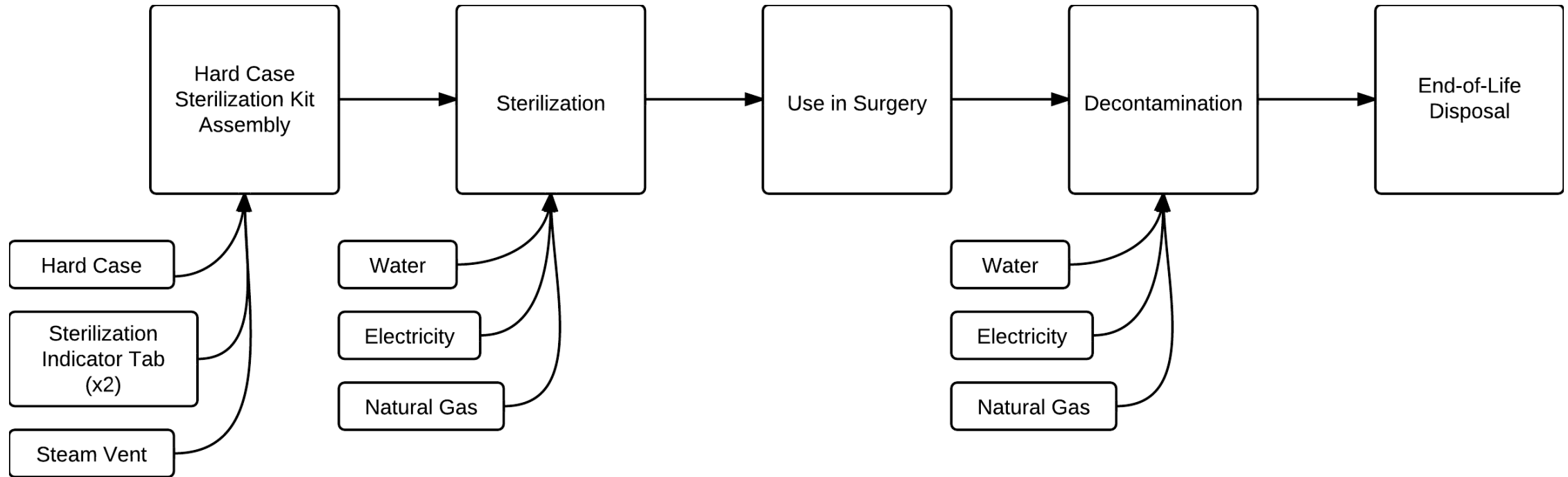
Source: Minnesota Technical Assistance Program

HARD CASE MANUFACTURING



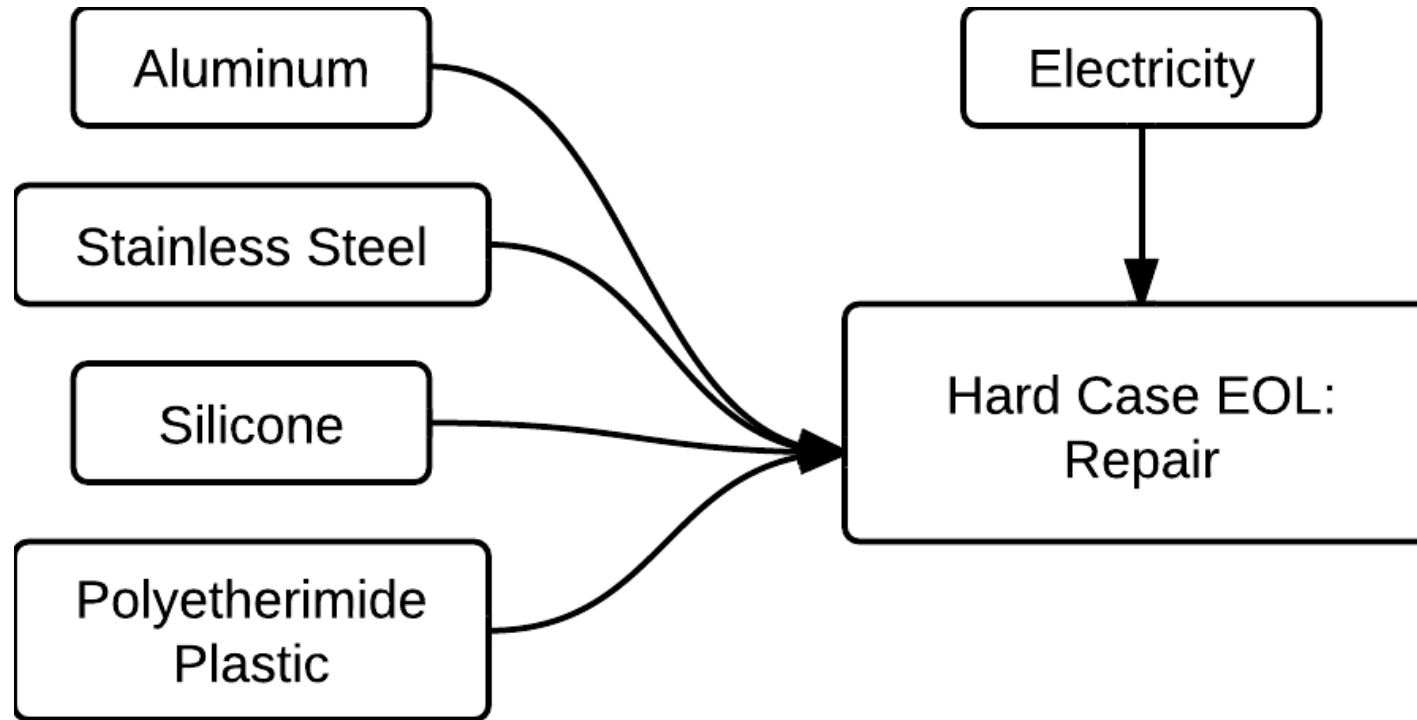
Source: University of Minnesota, Minnesota Technical Assistance Program

