

# Education



# PROTECTION

IS

# PARAMOUNT

## THE FACTS

According to educators, **one in five tablets are damaged every year.**<sup>1</sup>



At \$300 per tablet for a school of 400 students that's \$24,000 annually for repairs and replacements. Ideally, educators want devices to last up to four years. To achieve this goal, not only does device protection matter, the quality of the protection matters more.

The pace at which schools provide students with computers and tablets has grown steadily. With the onset of the Covid-19 pandemic, that process accelerated faster than anyone imagined when 56.6 million<sup>2</sup> students in the US switched to remote learning overnight. "During the first part of 2020, shipments of mobile PCs to America's K-12 school systems were up 28 percent over the year before, according to data from FutureSource Consulting, a U.K.-based market research firm."<sup>3</sup> Computers and tablets are now the primary connection with all students as opposed to just a few.

# FUTURE

# TODAY

Schools, districts and administrators are building strategies around mobile tech learning tools and what that looks like in the years to come. As budgets are developed, mobile tech and protective cases are standard line items for the foreseeable future. And that future envisions increased use of technology in schools for the following examples:



Greater interactivity between teachers and students



More hands-on, active learning experiences



Improved communication between teachers, students & parents



Increased use of video

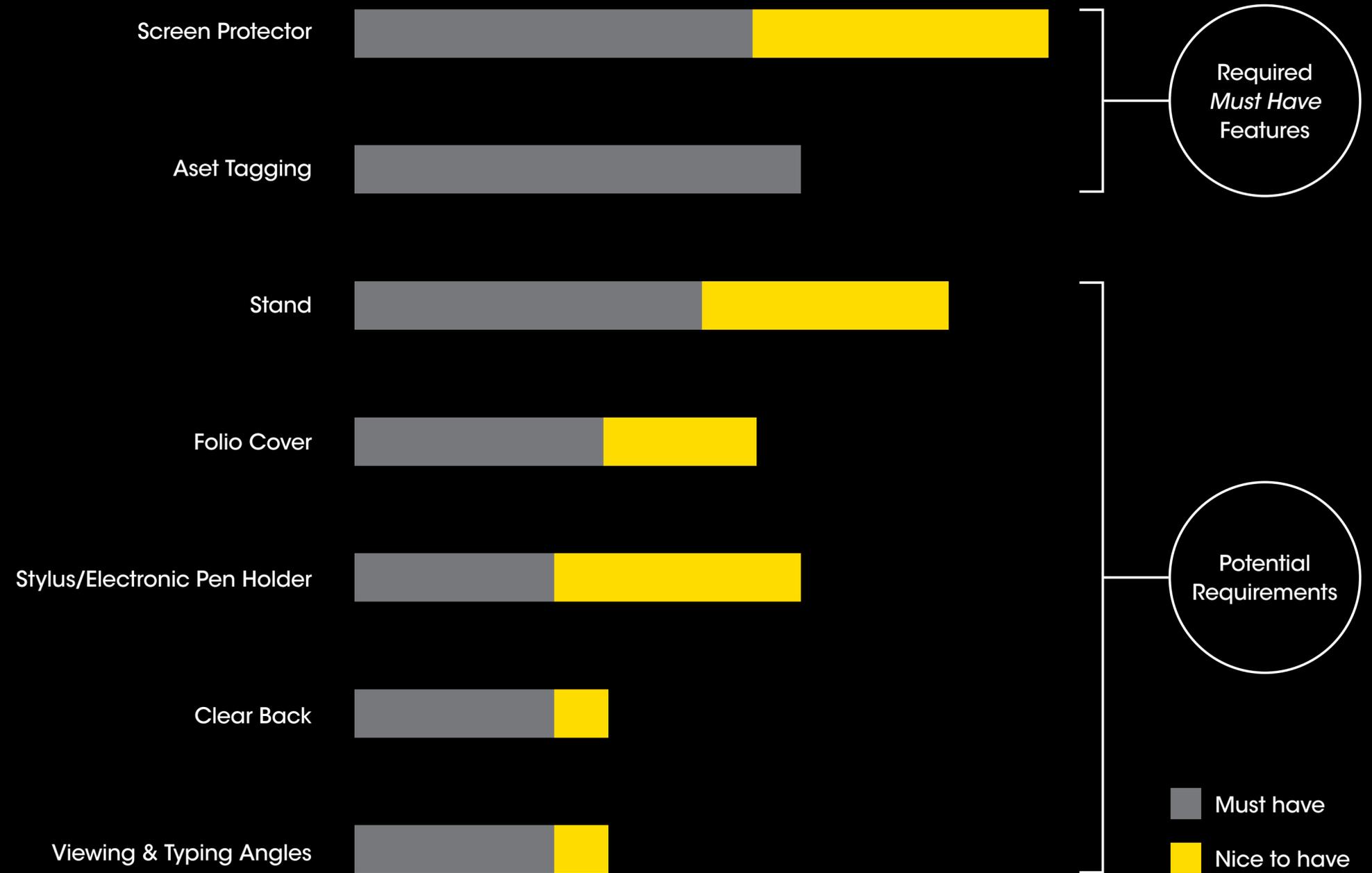
“I see video becoming more predominant where students submit their answers on videos. They use the webcams on their devices and submit the video as part of their grade. They’re not typing and writing the answers, they’re speaking them.”

