



DFMA Case Studies in Supplier Costing for Low Volume Medical Devices

FRED JOHNSON - ORTHO CLINICAL DIAGNOSTICS

Presented by:

Brian Rapoza - Boothroyd Dewhurst



Ortho Clinical Diagnostics who we are

We are a global leader of in vitro
diagnostics serving the global
clinical laboratory and
immunohematology communities.

Ortho Clinical Diagnostics at a glance

- ▶ 75 years in this business
- ▶ Customers in 120 different countries
- ▶ 250 different products
- ▶ 4200 employees worldwide
- ▶ \$1.7 billion in annual revenue
- ▶ Former business unit of Johnson & Johnson
- ▶ Recently became independent

Ortho Clinical Diagnostics

two types of products

Non disposable machinery

- ▶ Made in low volumes
- ▶ Expensive to produce

Disposable support products

- ▶ Made in very high volumes
- ▶ Less expensive to produce

Costing tools considered

aPriori

- ▶ Alignment procedure biases results
- ▶ Not useful for this type of work

DFMA

- ▶ Previous experience with DFMA
- ▶ Saved millions at other companies

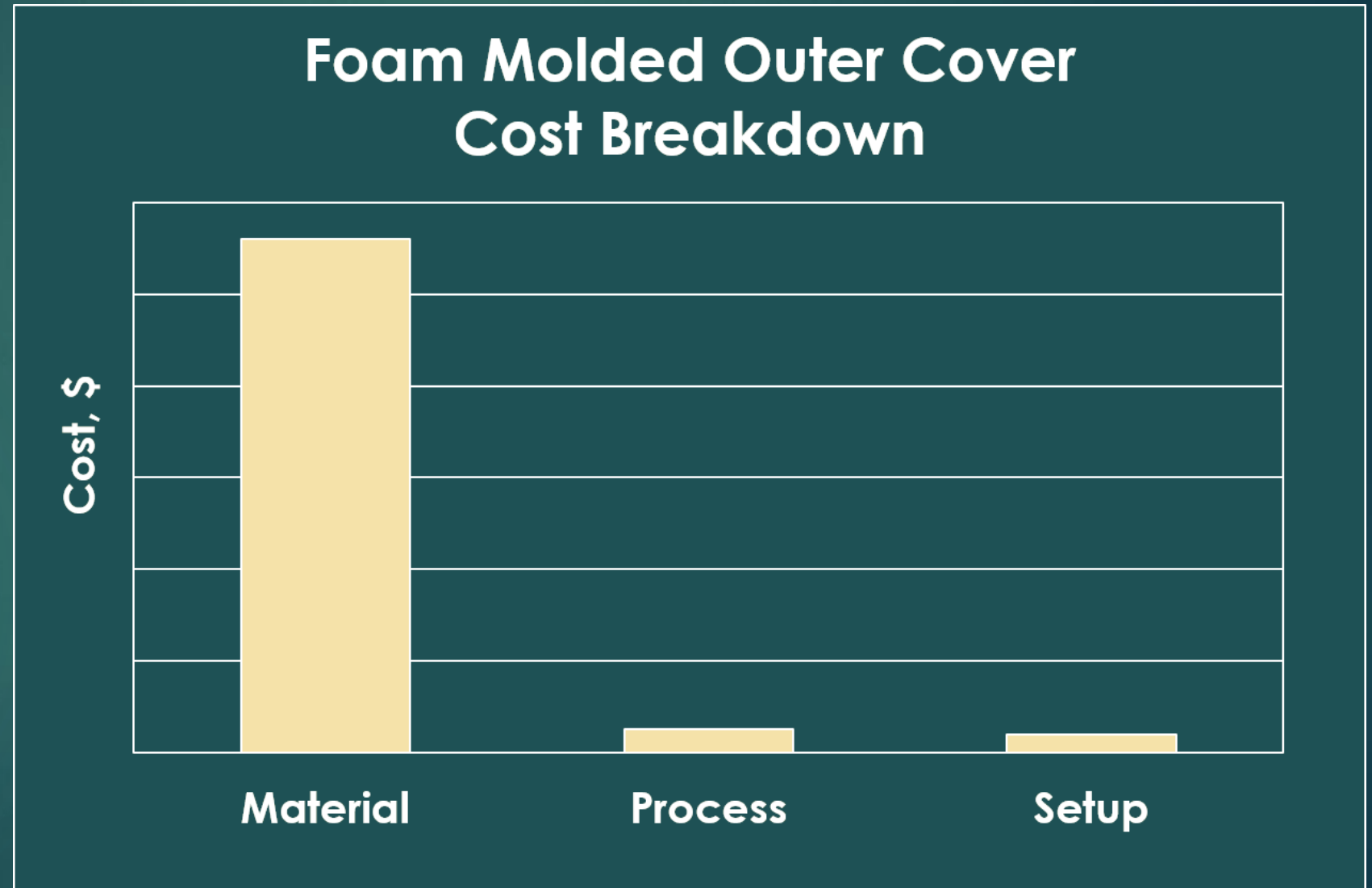


Setup of DFMA Software include all costs & profit

- ▶ Hourly chargeout rates for setup & processing - 40% profit
- ▶ Adjusted material prices - 15% profit
- ▶ Hourly chargeout rates for tool production - 140% profit

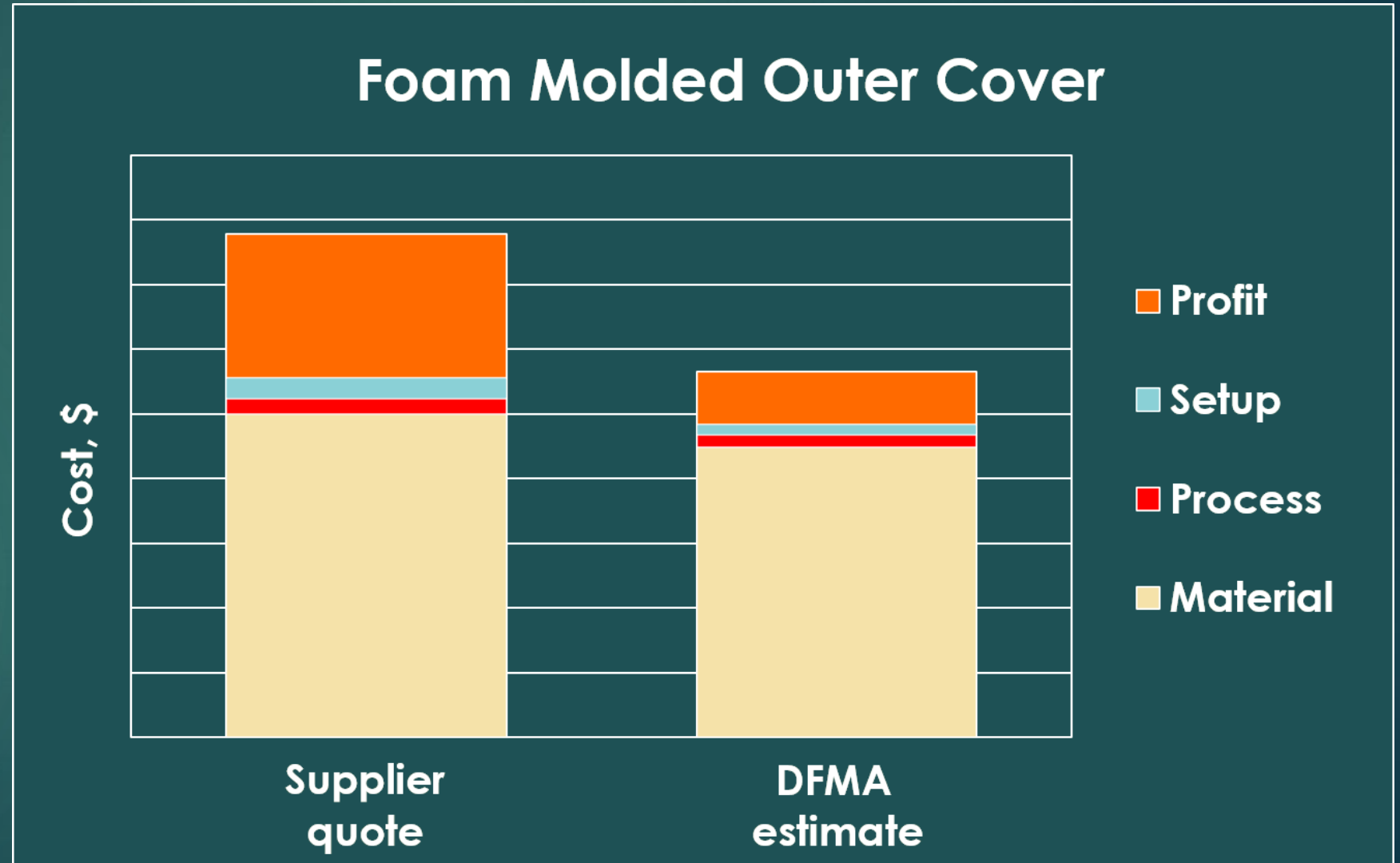
Supplier profit

- ▶ Process & Setup - 40% profit
- ▶ Material - 15% profit



Supplier profit

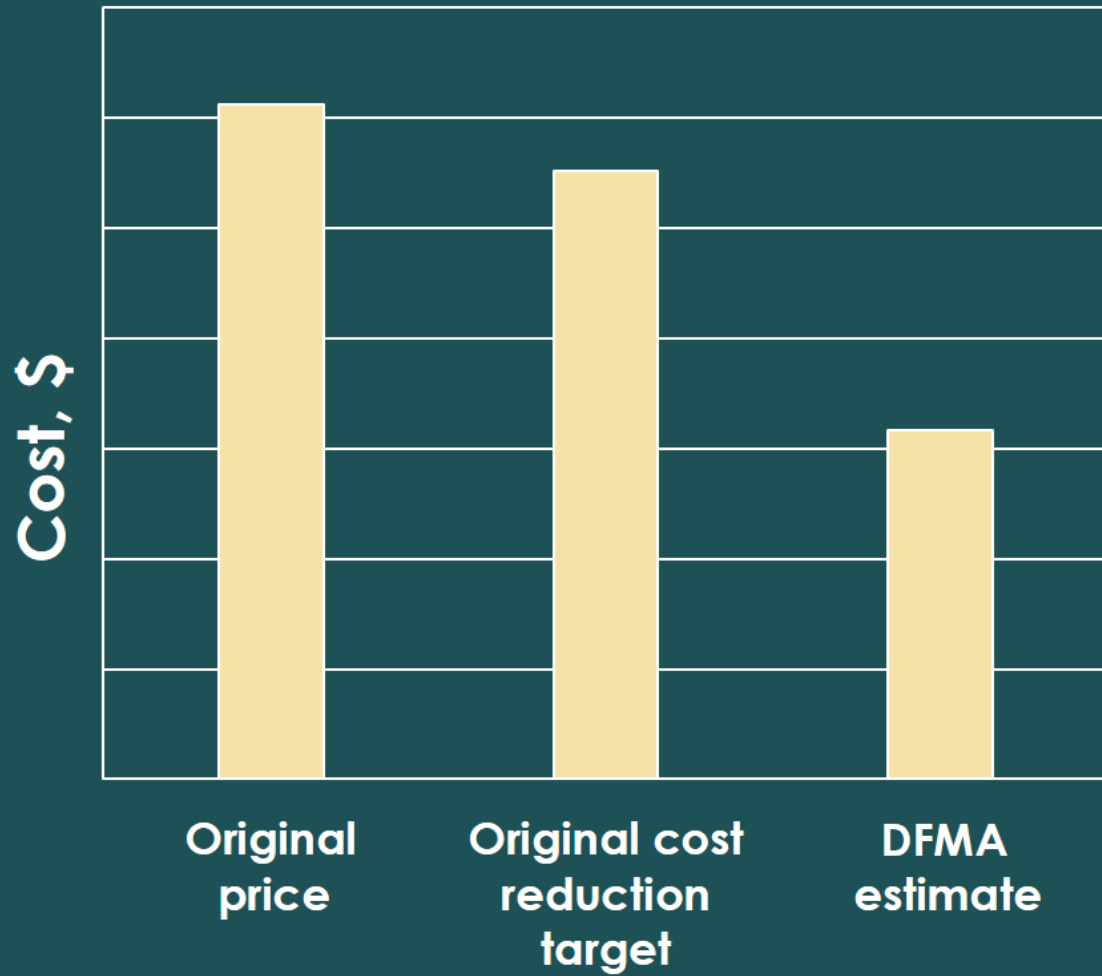
- ▶ Process & Setup - 40% profit
- ▶ Material - 15% profit



