



2023–2024
12–Pages

CTE + STEM

Anytime, Anywhere!

**A K12 IT Director's
Guide to Equip
Every Student for
CTE & STEM
Learning From
Anywhere**

**+Bonus Guide!
Are Your
Chromebooks
Expiring?**

itopia.com/students

Google Cloud

INDUSTRY SOLUTION —
TECHNOLOGY

**Partner
of the Year**

Education

2023



Introduction

Gen Z's "Zoomers" and their younger counterparts are dissatisfied with classroom education. They don't want to be locked into learning approaches they don't believe will prepare them for the future.*

Governments are encouraging STEM education and CTE labs in schools, but their supplemental resources were limited, and now — in the post-pandemic period — they're shrinking fast.

Digital learning is key to the adaptable, tech-centric education that is vital to our youth and America's future. But access remains too limited and too costly for districts to maintain. Can technology open the classroom, delivering a better learning experience for all?

Kyra's Story

Kyra is a middle school student, passionate about digital storytelling. She dreams of traveling and discovering new ways of telling the stories of people who are rarely seen and heard from.

Kyra's smartphone isn't the latest model, but it lets her take videos, and she's downloaded apps for simple editing. Her school's CTE Lab has Adobe® Creative Cloud that lets her experiment hands-on with every element of a digital story: text, image, illustration, narration, music, and video. But she can only use it when the CTE lab is open — and when she's available, too. Her Chromebook™ won't run the high-powered apps she needs, especially for graphical editing and rendering.

At 7:15 on a Tuesday night, Kyra is working on a slide show with a study group online, but she grows bored, begs off for the night, and shuts her Chromebook. She picks up her phone and begins flipping through copyright-free images she could use to illustrate a story. She tries to imagine how the finished story would look and sound.

Kyra gazes at the phone in her hand. It isn't just the CTE lab that's closed. Her school isn't doing enough to help her prepare for the future she believes in.



Tech That Fulfills Dreams

Students aren't afraid to work. Their dreams are vivid, and they've grown up with technology like no other generation. It lies at the center of their identities and relationships, and they want it at the center of their education and future. Their belief, magnified by pandemic disruptions, is that learning resources being provided to them were founded on outdated assumptions about their needs. And the tools that are vital to their future are too out of reach. Like Kyra, today's students are not satisfied with their education*.



itopia believes we can better meet Kyra's needs and those of millions of other American students by providing secure access to every needed digital learning tool from anywhere on any device. With itopia and Google Workspace™, school districts can quickly, easily, and inexpensively provision their students with secure access to computing resources — including high-powered, memory-intensive apps like those common to STEM curricula and CTE labs. And they can do so while delivering an identical learning experience for every student, regardless of the platform being used. The only technical requirement for using itopia is a secure web browser. It can be deployed on PCs, laptops, and Chromebooks, or within any hybrid device landscape.

CTE Learning That's Secure and Affordable

Keeping Access Equal

Access to technology still divides our students into digital haves and have-nots. Despite federal and state legislation and funding designed to break down barriers, digital learning resources too often are not fully available to many students.

To achieve equity in education and provide the quality experiences students demand, they need access to the digital learning resources of their CTE labs without having to book time in those labs. And itopia and Google Workspace make this possible

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itopia enables students to securely access CTE apps through a web browser. School districts can securely deliver anywhere-anytime access to memory-intensive apps like CAD, video editing, and code creation: apps that are essential to STEM and creative learning.

It's time to break the lock and open the labs 24/7, enabling secure, on-demand access to the apps our students want and need.