—  
**Study Respondent, 2452 Mobile Protection Education Market Analysis & Opportunity**

# QUALITATIVE HYPOTHESIS

We also know the quality of a protective case matters as much as its price and features. To ensure high ROI and the longevity of devices OtterBox collected all the wants, needs and desires for protective cases from educators and wrapped everything into Unlimited Series. It's not a one-case-fits-all product. It's a case with a variety of configurations and add-ons that customize for age group and learning requirements.

The chart shown is a qualitative hypothesis of the relative importance of case features, based on respondent selections of Must Have and Nice to Have features from the list below.\*



\*These bar graphs reflect the number of times the respondents designated each feature as being a Must Have or Nice to Have feature of protective cases. The actual numbers are not shown, as these results are qualitative in nature, based on a small sample of n=16, and should be considered as hypotheses to be tested in quantitative research.

# UNLIMITED SERIES

Quality, versatility and durability should be top-of-mind for educators focused on student engagement. We incorporated learnings from past products to design improvements and refinements into Unlimited Series that answer educator requirements for protecting mobile learning devices, including meeting a 6 foot drop to concrete.

Provides excellent drop protection

Durable case that takes a beating

Easy for students at all grade levels to use

Slim design, not bulky

Protects the screen from dirt or dust particles

Good value price

# CASE CONFIGURATIONS & ACCESSORIES



↑  
**Unlimited SERIES**  
with Keyboard Folio



↑  
**Unlimited SERIES**  
with Folio



↑  
**Unlimited SERIES**  
with Kickstand



Screen Protector



Privacy Screen Protector



Kickstand



Kickstand &  
Hand Strap



Table Stand



Shoulder Strap

# CONFIGURATIONS

Unlimited Series case is configured three different ways to meet the demands of different learners and various ages in the learning process. From there, add-on accessories are available to further customize each engagement.

**ADMINISTRATORS CAN EQUIP TEACHERS WITH ONE SET OF TOOLS. AND NO MATTER THE CONFIGURATION, UNLIMITED SERIES GUARANTEES DURABILITY AND QUALITY.**



**TEACHERS**  
with one set of tools



**ELEMENTARY GRADES**  
with a different set



**HIGH SCHOOLERS**  
with yet another set

“Achieving 6 foot drop protection was our primary driver and it was a challenging engineering problem for us to solve.”

—  
**Lead Engineer, Michael Skahan**

A woman with blonde hair is focused on working on a smartphone case. She is using a pair of pliers to adjust a component on the case. The case is dark-colored and has a textured, reinforced appearance. In the foreground, there are two containers: a white one on the left and a teal one on the right, both containing small, light-colored parts. The background is a wooden surface.

“Using computer simulations, our designs went through several iterations to meet the competing goal of a slim case with a sleek look and a reinforced structure that prevails over 6 foot drops.”

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**Lead Engineer, Michael Skahan**

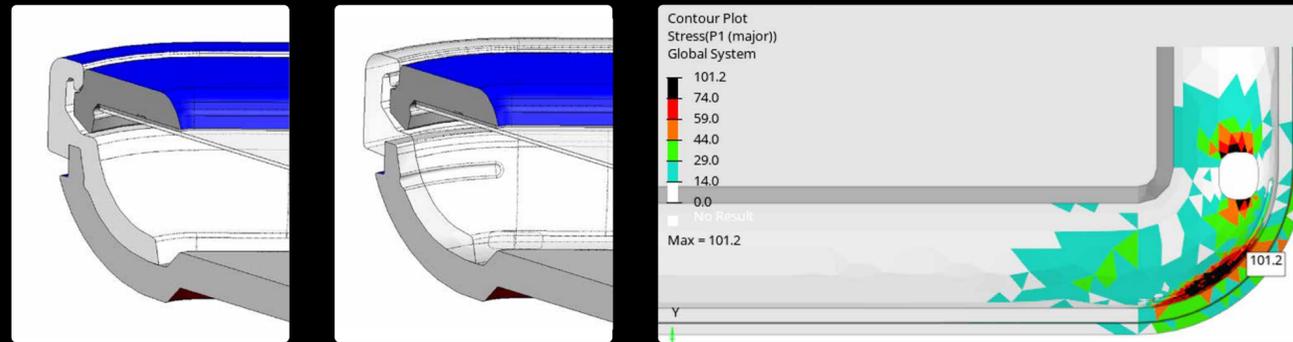
Working closely together to refine the design, industrial designers and engineers conducted rapid prototyping and testing to get the hard data that led to the final design with reinforced case corners and beefed up overall structure, all while keeping the final product slim.

