NS is preparing the refurbishment of 20 years old rolling stock. The requirements for this refurbishment are:

**OPERATION:** Intercity instead of commuter (configuration of train sets, comfort).

**COMFORT:** Improvement of comfort (air systems, less seats, more space).

**ENVIRONMENT:** 5% reduction of energy consumption.

**ATTRACTIVENESS:** New design for exterior & interior (dedicated for different customer types).

Average yearly consumption per train set: 3084 kWh (IC operation and 275,000 km/yr);