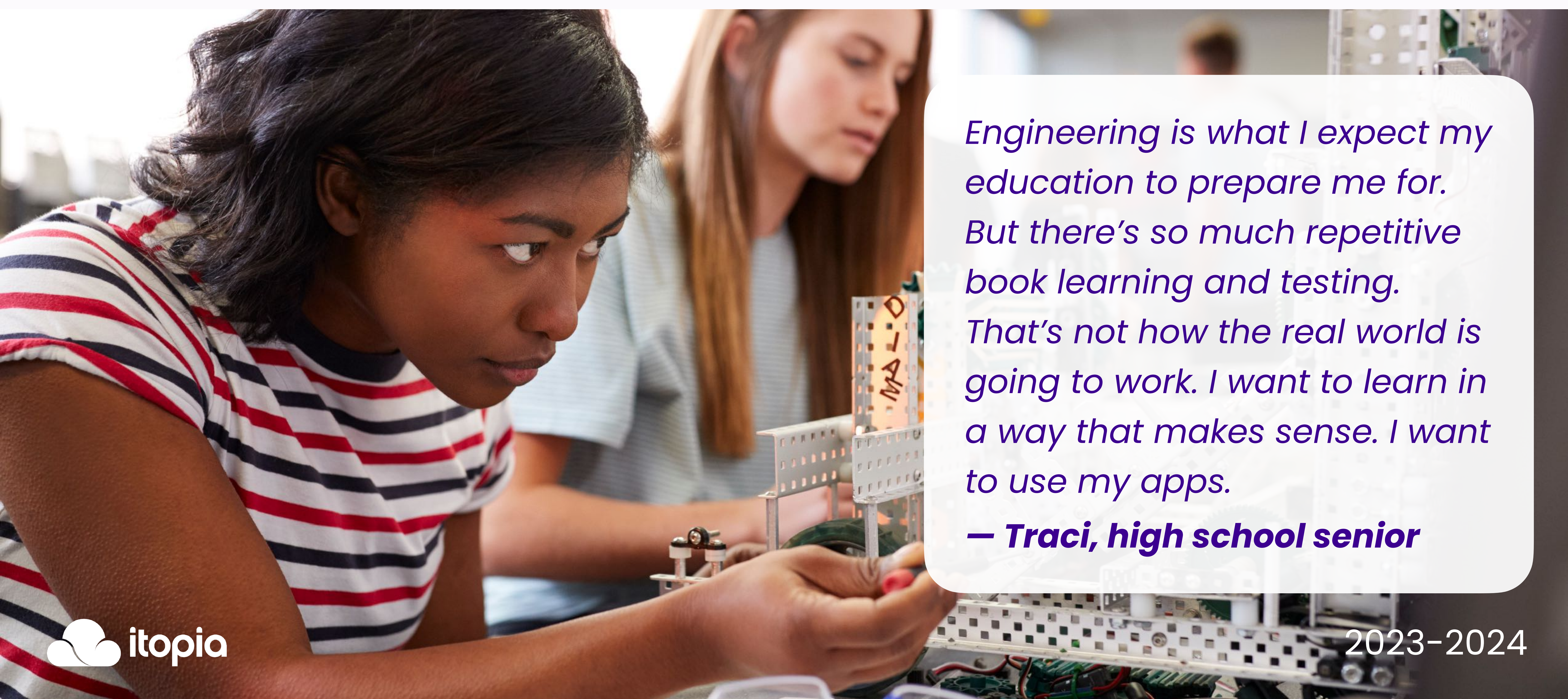
Keeping Students Engaged

Whatever one believes about our students' educational experiences during the pandemic, digital learning saved the day, providing a critical pathway to learning when brick and mortar classrooms were closed by government mandate. But it also exposed another digital divide: an engagement gap between how students were learning and how their overall curricula were supporting them.

CAD software, for example, is essential to engineering-related studies. But what do students do — after hours or at home on weekends — when CAD apps aren't available to them? Those who are forced to transition from learning on CAD platforms to schoolbooks and back, due to the availability of resources, are at greater risk of disengagement from their coursework.

Breaking down this resource barrier and incorporating CAD and other CTE apps throughout their studies, no matter where students are studying, is a powerful way to keep them engaged and learning.