HARD CASE USE



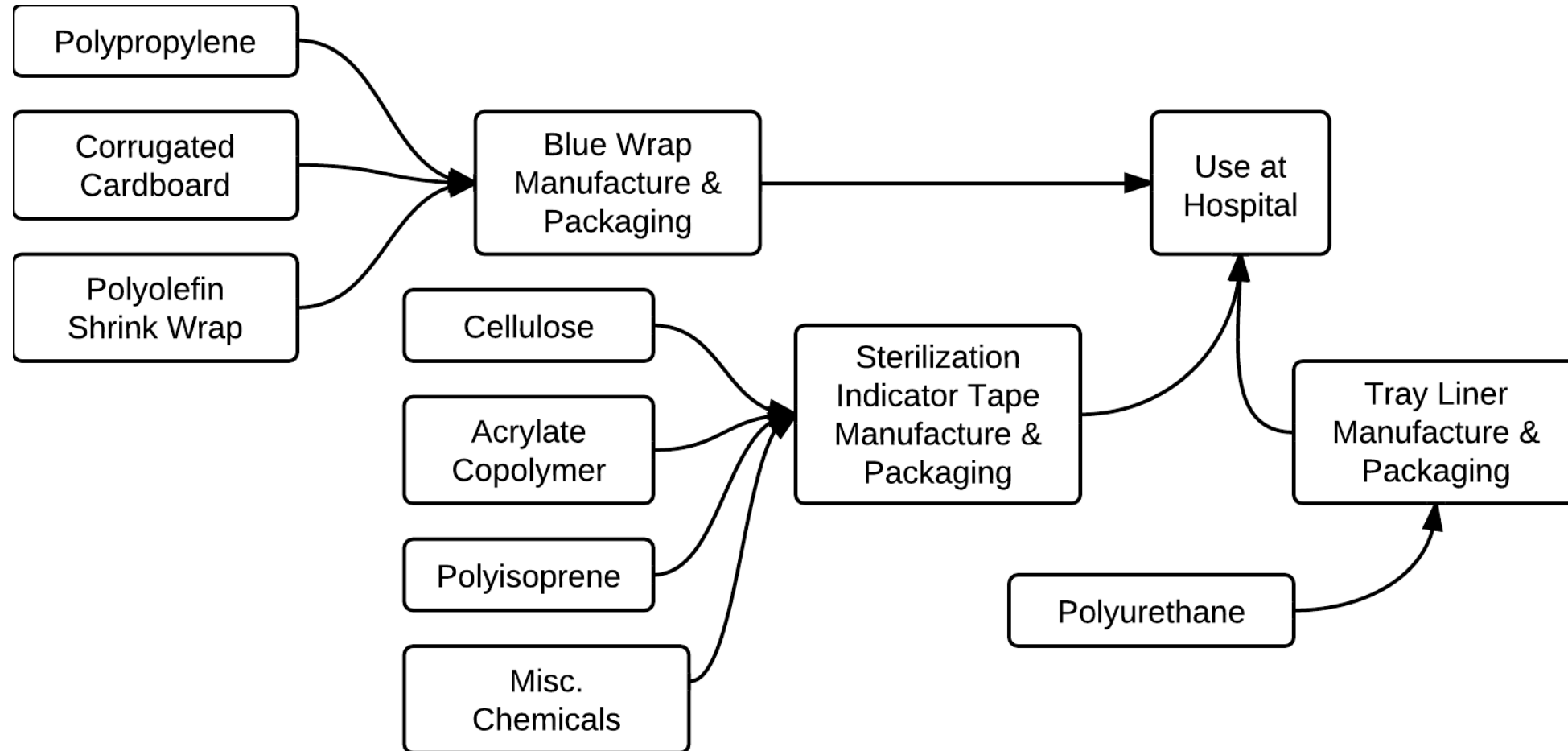
Source: University of Minnesota, Minnesota Technical Assistance Program