# DROP SIMULATION

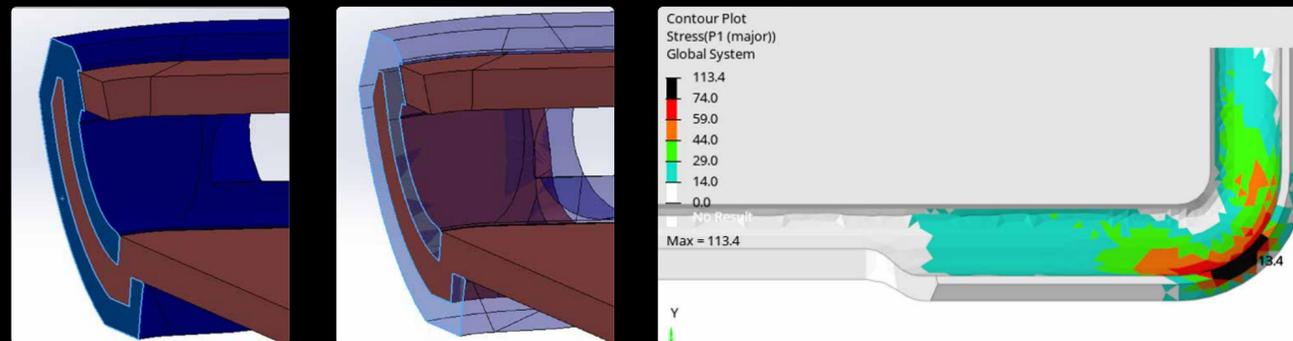
## COMPARE IMPACT STRESSES ON TABLET CASE

- Baseline case stresses were higher than chosen design.
- Final design reduced stress by 25% over legacy Unlimited cases.
- Several other designs were simulated before choosing this design.
- Other criteria were considered besides simulation results, such as manufacturability and long-term durability.\*

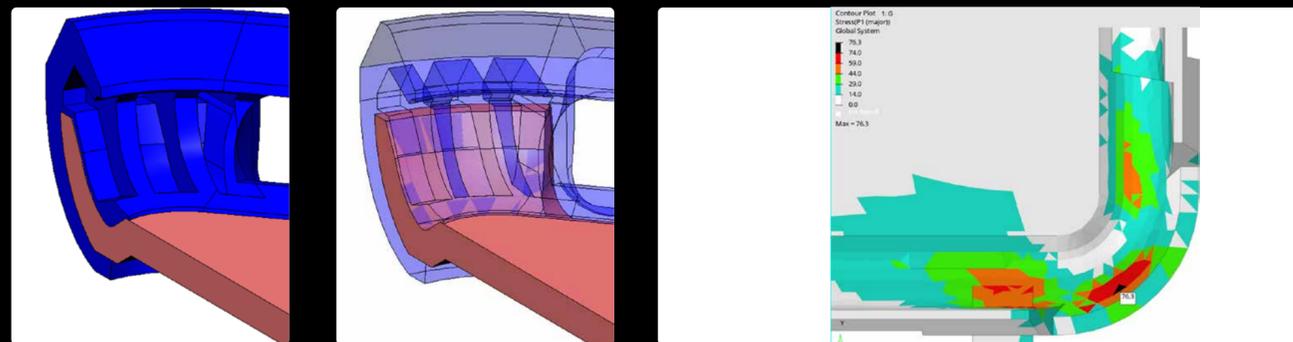
### Unlimited Legacy Design Max Stress 101