"I'm not going to get stuck with a minimum wage job. I know I need an education. But school isn't giving me the chance to explore what I want to explore. I feel like I'm being prepared for somebody else's idea of what I'm supposed to do with my life." — Joel, high school junior



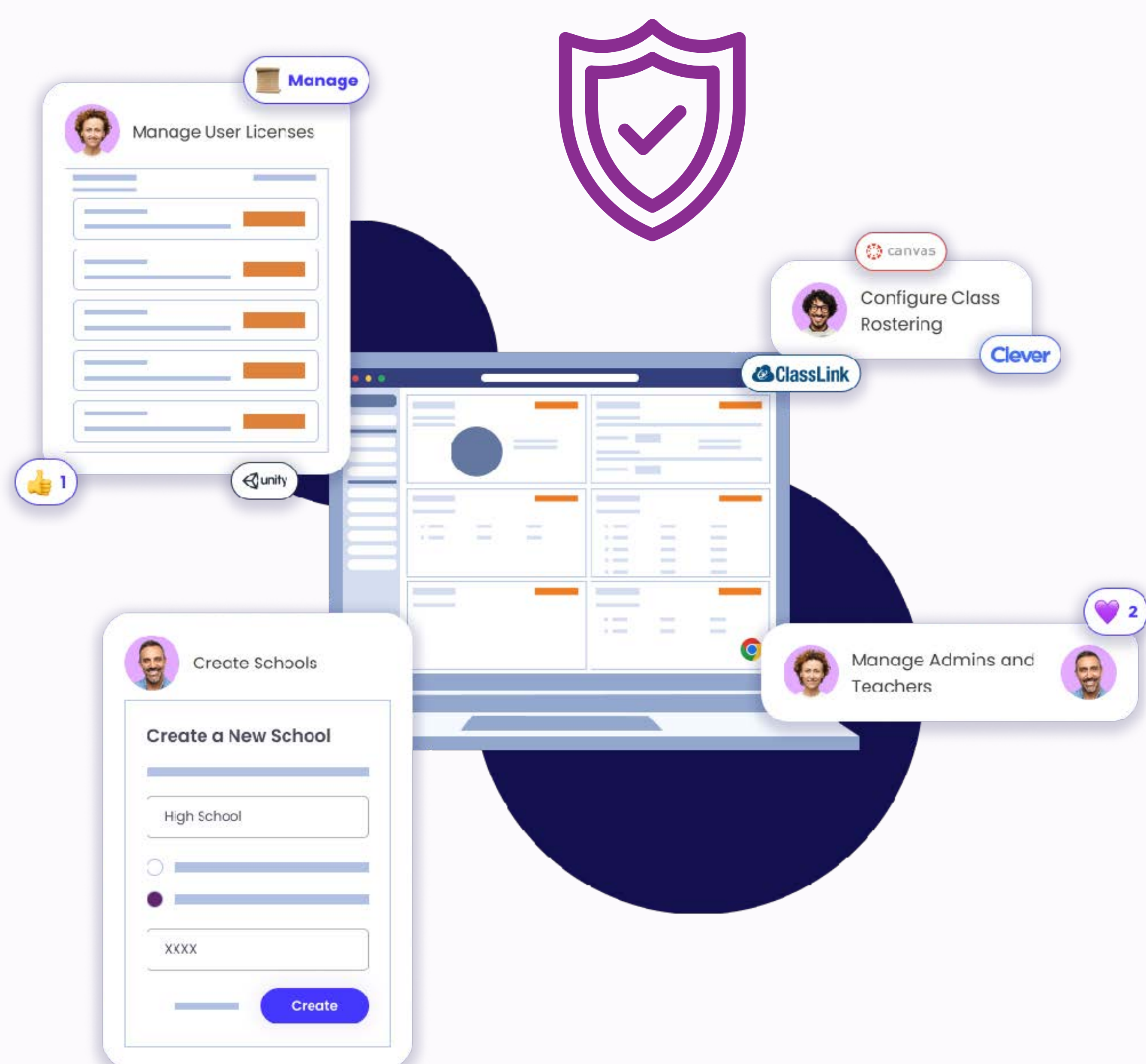
Engineering is what I expect my education to prepare me for. But there's so much repetitive book learning and testing. That's not how the real world is going to work. I want to learn in a way that makes sense. I want to use my apps.
— Traci, high school senior

Keeping Computing Secure

Securing access to computing resources can quickly encumber students who just want to learn. Through seamless integration with the built-in and automatically maintained security protocols in browsers and Google Workspace, itopia delivers access to CTE resources with minimum barriers for students, while providing district IT professionals with customizable security controls.