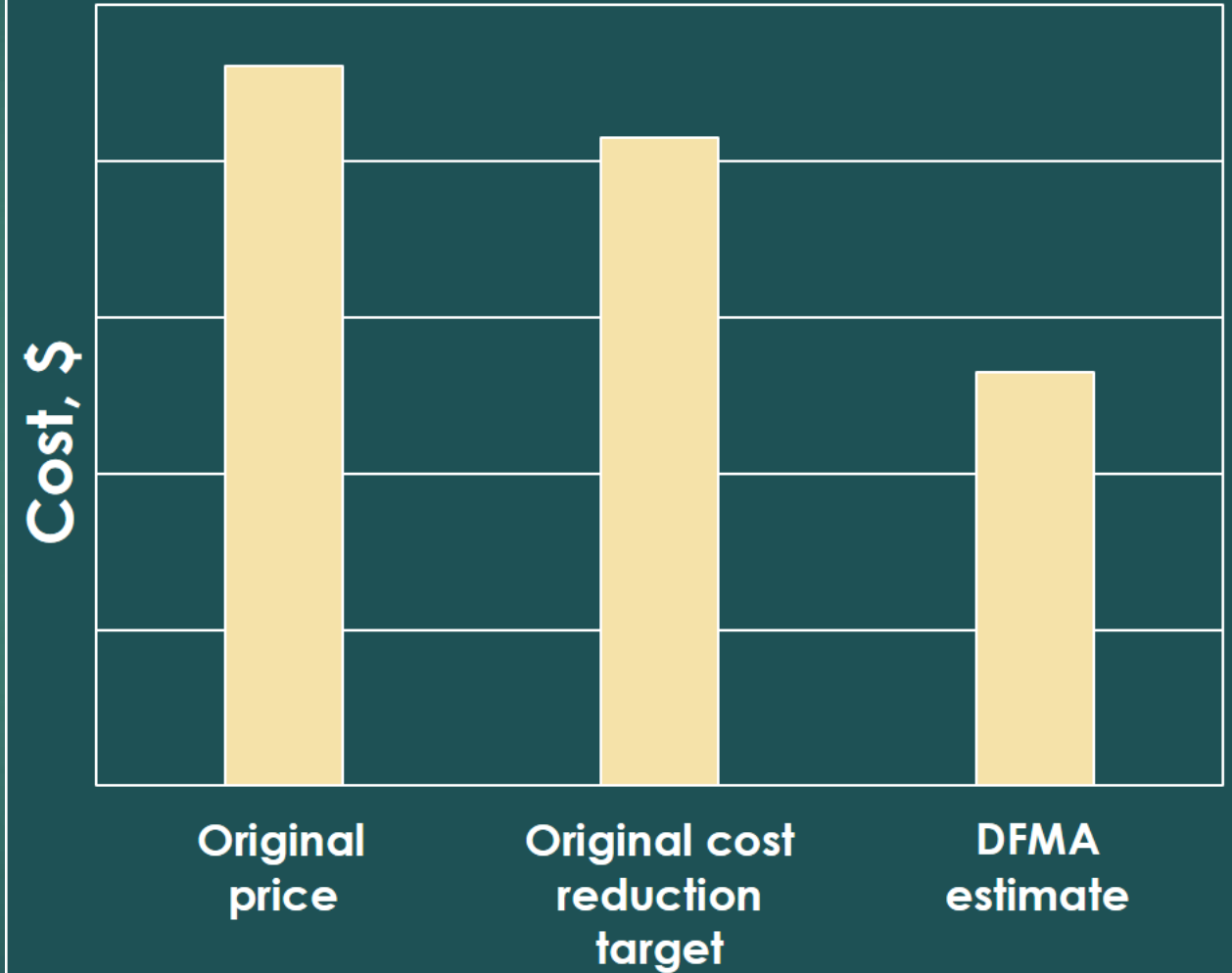
Two sizes of fabricated tables



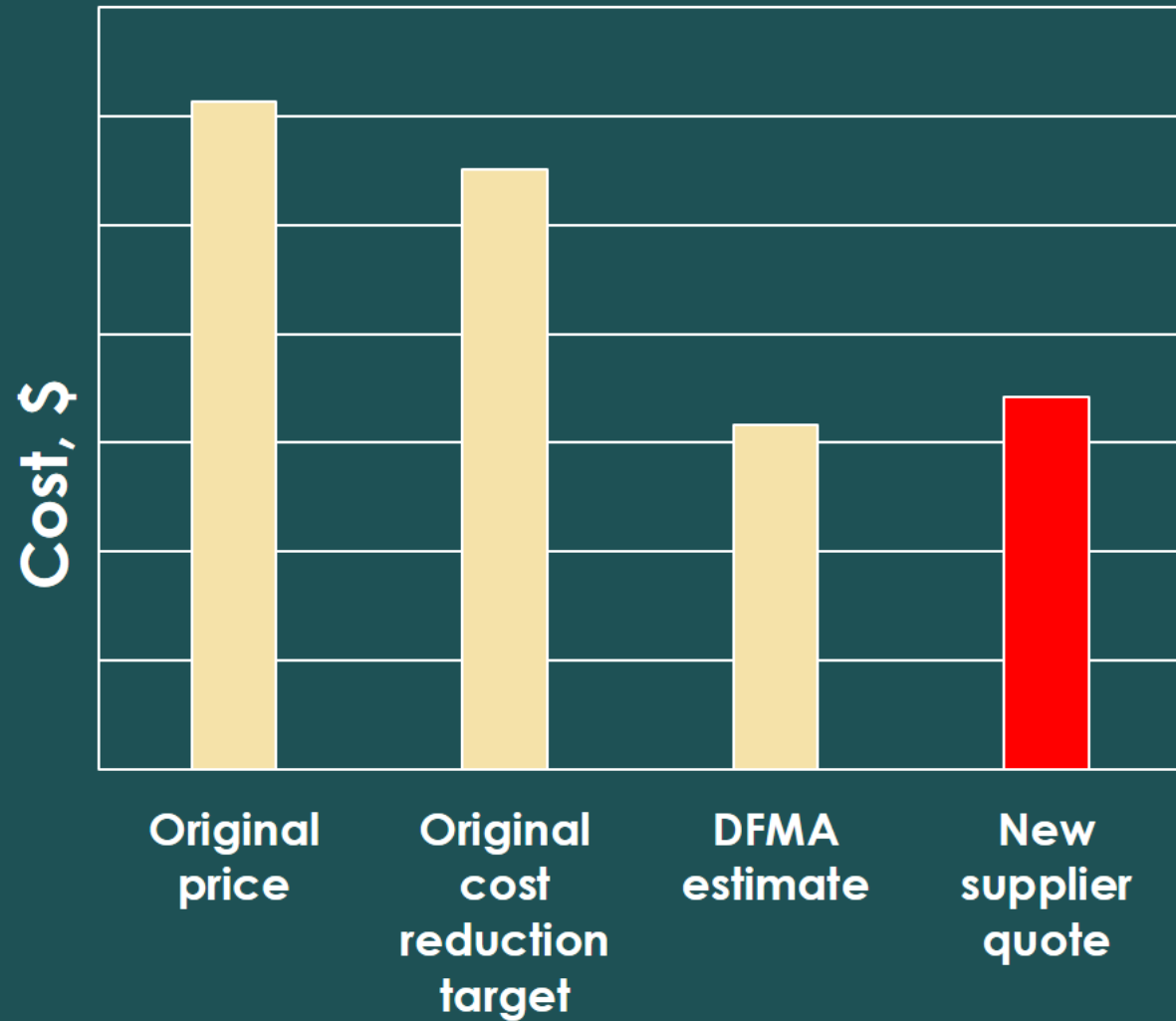
Long Fabricated Table



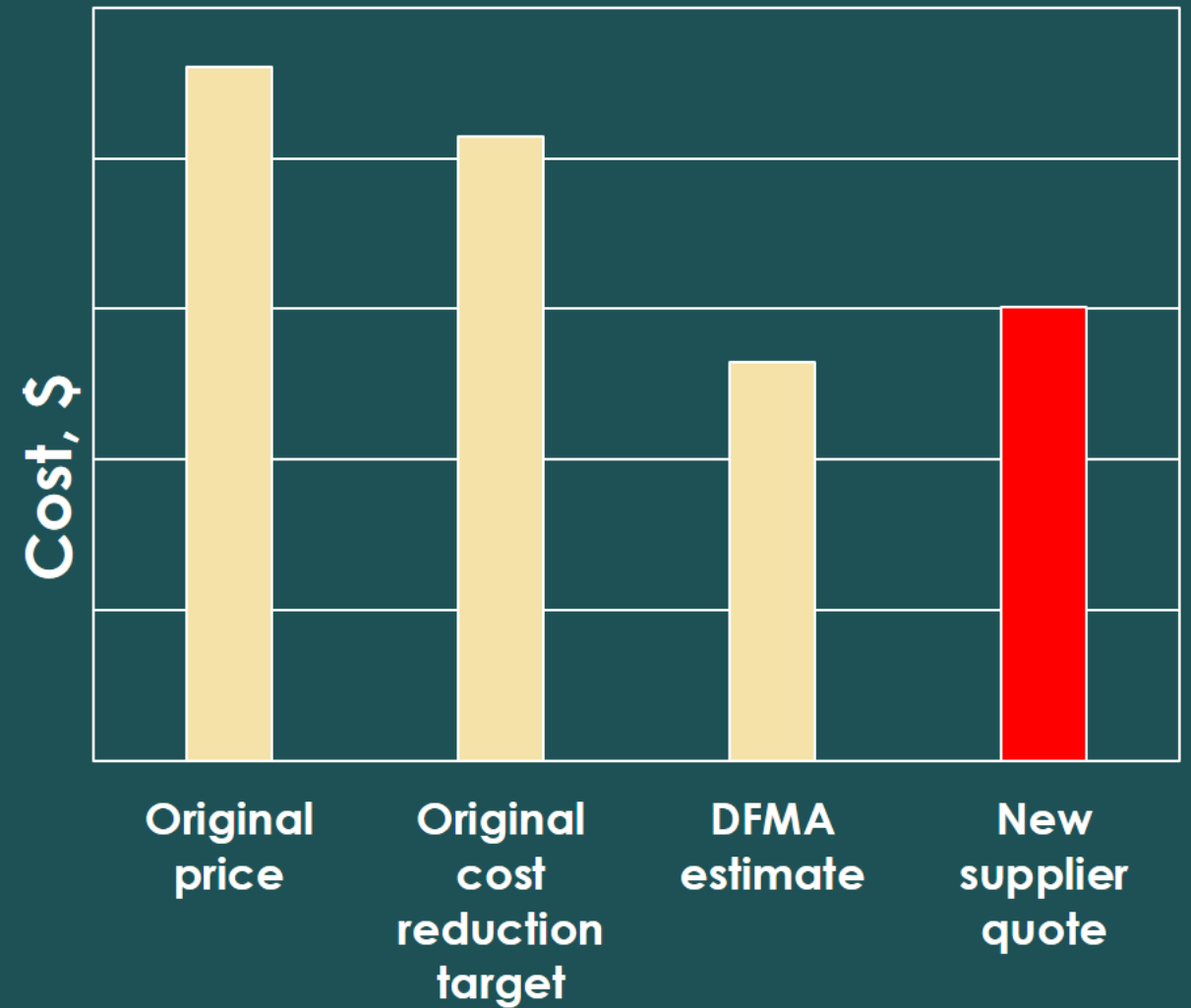
Short Fabricated Table



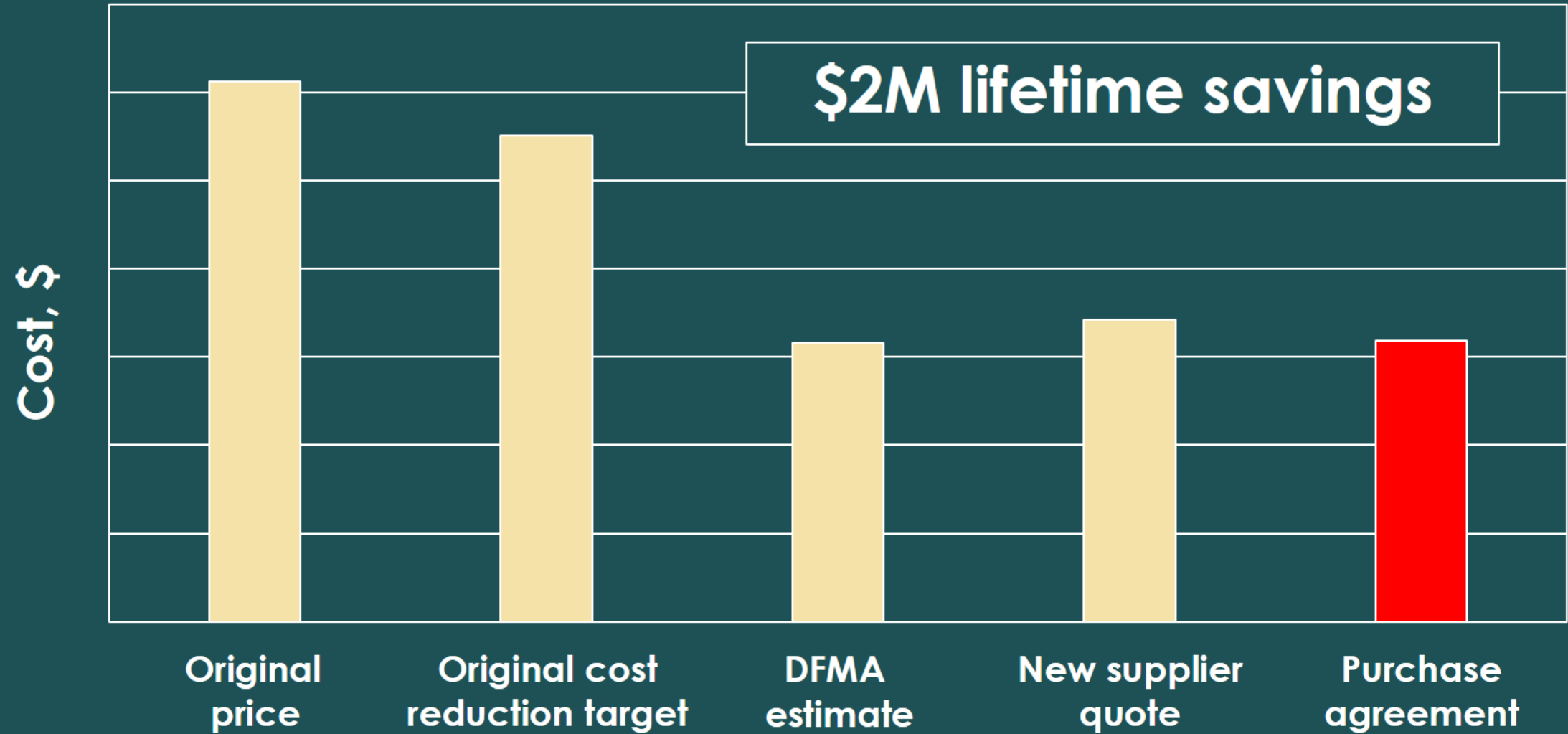
Long Fabricated Table