HARD CASE END OF LIFE: REPAIR



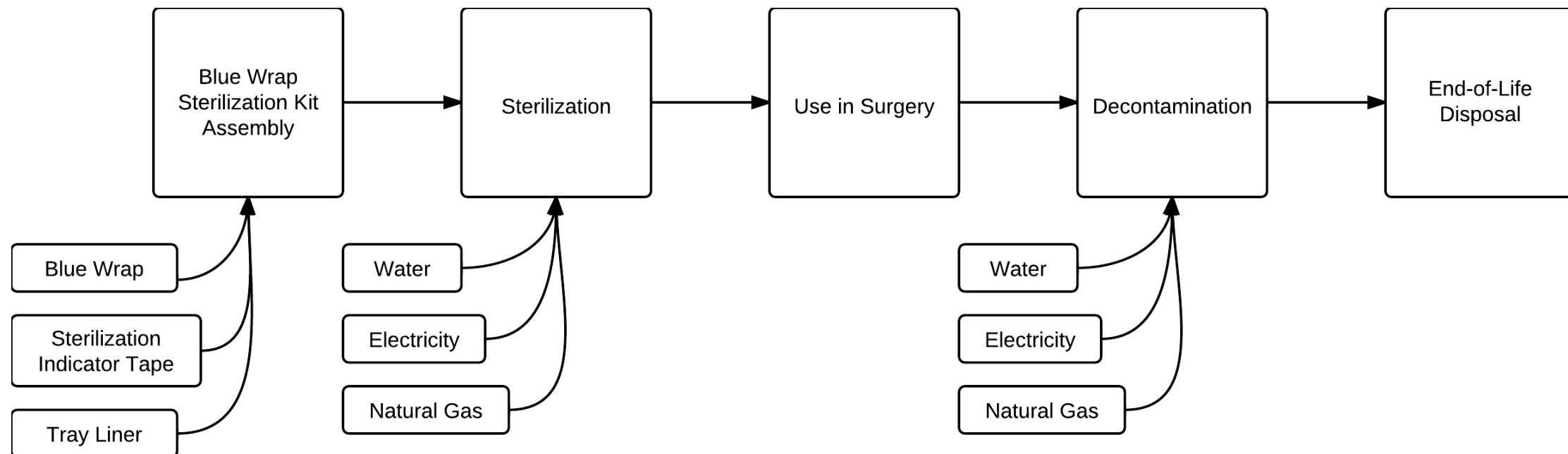
Source: University of Minnesota, Minnesota Technical Assistance Program