Google Workspace supports sandboxing of OS identities and user profiles, plus multiple layers of data encryption and security checks, as well as single sign-on. Students authenticate once and begin learning. Their computing is safe and secure, with data protected and access managed from anywhere the devices are being used.

Centralized Management + Security



"My students deserve the best I can provide, but I also need to keep them secure or it's just chaos. I keep them safe by managing what they can access in a way that's unobtrusive for them."

— Ally, District IT Manager



Keeping Management Costs Low

CTE resources are often limited because of the cost of keeping lab technologies updated and secure. But this translates to higher, ongoing management costs — and still higher costs incurred periodically as labs are refreshed and re-outfitted.

itopia equips districts to fully leverage Google Workspace and its seamlessly integrated suites of apps, including apps for engineering, software development, and creative design, among others.

itopia enables powerful computing resources that can be quickly and securely provisioned, managed, and supported.

itopia provides CTE labs without walls to fully enable digital learning for every student who can access a web browser.

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It's no contest when it comes to maintaining a suite of cloud apps vs. on-premises apps. But making them available through browsers takes managing those environments to the next level. — Sam, District IT Director



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itopia Opens Classroom Doors

itopia CloudApps Classroom radically transforms digital learning by eliminating walls so access to apps from anywhere becomes a daily reality. itopia does this by streaming apps to students anywhere on any device through their browsers. Students get secure, single sign-on access to hundreds of industry apps, along with features that make them easy to access and manage, including:

- Consistent, simple-to-manage and secure digital experiences;
- Zero cloud infrastructure or image management;
- Instant access to virtual apps, with zero cloud infrastructure or image management;
- Powerful experiences for graphics-intensive apps that require video editing and 3D rendering at high resolution;
- Seamless integration with Google Workspace and Google Classroom for easy rostering of students and teachers, plus full integration with Google Drive™ for saving projects and work.

Apps available through itopia include: Adobe Creative Cloud, Autodesk CAD/CAM, Eclipse Git, IDE, IIS, Java 16, NetBeans, Node, O365, PHP, Pygame, PLTW, Python, Visual Studio Code, GMetrix Practice Tests, and many more.

Single Sign-On + Easy Rostering



itopia Reduces Chromebook e-Waste



School districts have worked hard to give their students access to computing, and more than 70% have turned to Chromebooks as a low-cost pathway. While these simple devices have been a boon to districts and students, their expiration is beginning to pose expensive new challenges.

“Google imposes expiration dates [on Chromebooks], even if the hardware still works,” according to a recent article in The Wall Street Journal. “This year, Google ceases support for 13 models. Next year, 51 models will expire.”

