What We Announced at Connect 2021

Below is the news shared today at Connect.

Each of these items are part of [the foundational work we're doing in an effort to help build the metaverse](). The metaverse will feel like a hybrid of today's online social experiences, expanded into three dimensions, which is why hardware like VR headsets and AR glasses and their corresponding platforms are so important.

VR news
VR is at an inflection point. Led by the release of Quest 2, more people are jumping into VR with more to do. We shared updates about how we're scaling the VR ecosystem — games are booming, VR is getting more social, fitness is becoming a hot vertical, and we're building out more ways VR can be used as a work device. And, we continue to invest in the developer community to help them build and monetize their applications through new tools and features.

New VR hardware preview:
- **Project Cambria:** We showed a sneak peek of our next-generation all-in-one VR hardware, Project Cambria, launching next year. This isn't a Quest 2 replacement, or a Quest 3. Project Cambria will be a high-end device at a higher price point, because it's going to be packed with all the latest advanced technologies, including improved social presence, color Passthrough, pancake optics, and a lot more. It's going to bring us a step closer to the metaverse and we're excited to share more in the future, so stay tuned.

Gaming:
- **Grand Theft Auto: San Andreas:** The Rockstar Games classic, Grand Theft Auto: San Andreas is currently in development for Oculus Quest 2. This new version will offer players an entirely new way to experience this iconic open-world in virtual reality.
- **Vertigo Games Partnership:** Oculus is partnering with Vertigo games to bring a total of five games to the Oculus platform.
- **Beat Saber update:** Beat Saber surpassed $100 million in gross lifetime revenue on the Quest platform. We also shared a teaser for a new update, coming soon.
- **POPULATION: ONE ongoing updates:** POPULATION: ONE will be offering a double XP weekend October 30-31 tied to its Halloween event that went live last week. Next month, they'll launch an Autumn event, followed by a Winter Wonderland update in December. Since launch last October, POPULATION: ONE has seen more than 5 million friend connections made in-game, as reported by BigBox VR, the title's developer.
- **Blade & Sorcery launch date:** Blade & Sorcery: Nomad is launching exclusively for the Quest 2 on November 4, 2021.

Social VR:
- **Introducing Horizon Home**: Soon when you join an Oculus Party you'll be able to invite your friends into a new social version of your Home where they'll be embodied as their avatars. You'll be able to spend time together with friends, co-watch videos together, and launch games and apps together
- **Messenger calling in VR:** Soon you'll be able to communicate with your friends across all your apps and devices -- including Portal -- with Messenger calling in VR coming later this year. From anywhere in VR, you'll be able to invite your Facebook friends to join a Messenger call and eventually spend time together or travel to VR destinations.

Fitness:
- **New fitness offerings on Oculus:** Supernatural boxing, new FitXR fitness studios and Player 22 by Rezzil, which is currently used by pro athletes, is adding guided and hand tracked bodyweight exercises.
- **Active Pack for Quest 2:** We're making a fitness accessories pack that makes Quest 2 more comfortable, with controller grips for when things get intense, and a facial interface that you can wipe the sweat off, making your sessions more comfortable. That's coming next year.

[VR for Work:](#)
- **Quest for Business, including Work Accounts support on Quest 2:** Our new business offering will bring work capabilities into consumer Quest devices, including the ability to log into Quest 2 with a Work Account instead of your personal Facebook account. It will also bring businesses the tools they need, like account management, IDP & SSO integration, Mobile Device Management and more. Beginning to test this year; fully available in 2023.
- **2D apps coming to Quest in Horizon Home:** We announced that services like Slack, Dropbox, Facebook and Instagram, and many more will soon work in VR as 2D panel apps in Horizon Home -- so you can multitask, cross things off your to-do list between gaming sessions, and stay connected while in VR. This starts bringing some of your favorite 2D internet services into the metaverse. You'll see the first 2D apps in the Store today, including Facebook, Instagram, Smartsheet, and Spike. More apps will follow soon, like Dropbox, Monday.com, MURAL, My5 (UK), PlutoTV, and Slack - all built using the Progressive Web App industry standard.
- **New personal workspace environment in Horizon Home:** A place to focus and work using the new suite of 2D panel apps, or just check a few things off your to-do list.
- **Workrooms customization**: For Horizon Workrooms, we're working on launching the capability to customize your Workroom with your company logo, posters, or designs.