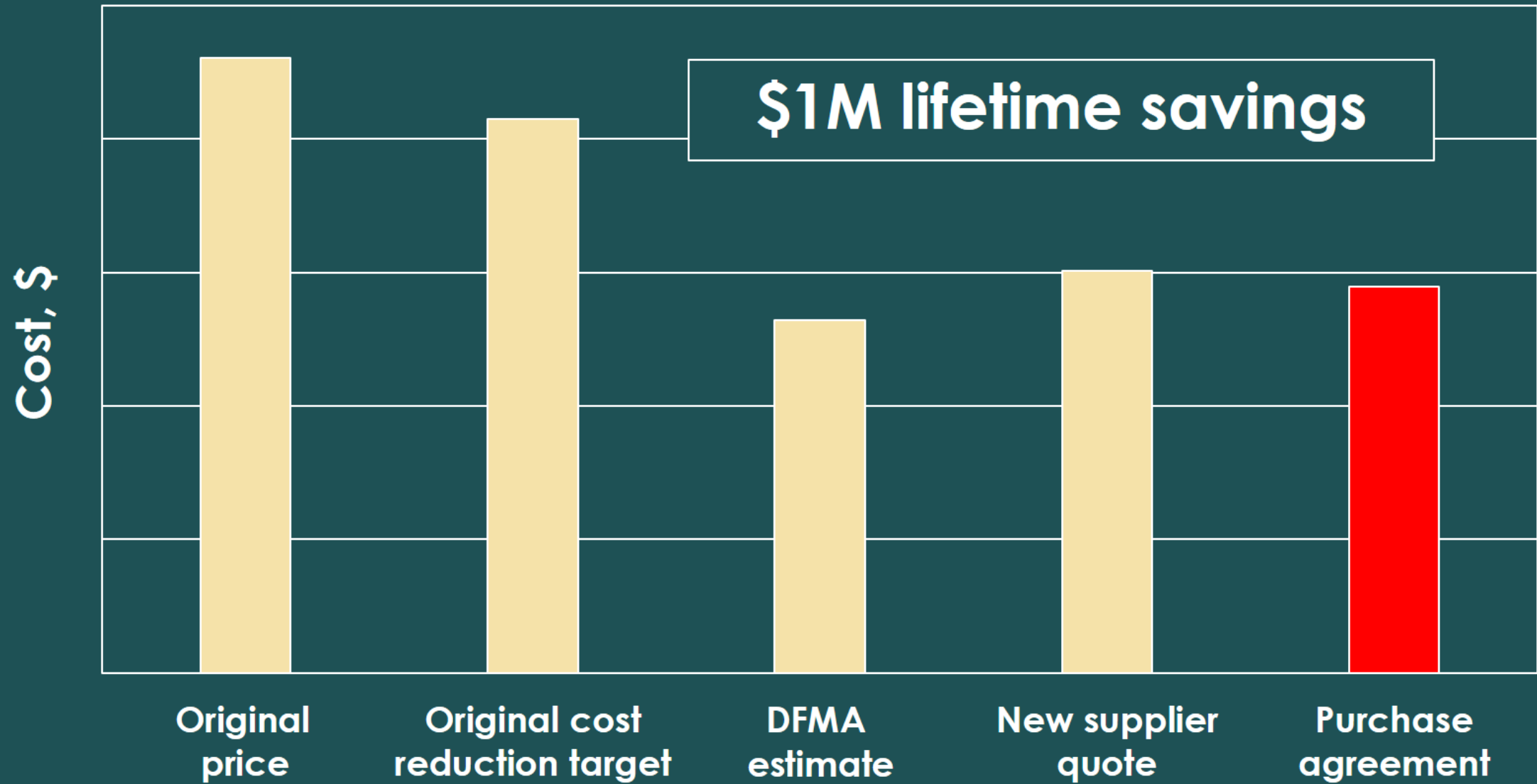
Short Fabricated Table



Long Fabricated Table



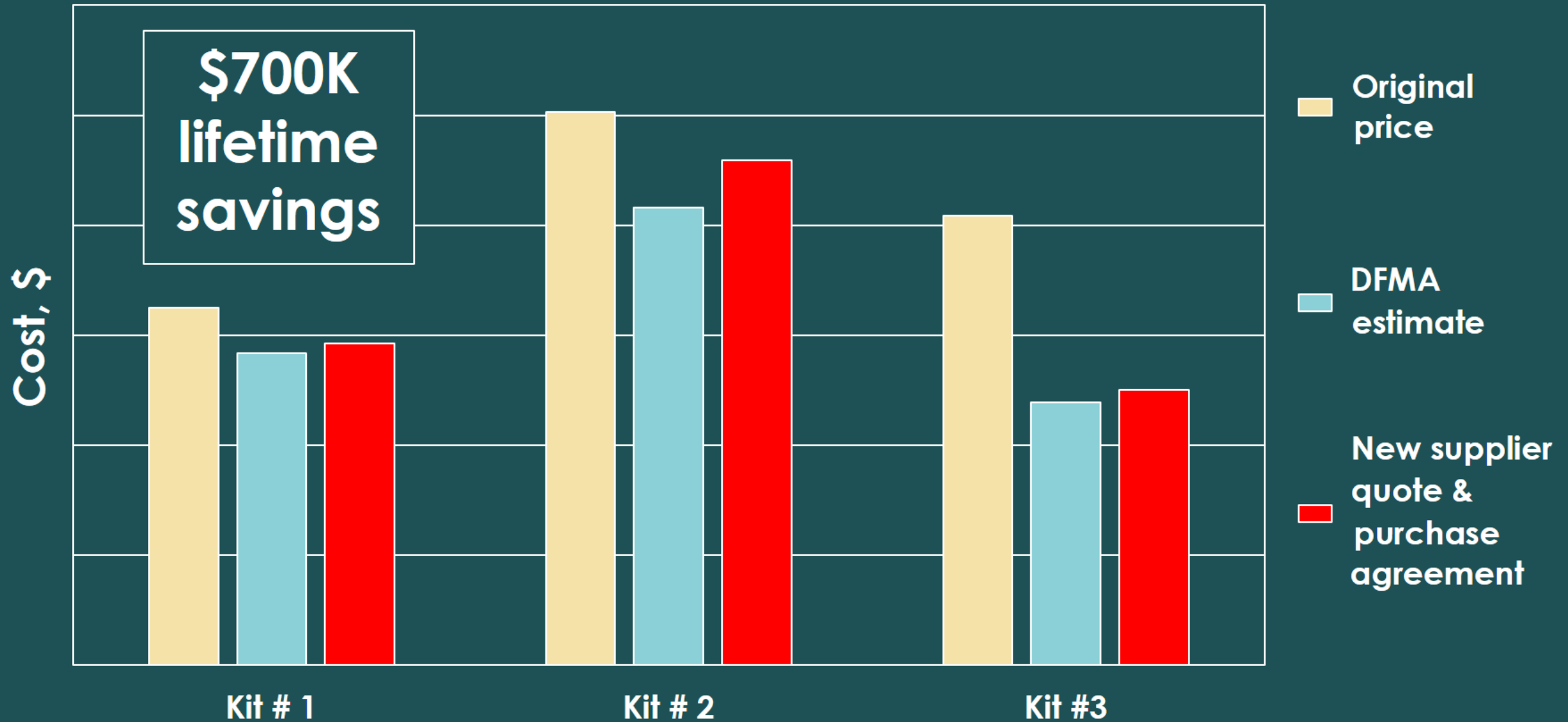
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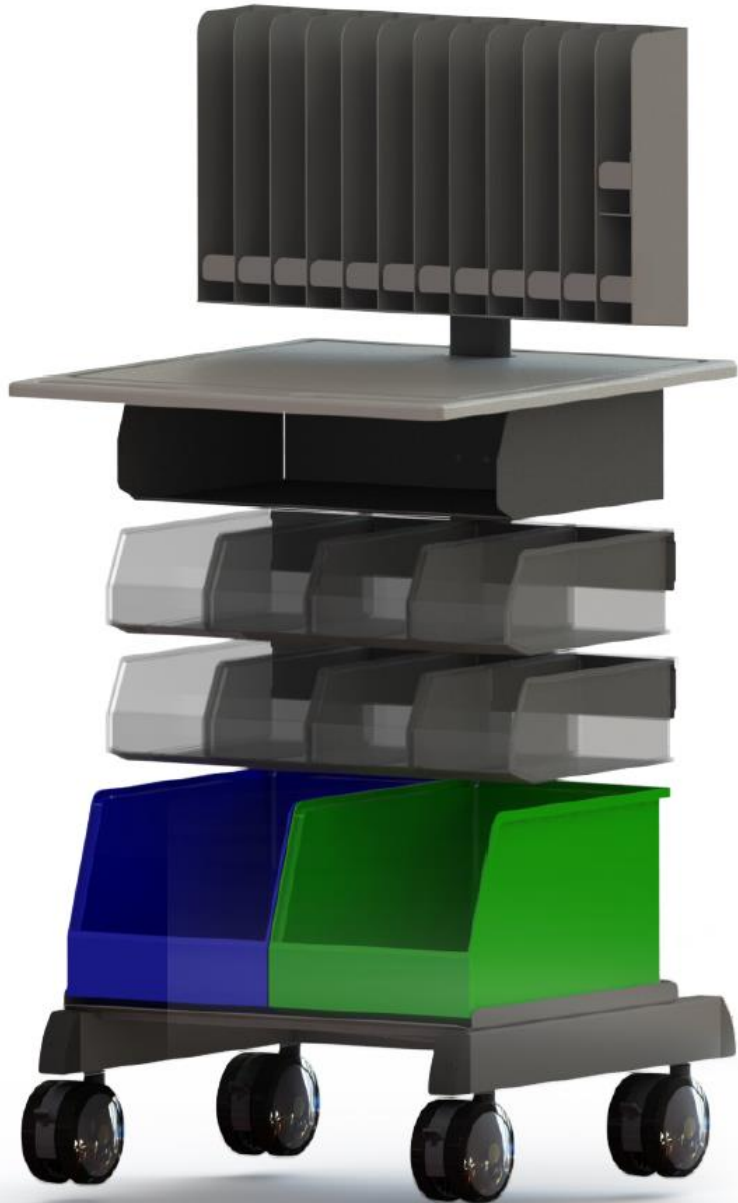
Anchor bracket kits