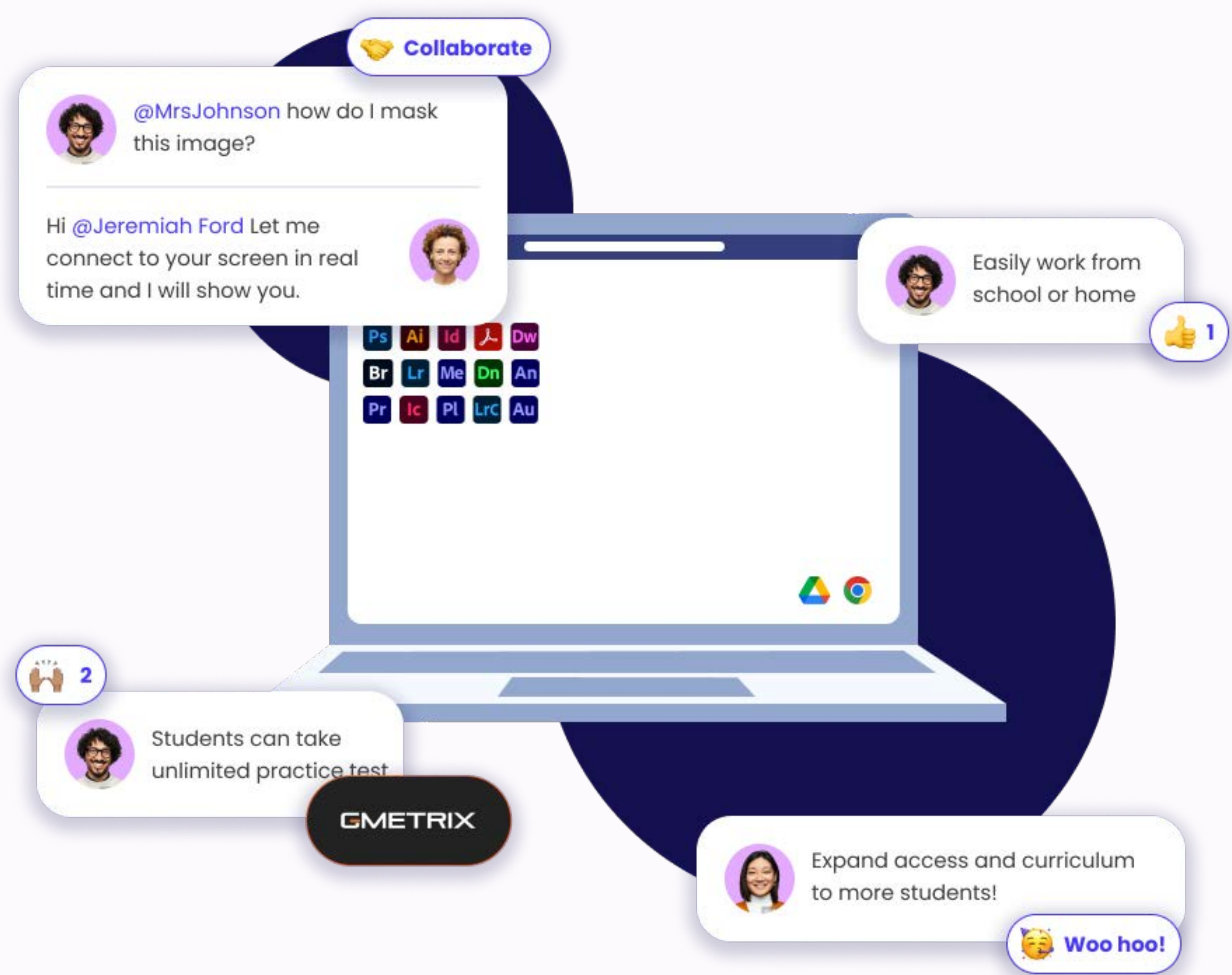
When they expire, school districts are faced with discarding them as e-waste: an expensive proposition. A recent report by the US Public Interest Resource Group (PIRG) found that “Doubling the lifespan of Chromebooks could save public schools — and taxpayers — an estimated \$1.8 billion....”

itopia delivers relief from costly e-waste disposal now. itopia CloudApps Classroom extends the shelf life and productivity of Chromebooks. Those nearing expiration can still function as browser-based devices, and itopia offers browser-based access to a variety of apps. Older Chromebooks — even without software updates — can still access and run these apps without any local installation, greatly extending the functional lifespan of a Chromebook.

itopia Opens Classroom Doors, Cont'd

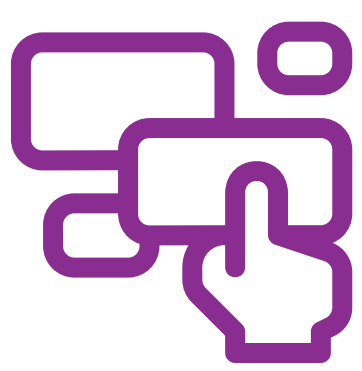
Apps available through [itopia CloudApps Classroom](#) include: Adobe Creative Cloud, Autodesk CAD/CAM, Eclipse Git, IDE, IIS, Java 16, NetBeans, Node, O365, PHP, Pygame, PLTW, Python, Visual Studio Code, GMetrix Practice Tests, and many more.

