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9 Ways Reliability is Green Engineering



Reduce



Reuse



Recycle

Green Engineering is

... reduces pollution, promotes sustainability, and
minimizes risk to human health and the environment...

US EPA



Just Reliable



Simple Just Reliable

Simple designs tend to be more
reliable

Fewer Parts



High Yield

Just Reliable

Easy to manufacture well

Made consistently and well
improves reliability performance



Durable Just Reliable

It just works

It just works for a long time

less landfill

less use of resources



What scope

should we consider?

Cost of Ownership



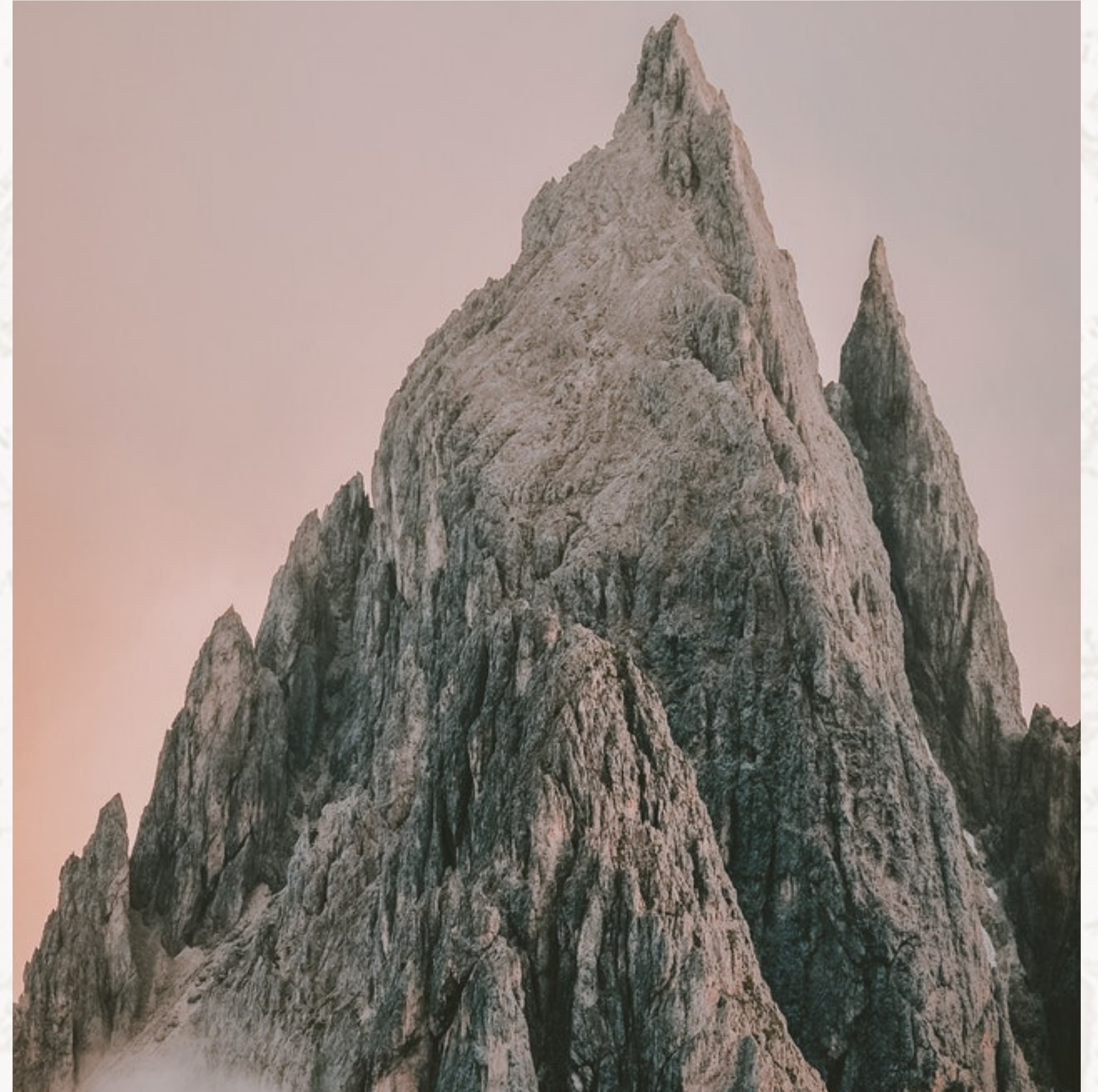
Standard Parts

Cost of Ownership

Easier to design

Easier to validate

Easier to find replacements



Repairable

Cost of Ownership

This is a requirement

A 5 cent part to restore a \$1,000
device makes sense



Life Cycle Engineering