Anchor bracket kits

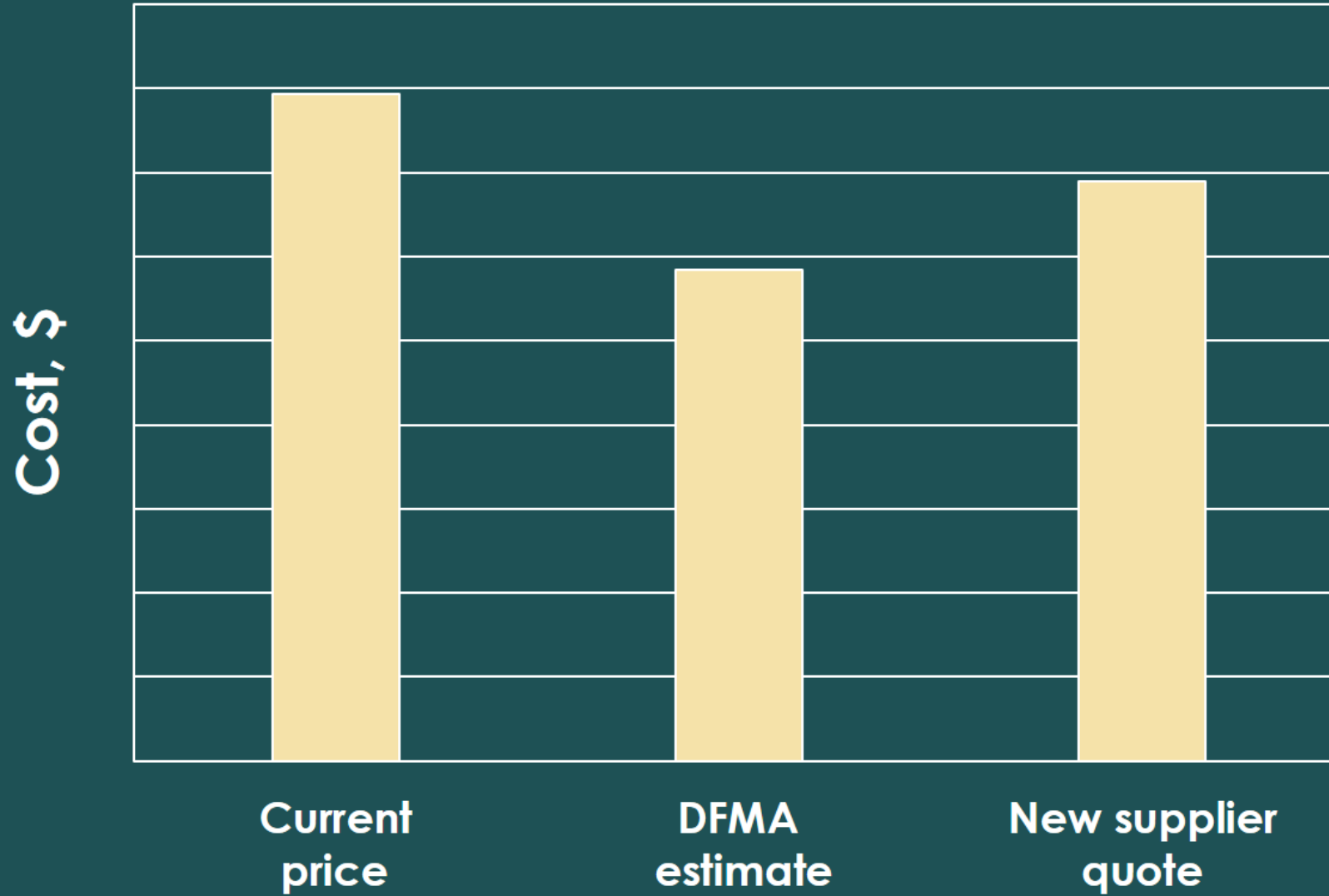


Cart cost-down

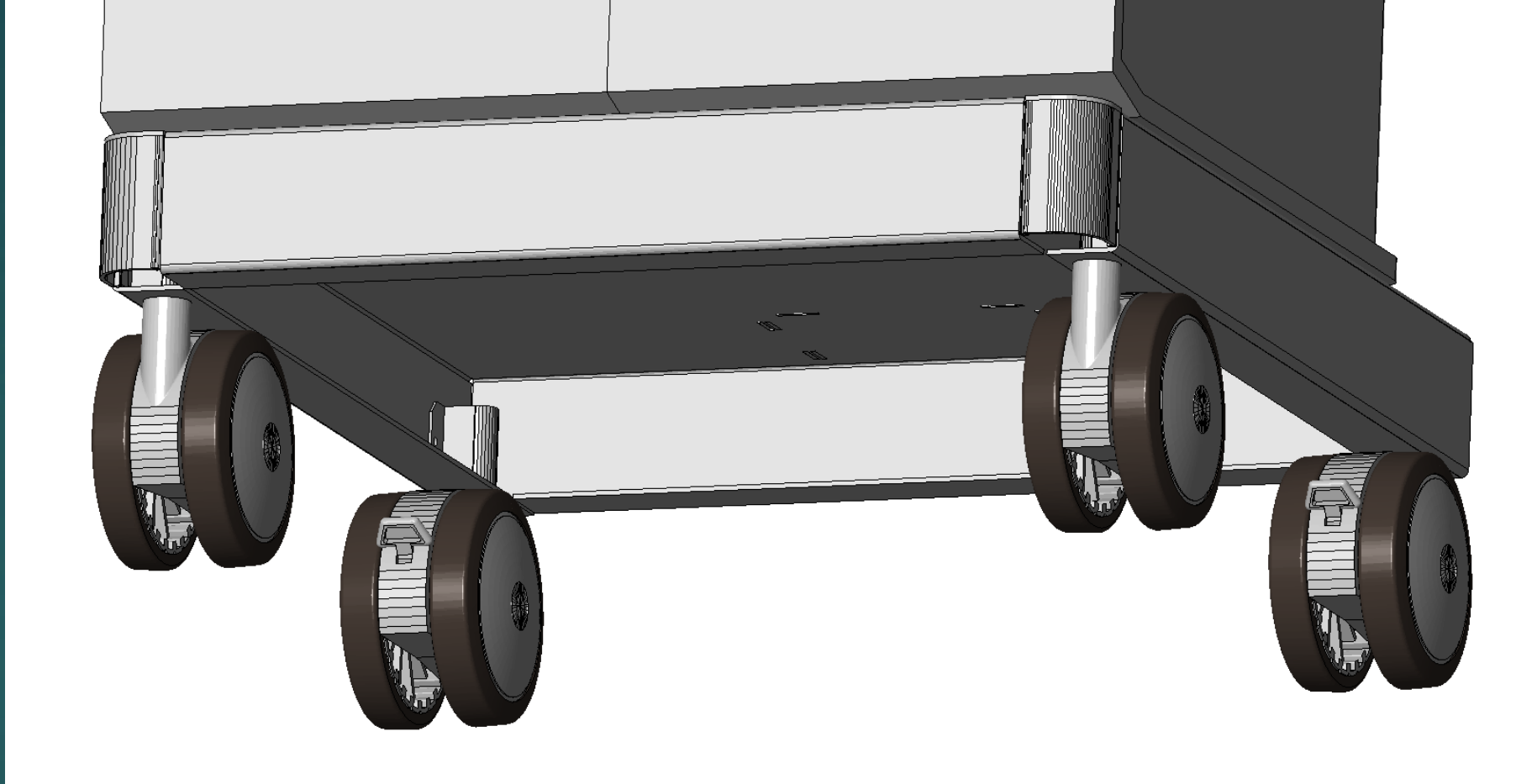


- ▶ Stores and carries consumables for our machinery
- ▶ Primarily composed of sheet metal and standard structural steel shapes fabricated, welded, and pop-riveted together.

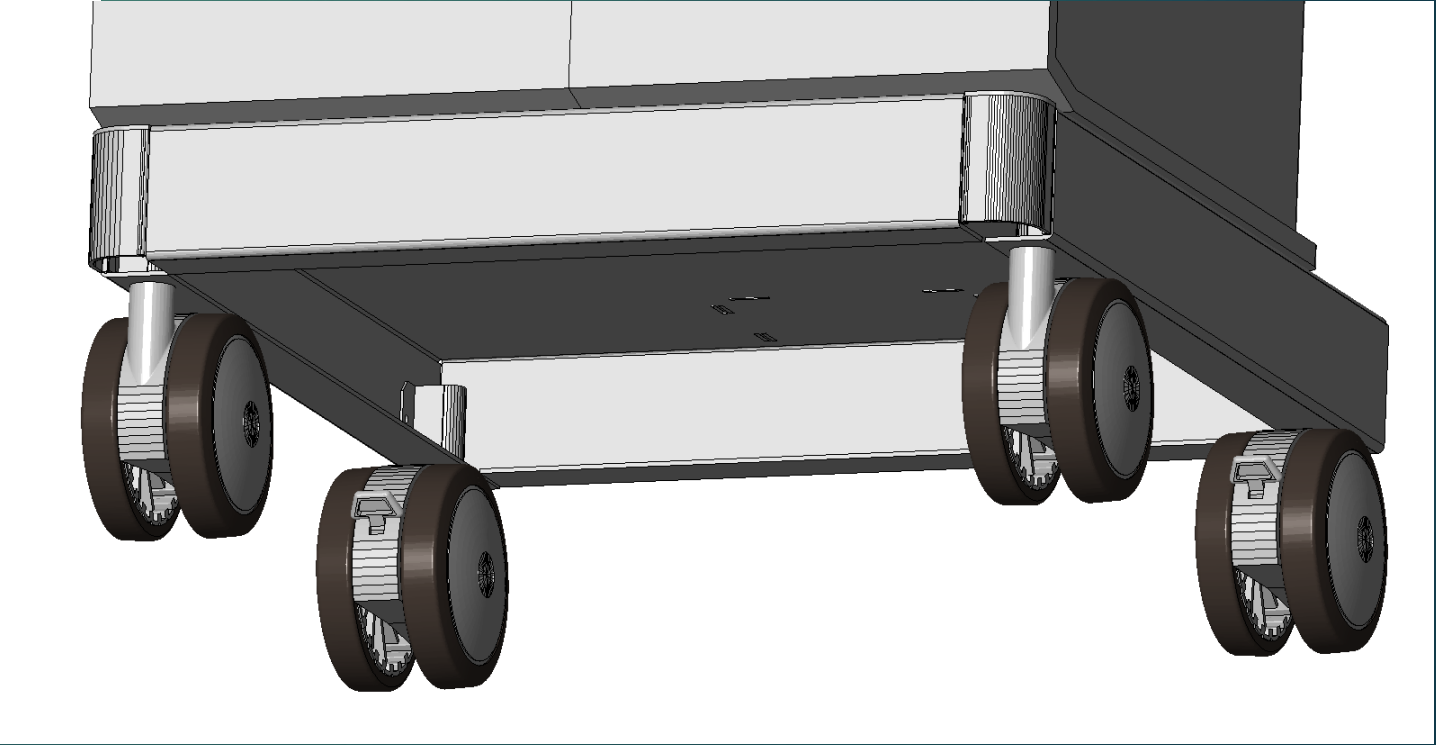
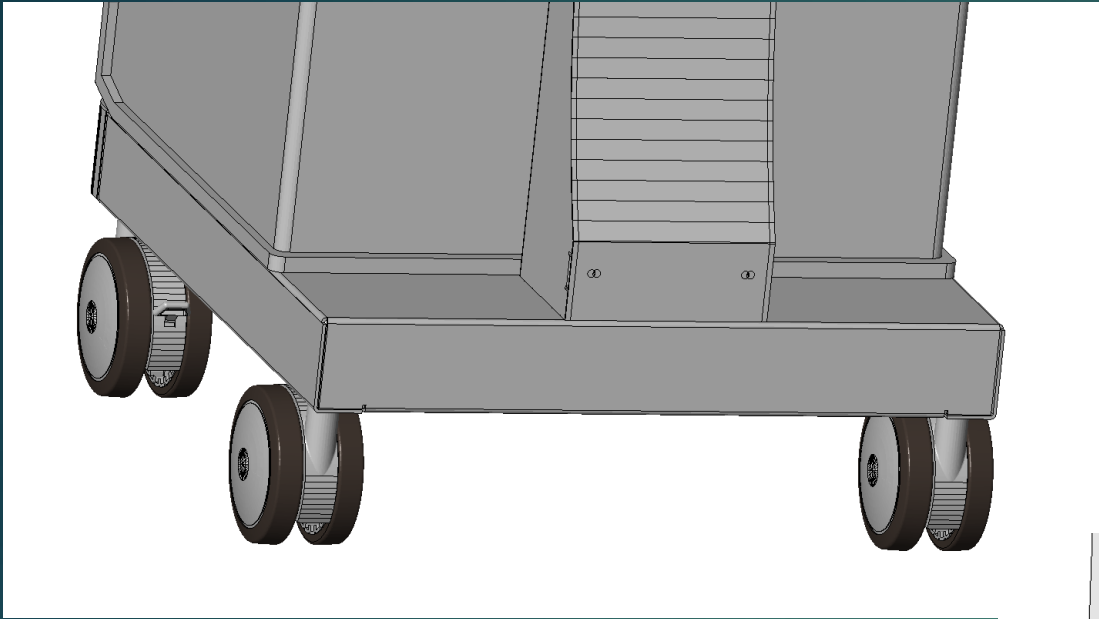
Cart