Access Apps and Collaborate



Take the Next Step

Visit this [link to begin a self-guided test drive](#) of itopia CloudApps Classroom. To learn more about stretching the lifespans of and usability of Chromebooks while reducing e-waste, read the sidebar to your right and the **Bonus Guide**, “Are Your Chromebooks E-Waste” below.



What the Survey Says



Gen Z (“Zoomers”), including ages 15 to 25, are America’s first generation immersed in technology and social media throughout their lifetimes. They will soon be the nation’s leaders and largest block of voters. Their views about the relevance of their education today are vital. Their knowledge and ideas, informed by their education, will matter to the world. A recent survey offers insights.

“Zoomers do not believe their educational experience will adequately prepare them for life after graduation. While half express positive sentiment about returning to school, one third of high schoolers are not very confident about their future. Nearly all want learning opportunities that help them gain skills for the real world or obtain good jobs after graduation but say they aren’t readily available.”

**From “Checking in with Gen Z,” by John Della Volpe, Director of the Harvard Youth Poll, and Murmuration, in partnership with Walton Family Foundation. Fall 2022.*

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About itopia

itopia has received the 2023 Google Cloud Industry Solutions – Tech Partner of the Year for Education Award for closing the “app gap,” making high tech education accessible for everyone. itopia’s “i-streamr” streaming technology, that powers itopia CloudApps Classroom, works on every browser and every device.

It’s a secure, cloud-based platform that enables students to stream more than 100 critical industry apps from anywhere! It’s improving education equality through better accessibility and is being rapidly adopted by leading school districts as the ultimate add-on to STEM, fine arts, and career and technical education (CTE) curriculums.



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Are Your Chromebooks Expiring?

- itopia turns expensive e-waste into valuable learning experiences for your students
- Plus other ways to leverage secure, browser-based app streaming for equitable learning

It's True. Chromebooks Have an Afterlife.

Even without software updates, Chromebooks can still be usable browser-based devices. And [itopia CloudApps Classroom](#) offers browser access to 150 apps. Aging and expired Chromebooks can run them, stretching their lifespans by years. Here are reasons to turn e-waste into great learning experiences with itopia.

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Extending Device Lifespan

With [itopia](#), even if Chromebooks reach their expiration date or other devices become outdated, they can still be used as thin clients to access cloud-based desktops. This approach can potentially double or triple the effective lifespan of devices in educational settings.



Minimizing E-Waste

Since devices can be utilized for longer, fewer devices end up as e-waste. The focus shifts from the physical device to the virtual environment, promoting a more sustainable approach to IT in education.



Extend Your Infrastructure

[itopia CloudApps Classroom](#) integrates seamlessly with Google Workspace, Google Drive, and Google Classroom. Leveraging the Google ecosystem for students extends the capabilities of your Chromebooks.



Keep the Learning Experience Relevant

Your Chromebooks – even those that expire – can become portals to access [itopia CloudApps Classroom](#). With itopia's browser experience for even complex, graphics-intensive apps, students are assured of access to the latest versions of educational software.



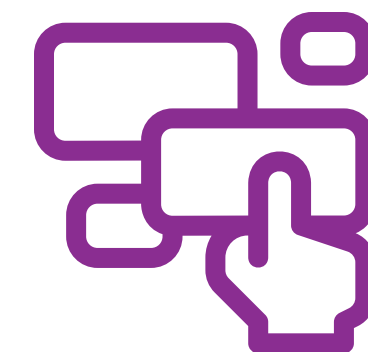
Take Learning to the Cloud

Enable Learning Anytime, Anywhere



Device Security

Data in a virtual environment is stored centrally and not on individual devices. This minimizes risks associated with lost or stolen devices. Moreover, the centralized nature allows for better security protocols and regular backups.



Ease of Management

Virtual desktop infrastructures like those offered by itopia centralize much of the IT management. This centralized approach can simplify tasks like software deployments, updates, and troubleshooting, reducing the strain on IT teams.



Access to the Latest Software

itopia's cloud-based solution allows for centralized software updates, ensuring all students and staff have access to the most recent applications and tools without depending on individual device capabilities or update cycles.