BLUE WRAP MANUFACTURING



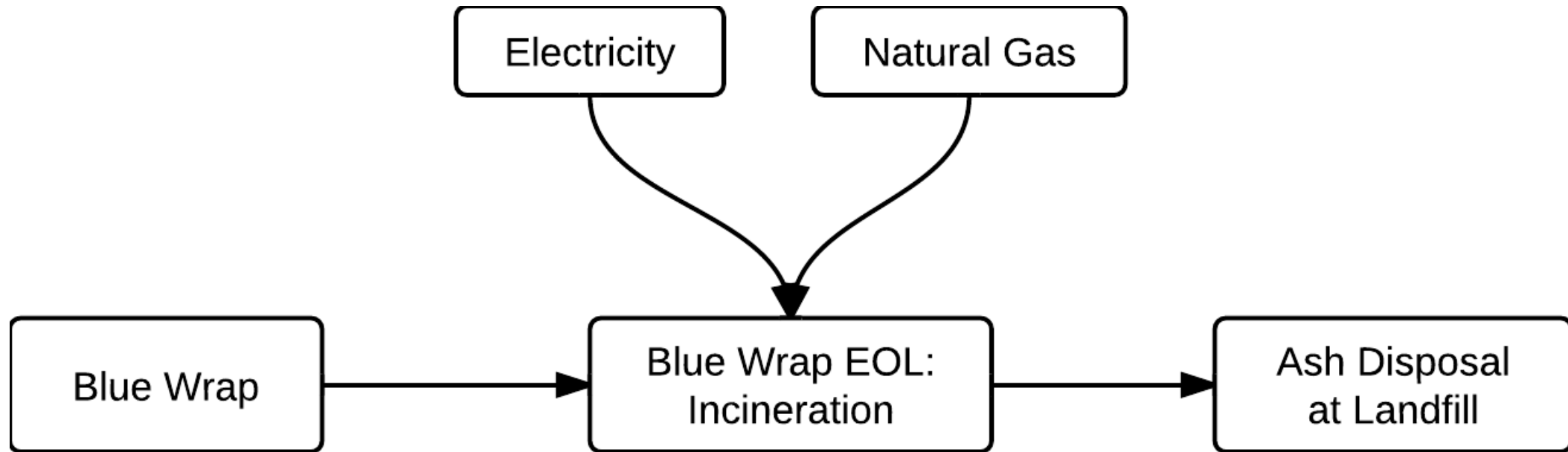
Source: University of Minnesota, Minnesota Technical Assistance Program