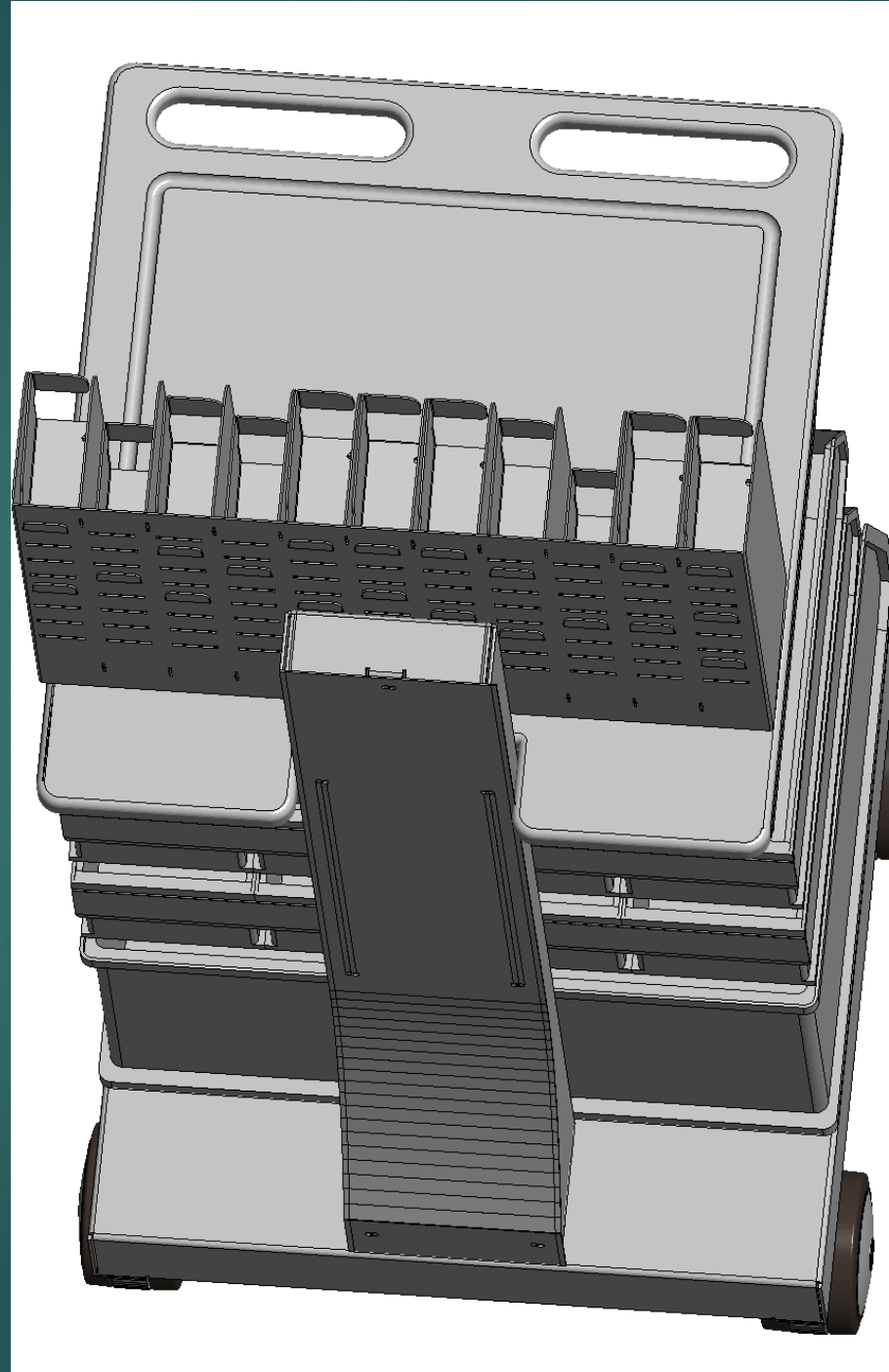


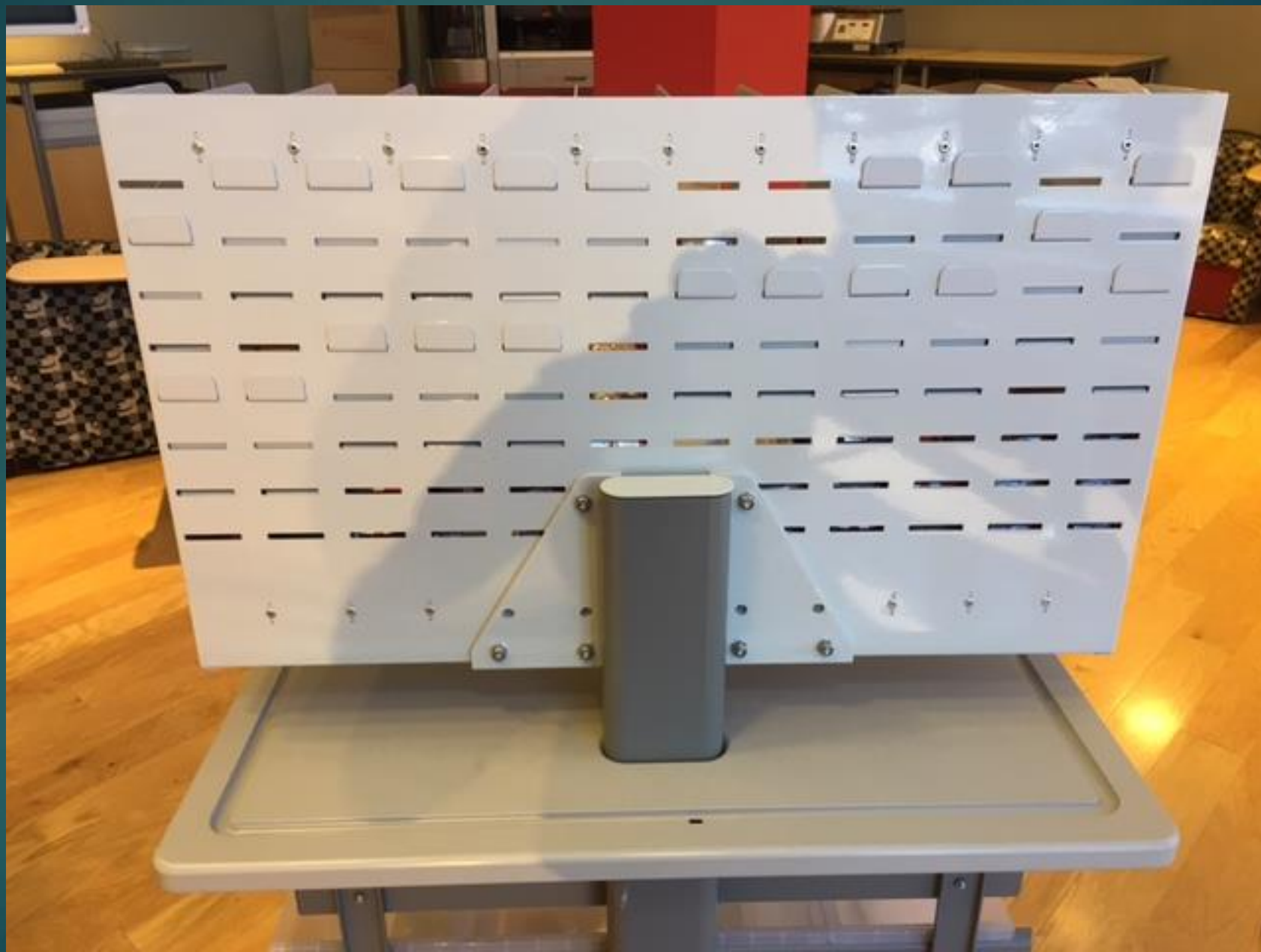


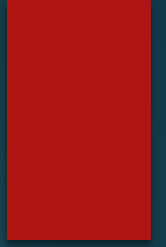
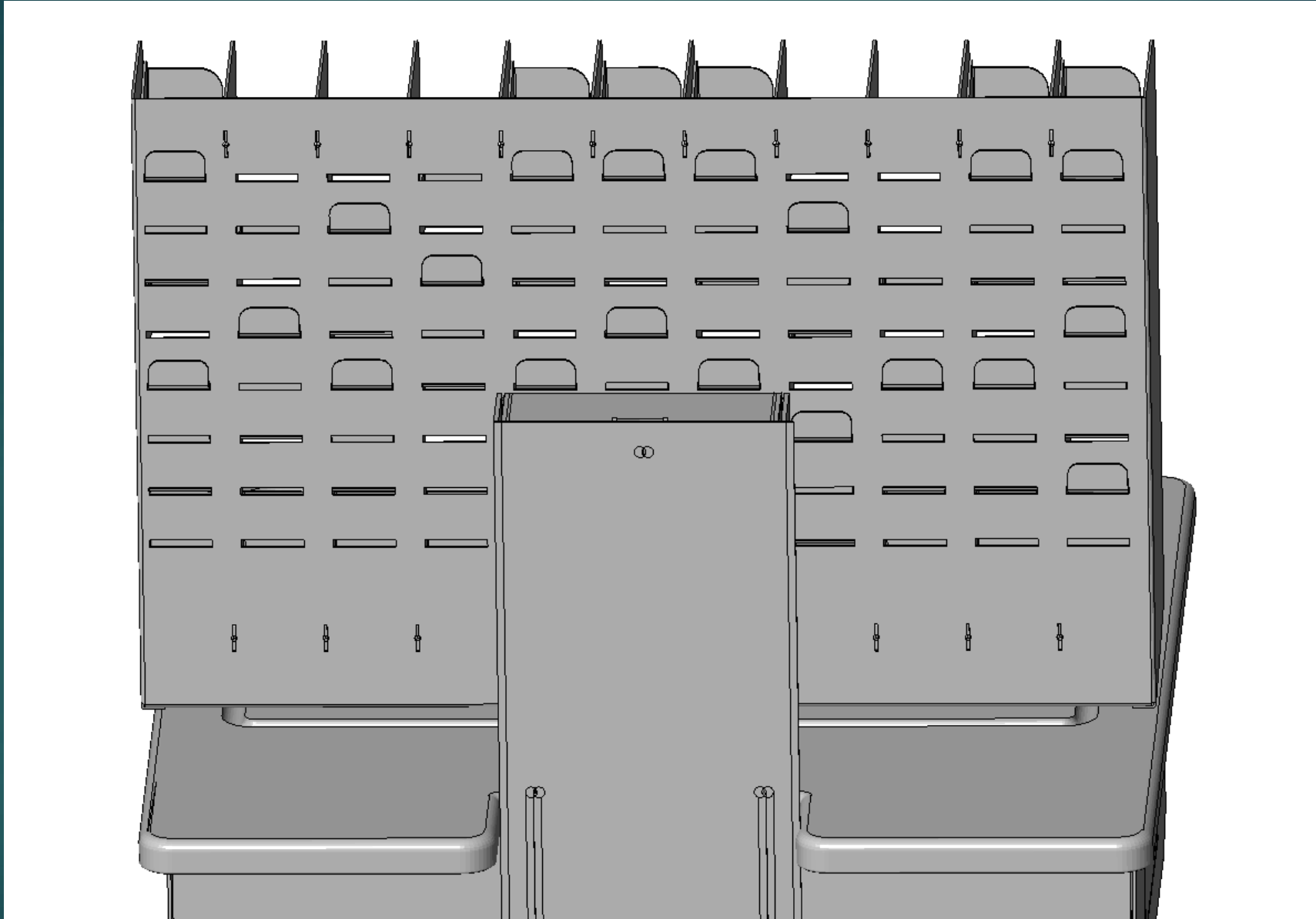