### Initial Redesign Concept Max Stress 113

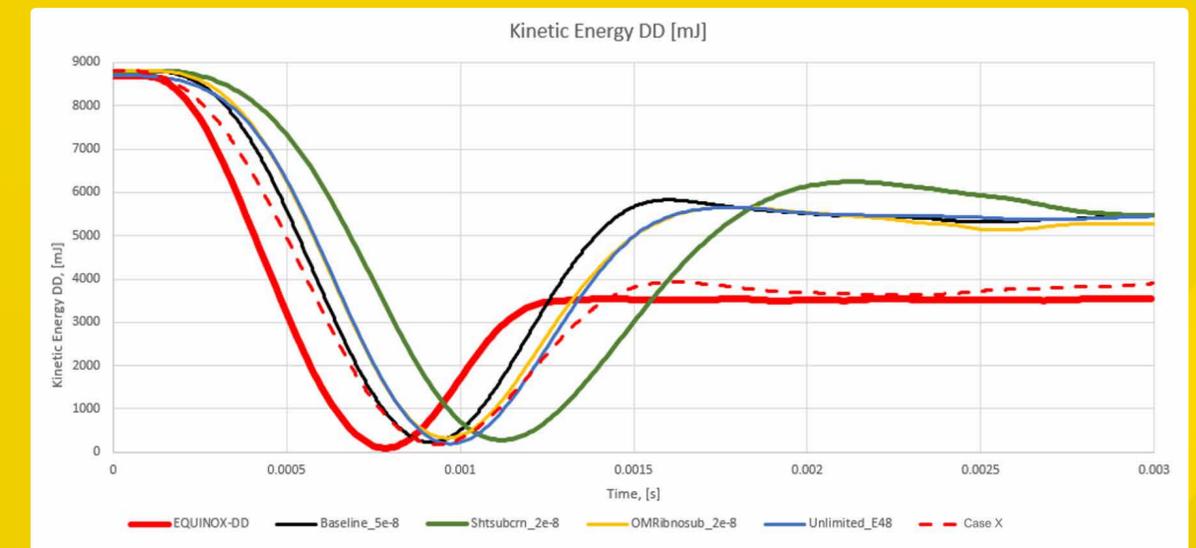


### Chosen Design Max Stress 76



## COMPARE KINETIC ENERGY OF DEVICE

- Following chart lines from left to right shows the change in Kinetic Energy of device over the drop cycle.
- Lowest KE (zero) occurs at impact rebound point.
- Amount of residual KE after impact is lower than before impact.
- The lower the residual KE, the more energy was absorbed by the device and case in the form of permanent deformation.



**Bare Device** —

**Baseline Design** —

**Chosen Design** —

- Results in higher residual KE after impact (higher bounce), which indicates less energy is absorbed by the device resulting in reduced permanent deformation.
- Results in slower impact and rebound cycle, which indicates lower impact deceleration and a softer ride for the device.

\*Simulation is one methodology used during the design process. It is used as a comparative tool only, to give a general direction for design decisions.

**OTTERBOX**

**DROP+**

**Testing includes dropping cases**

Considering not only students, but IT managers as well, Unlimited Series is easy to install — whether equipping one device or hundreds. And, Unlimited Series accessories are designed with the case so that everything snaps together with a slim form factor that still fits into standard charging carts.

**DROP TESTING**

“We take a case with a device in it and drop it 26 times onto corners, edges, face and back to concrete. Beyond that, OtterBox DROP+ testing protocol includes over 24 tests that prove every product we make is ready for anything. And, we back every product with a limited lifetime warranty.”

—  
**Test Engineer Manager,  
Matt Wilkson**

**26x**

**IS EXTENSIVE**



# OTHER CONSIDERATIONS

Unlimited Series includes a removable pencil holder that comes standard. This makes it easy to add onto the case when deploying an Apple Pencil or to remove when not. And, Unlimited Series redirects audio forward to the student for optimal listening.

OtterBox understands the investment educators make in student technology and the need to protect that investment. Listening to educators and through in-depth design, meticulous engineering and expansive testing, **OtterBox delivers reliable products that protect critical learning tools and guard schools' ROI by decreasing the instance of damaged devices.**

# PARTNER IN PROTECTION

We are committed to providing the toughest cases for education. We're also committed to being a trusted partner. We invest in research, engineering and innovation that delivers the product quality, price and warranty educators demand. When you choose dependable OtterBox products to protect your technology investment, you're also choosing a trusted partner invested in your success and the success of your students.



## FOOTNOTES

**1** 2452 Mobile Protection Education Market Analysis & Opportunity, May 2019

**2** In 2019, approximately 56.6 million students attended elementary and secondary school in the United States. [www.educationdata.org/k12-enrollment-statistics](http://www.educationdata.org/k12-enrollment-statistics)

**3** During the first part of 2020, shipments of mobile PCs to America's K-12 school systems were up 28 percent over the year before, according to data from FutureSource Consulting, a U.K.-based market research firm. [www.edweek.org/technology/schools-handed-out-millions-of-digital-devices-under-covid-19-now-thousands-are-missing/2020/07](http://www.edweek.org/technology/schools-handed-out-millions-of-digital-devices-under-covid-19-now-thousands-are-missing/2020/07), July 23, 2020

Last year, American schools bought about 30 million laptops and tablets. [www.washingtonpost.com/technology/2020/08/10/laptop-buyers-guide-distance-learning](http://www.washingtonpost.com/technology/2020/08/10/laptop-buyers-guide-distance-learning), August 10, 2020 at 4:00 a.m. MDT