Cost of Ownership

From raw material to retirement

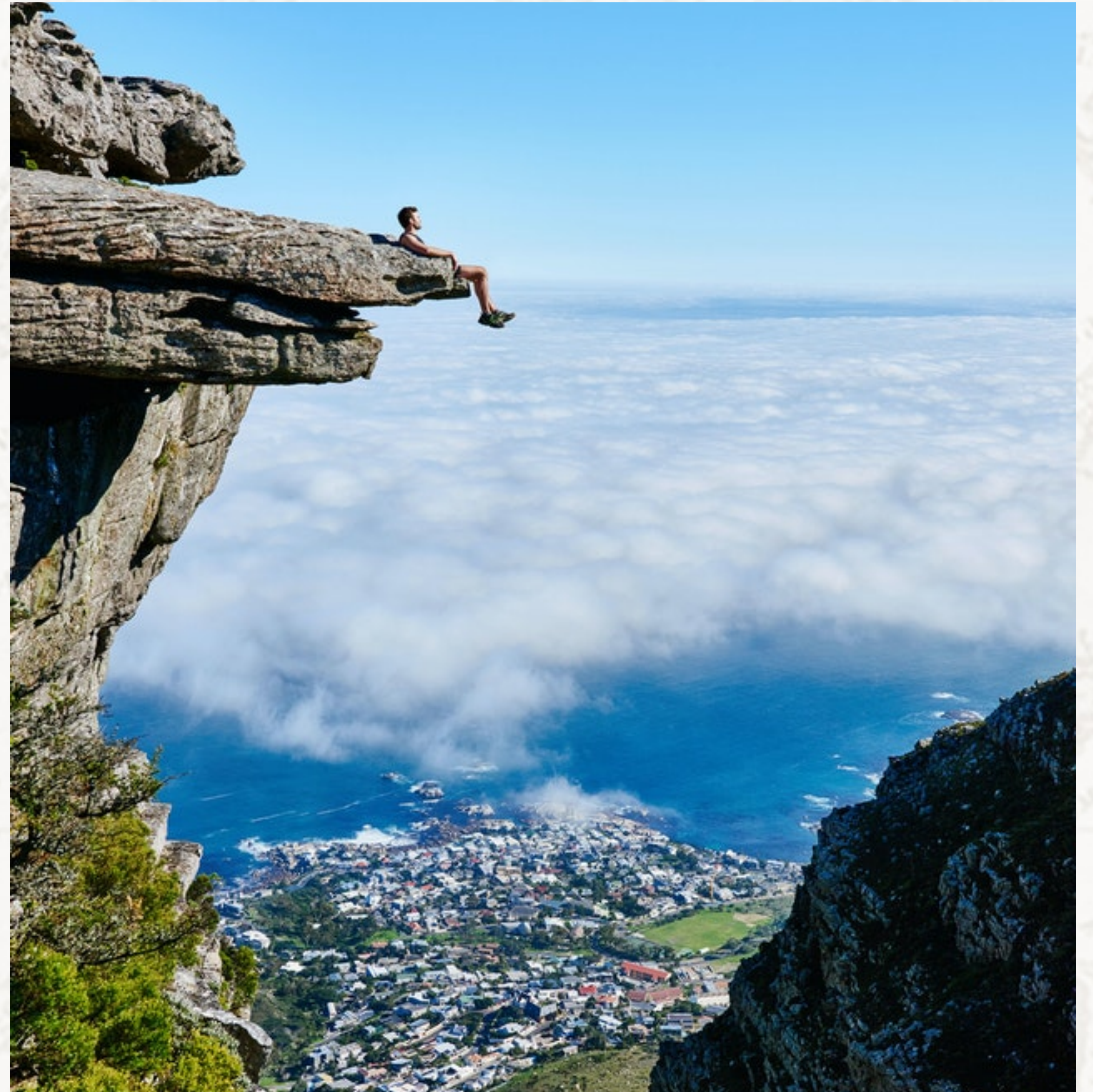
Reducing cost of ownership may involve:

robust supply chain

capable manufacturing processes

efficient diagnostics and repair

and, excellent reliability



What else

should we consider?



Modular

A few more...

Reuse modules across products

Allow upgrades via software or via module replacement

Recycable into other products or into base elements



Prognostic Health

A few more...

Make doing maintenance easy

Proactive

Predictive

and, built into the system
(prognostic health management)



Storage/Transportation

A few more...

Stored and moved safely
- i.e. no damage

Reusable or totally recyclable

Packaging that fits many product families - less customization



What are you seeing

happening with “green”?

What is the value of
creating a 'green' solution?

Thanks

see more at AccendoReliability.com