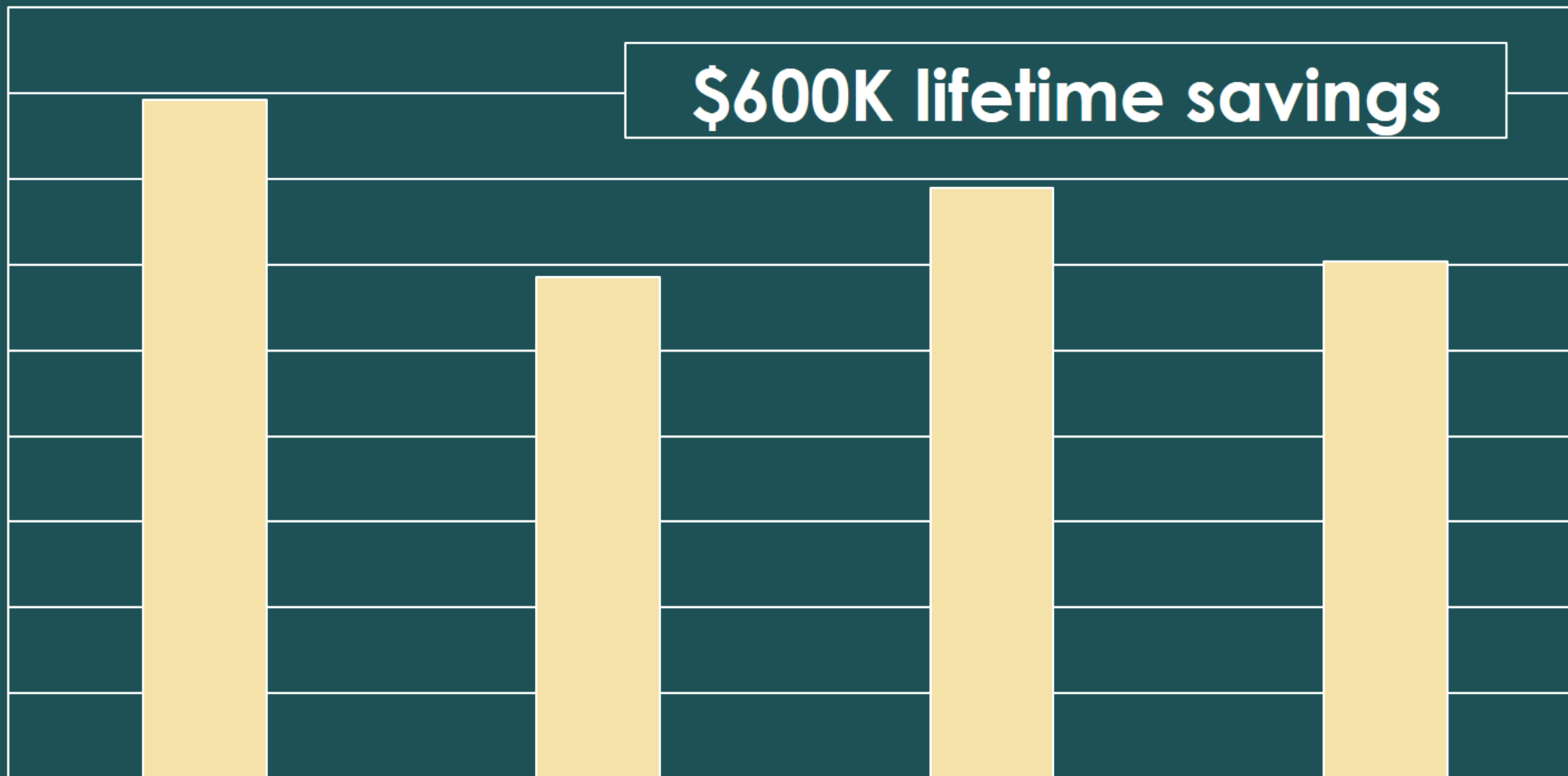




Cart

\$600K lifetime savings

Cost, \$



Current
price

DFMA
estimate

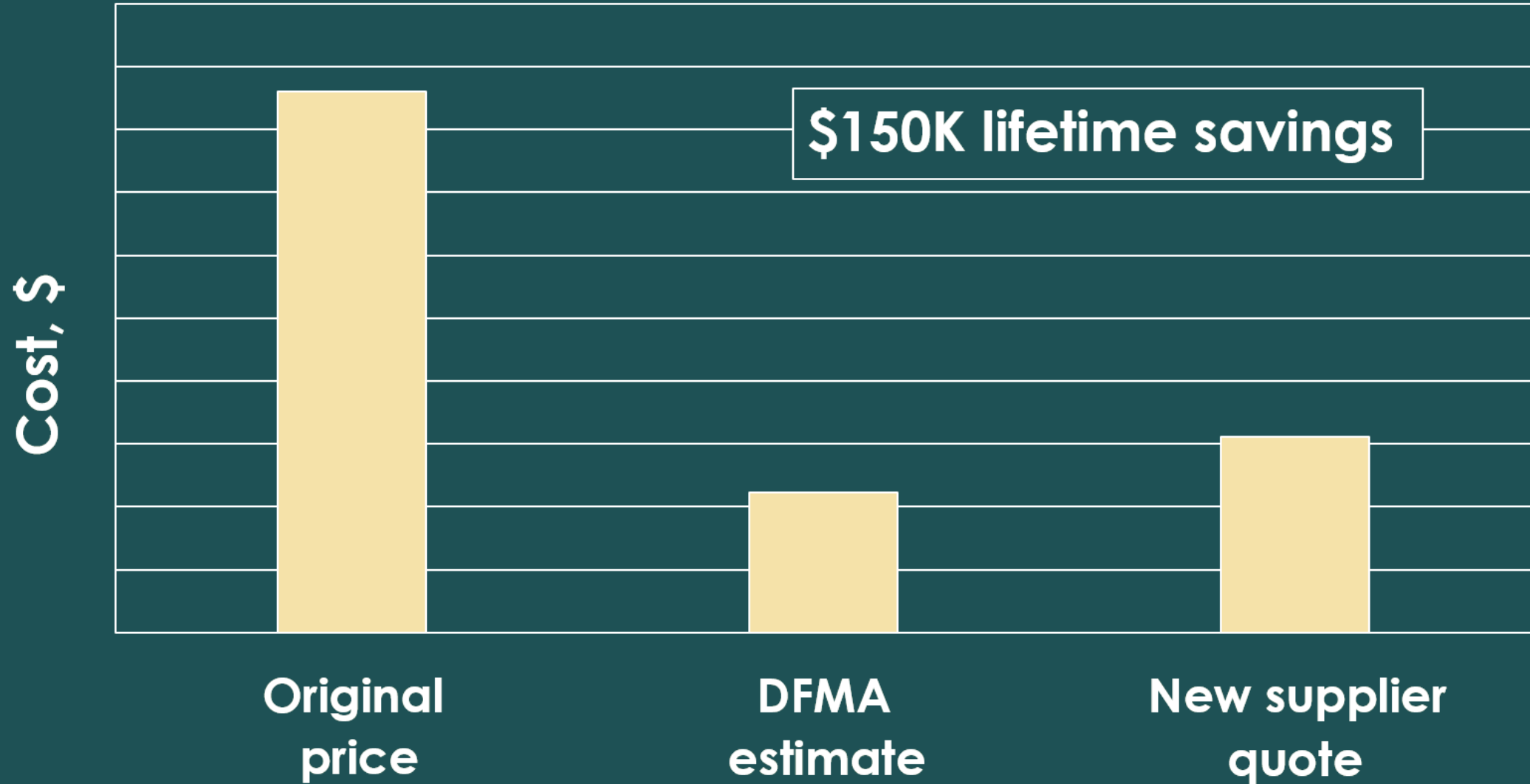
New supplier
quote

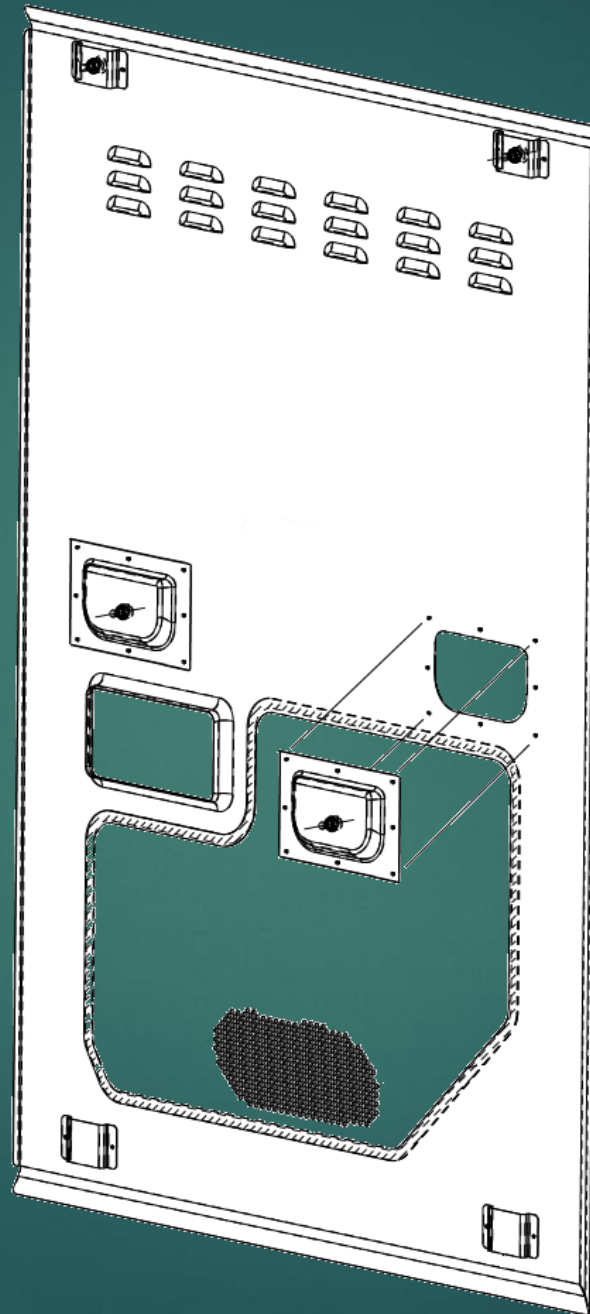
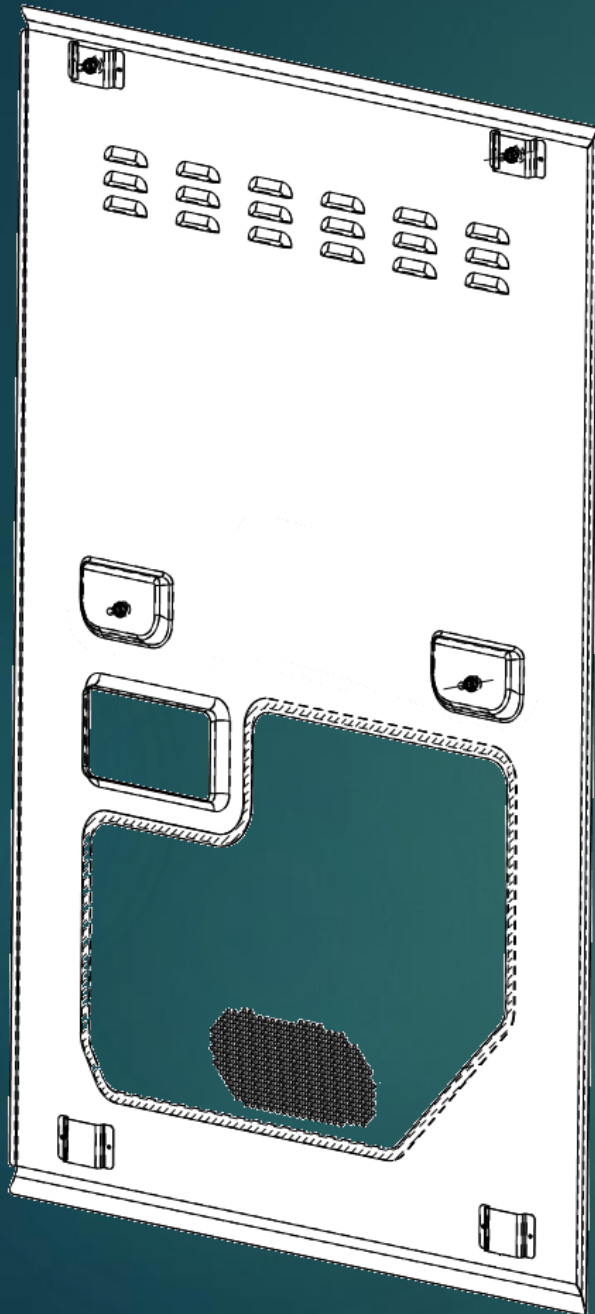
Purchase
agreement