BLUE WRAP USE



Source: University of Minnesota, Minnesota Technical Assistance Program

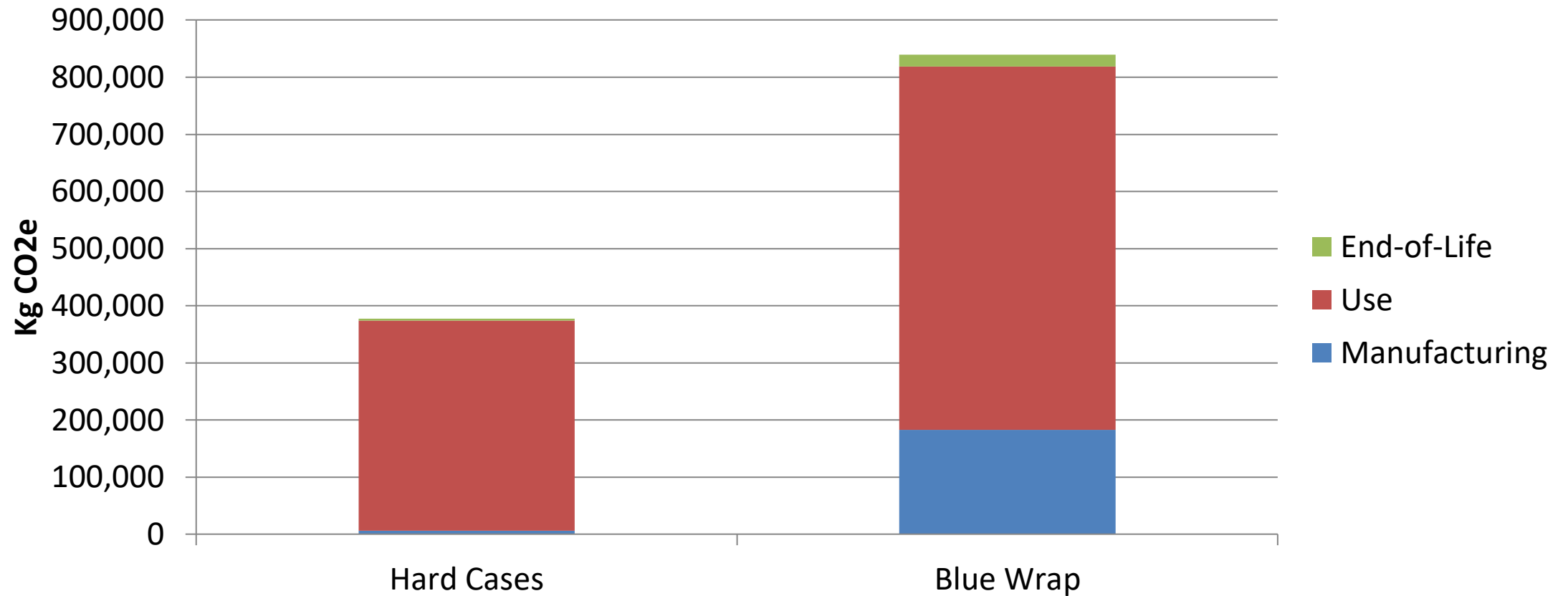
BLUE WRAP END OF LIFE: INCINERATION



Source: University of Minnesota, Minnesota Technical Assistance Program

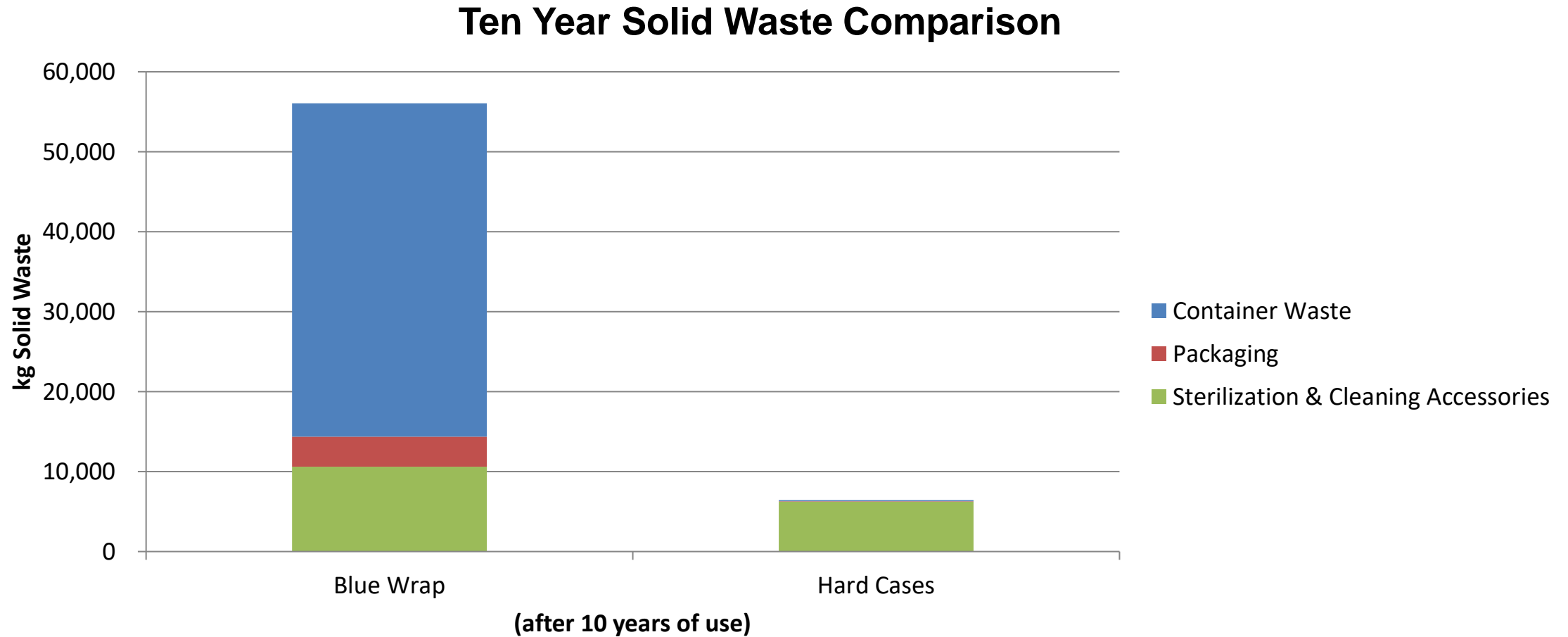
HARD CASES VS. BLUE WRAP

Ten Year Total Emission Levels with Breakdown by Life Cycle Phase



Source: University of Minnesota, Minnesota Technical Assistance Program

HARD CASES VS. BLUE WRAP



Source: University of Minnesota, Minnesota Technical Assistance Program

OTHER OBSERVATIONS

Blue Wrap

- Generally, requires more time
 - Inspect for damage
 - ~1.5x to wrap vs. hard case
- More susceptible to wet load
- Still needed for some surgical instruments that won't fit in a hard case

Hard Case

- Saves time
- Reduces need for disposable blue wrap
- Reduces unnecessary reprocessing
- Requires additional cleaning step
- Repair system required
- Space challenges



BLUE WRAP RECYCLING

- 37.64 tons of blue wrap recycled (2022)
- [Halyard's Blue Renew program](#)



How Blue Renew Works



Source: Blue Renew



THANK YOU!