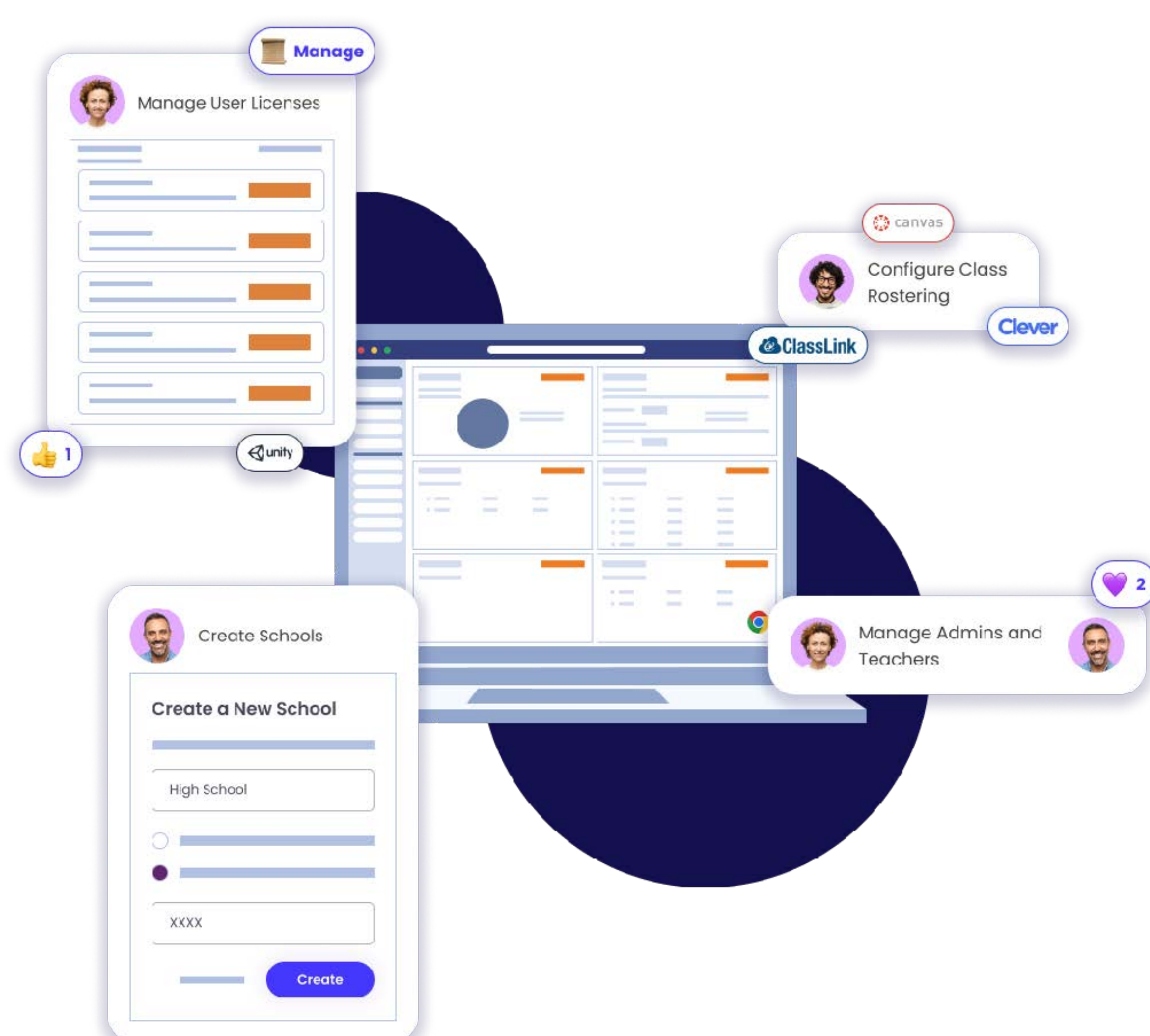
No Long Tail Legacy

With itopia, schools don't have to grapple with outdated legacy systems. As technology evolves, the virtual environment can be easily updated to stay current without the need for massive overhauls or migrations.



Stream Adobe and 150+ Apps in a Browser

Quickly Setup Schools & Classes



Give Students Access to Top Apps