Cap remover assembly



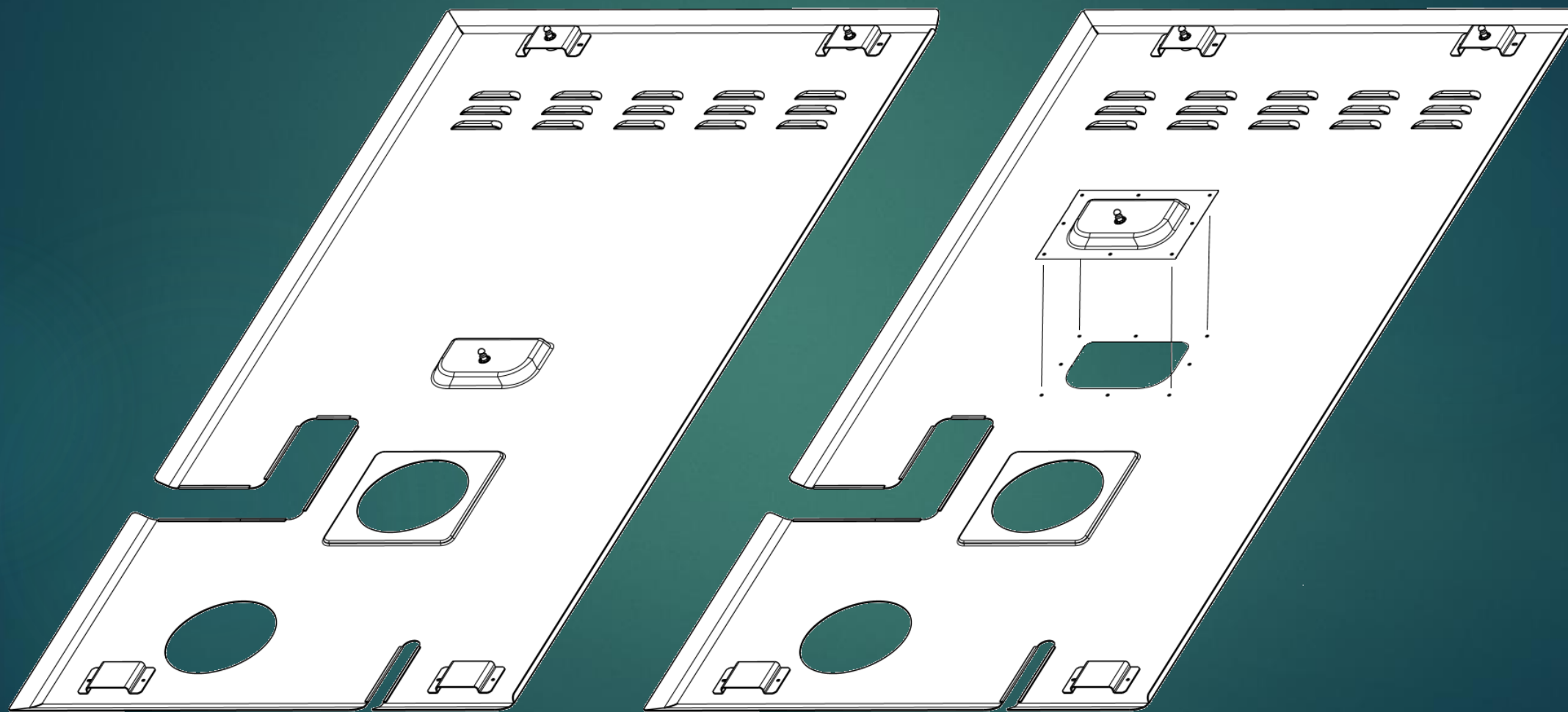
Cap Remover Assembly



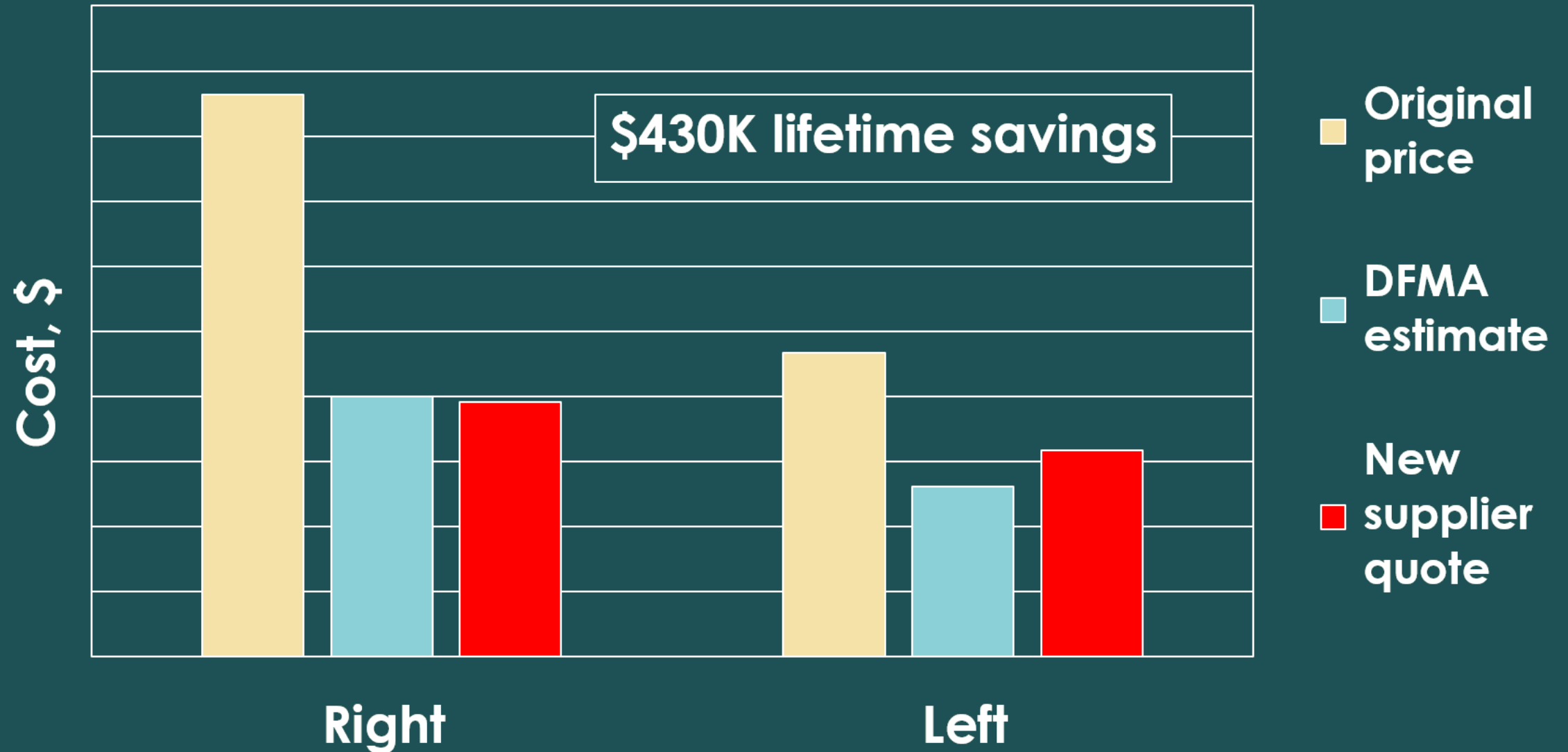


Right
cabinet
support

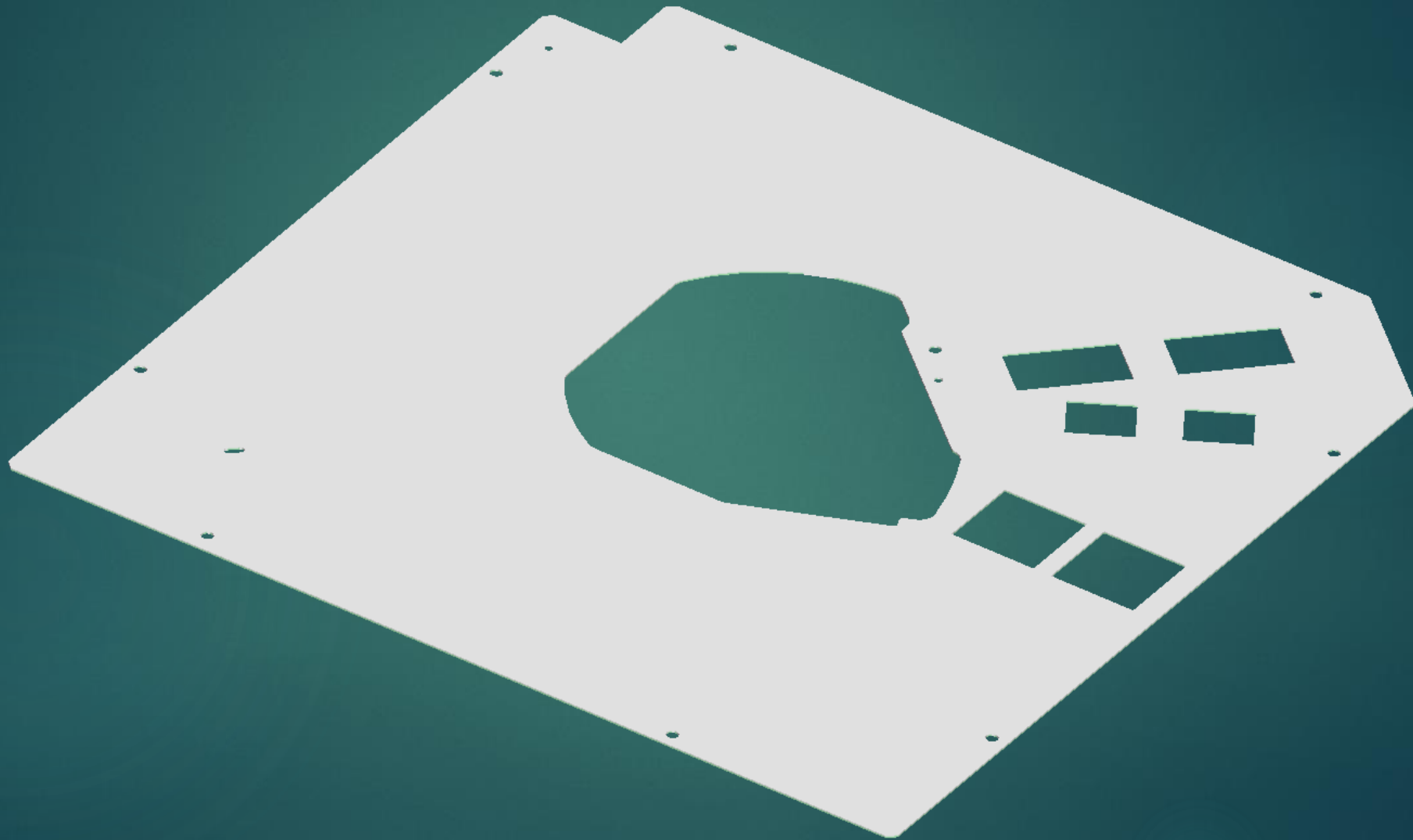
Left cabinet support



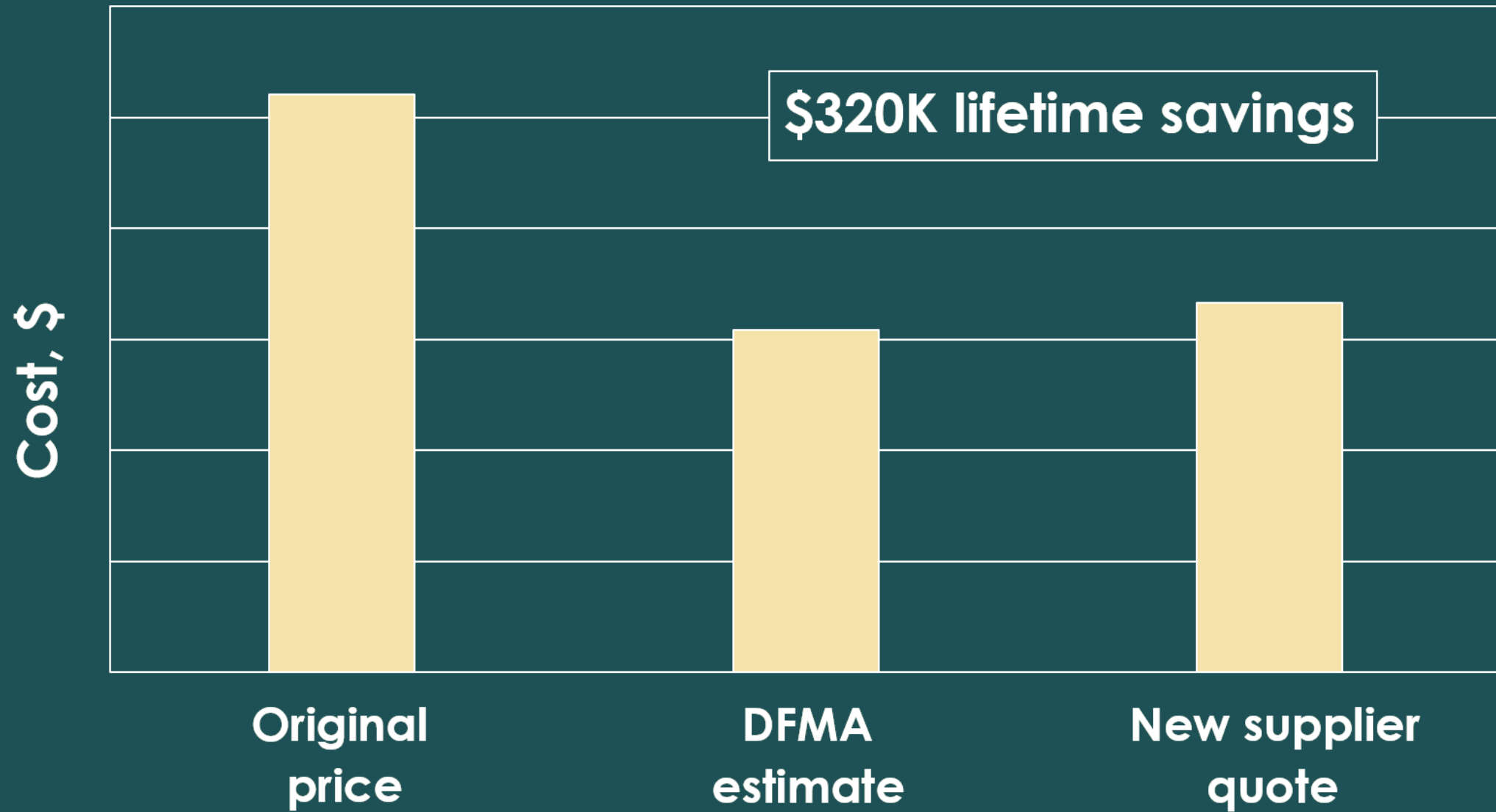
Cabinet Supports

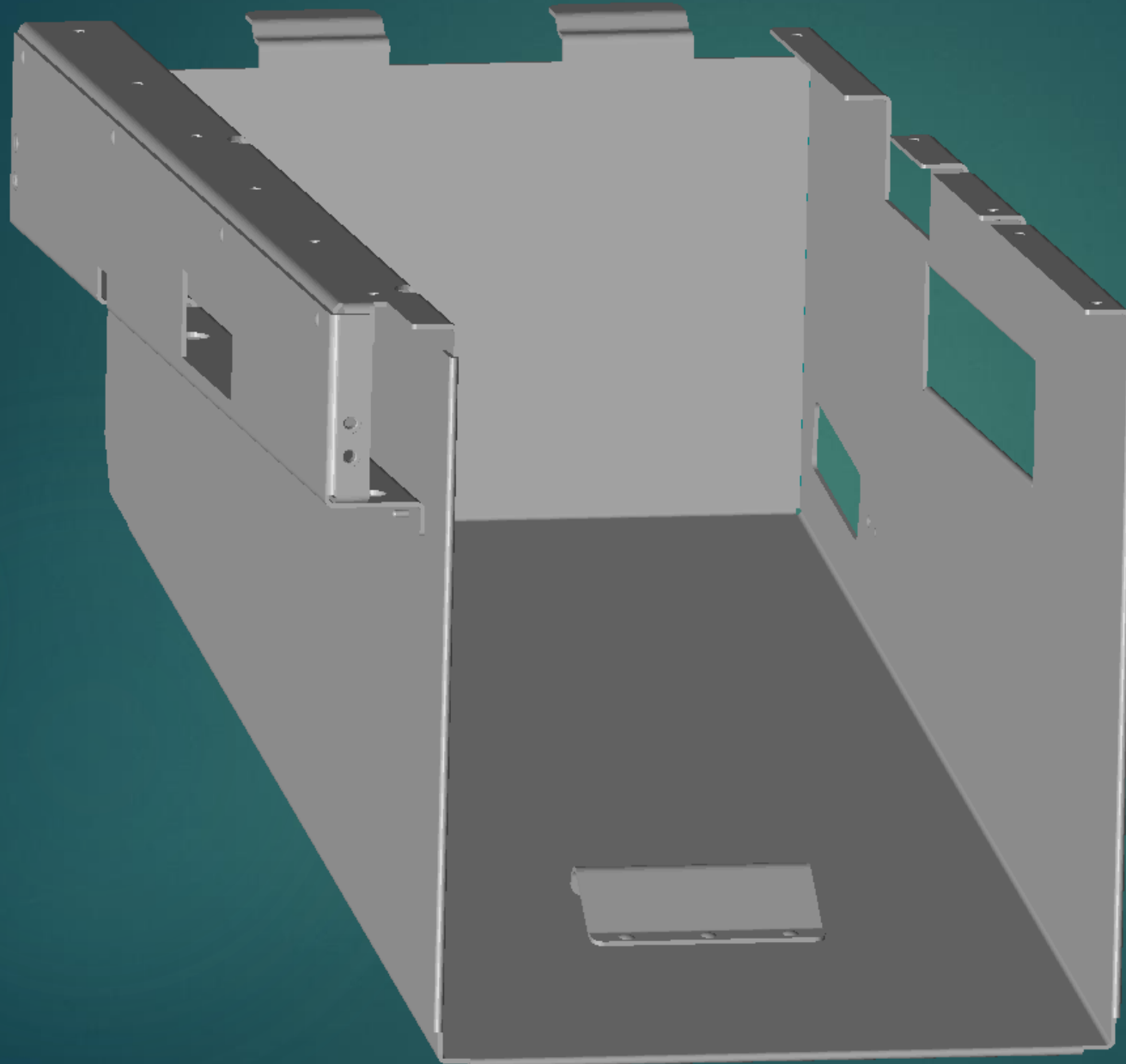


Frame plate



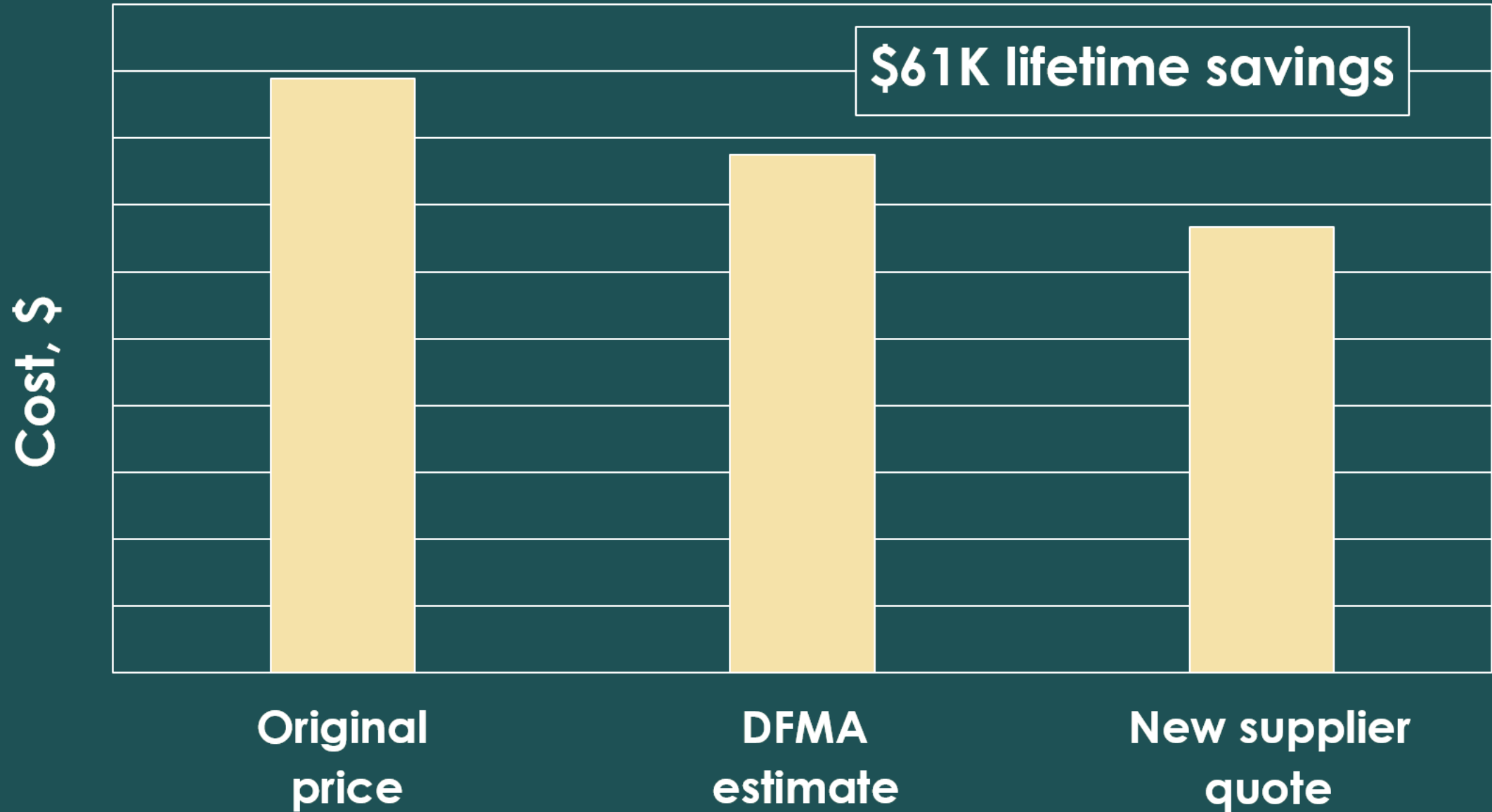
Frame Plate





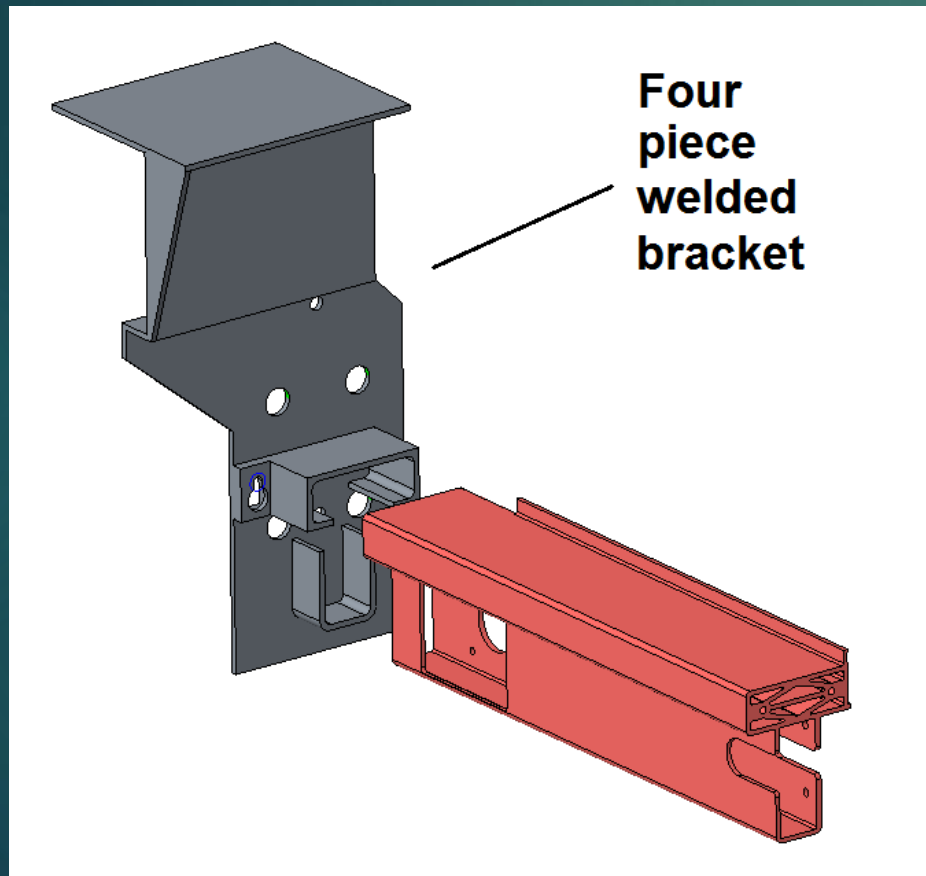
**Waste
bin
bracket
assembly**

Waste Bin Bracket Assembly

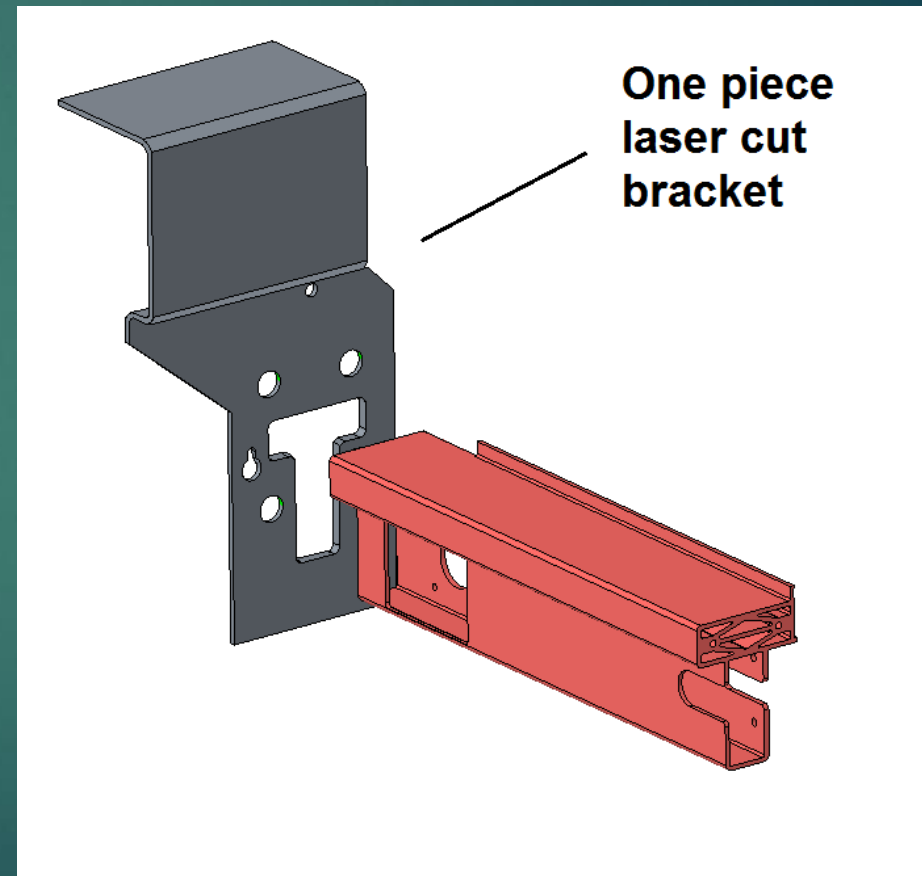


Redesign for cost reduction

Original



Redesign



Overall supplier costing results

- ▶ Working for three years
- ▶ \$33.7M captured
- ▶ 120 projects with identified savings
- ▶ Average savings per project - \$79K
- ▶ Quality of estimates is important