Oculus Developers:
- **[Presence Platform:](#)** We will unveil Presence Platform, a broad range of machine perception and AI capabilities that will enable developers to build mixed reality experiences on the

Quest platform. A realistic sense of presence will be key to feeling connected in the Metaverse, and Presence Platform's capabilities deliver on this promise with things like environmental understanding, content placement and persistence, voice interaction, and standardized hand interactions. Presence Platform consists of three offerings we're announcing today: Insight SDK for developing mixed reality experiences, Interaction SDK to make it easier to add hand interactions to apps and Voice SDK to make voice input a part of the experiences they build.

- **Progressive Web Apps (PWA):** We're rolling out the tools to allow any developer to start creating and testing PWA apps on Quest devices. In the near future developers will be able to ship their PWAs to App Lab. PWA developers will be able to submit app packages to Oculus, and their apps will show up in either the Oculus Store or App Lab. PWA apps stay up-to-date without requiring app package updates since they display live content from the developers' site. This will allow developers to transform the 2D experience of their websites into an app on Oculus. PWAs in App Lab can also use WebXR.
- **WebXR:** We're excited to share a couple updates coming soon that'll help with discoverability for WebXR experiences:
    - Support to share URLs from your phone to your Oculus headset via the Oculus App and Share link from Oculus Browser to a FB feed, FB Group and Messenger. Both will dramatically increase the ease of accessing WebXR context and will encourage sharing of WebXR experiences.
    - A redesign of the Oculus Browser New Tab Page to better feature WebXR experiences.
- **Avatars 2.0 SDK:** Earlier this year we announced an overhauled version of Avatars in VR. We're excited to share that the SDK will be made available in December.
- **Cloud Backup:** We'll be launching a new Cloud Backup system later this year, allowing users to backup their device's app data, like game progress or settings, so they can easily pick up where they left off in a game. It works at the filesystem level, with no coding required.
- **Application Spacewarp:** Application Spacewarp is a new feature that achieves a step function improvement in both performance and latency, at a magnitude that we didn't think was attainable. It's one of the most substantial optimizations that we have ever shipped to Quest developers. In our initial testing, Application SpaceWarp gave applications up to 70 percent additional compute, potentially with little to no perceptible artifacts.
- **Oculus User Notifications Platform:** Later this year, we'll roll out the Oculus User Notifications Platform, enabling developers to connect with their users in and out of VR through the use of notifications. These notifications can be sent to the Oculus mobile app as well as in VR with rich response functionality.
- **Multiplayer:** Later this year, we'll be adding the following Multiplayer capabilities: a direct invite APIs that lets you send invites directly from your own UX, a new channel into your app from our discovery surfaces called Ask to Join (existing integrated apps get this for free), ways to more easily friend other users and discovery opportunities in VR and 2D. We also built a new multiplayer sample called SharedSpaces to help developers get started with the new social platform APIs. Available for Unity and Unreal 4.

Rebrand for Facebook Reality Labs and hardware products:

- In alignment with our new company brand announced today, we'll be updating our org name from Facebook Reality Labs to Reality Labs to better make the connection that our org is building the technology that will enable the future metaverse. Our mission remains the same: "to build the tools that help people feel connected anytime, anywhere."
- Across our current lines of hardware in-market, we'll be bringing our brands and products closer to Meta, which is the umbrella for all our products and services. When people buy our products, we want them to clearly understand that all of these devices come from Meta and ladder up to our metaverse vision.
- VR will be the most immersive way for people to access the metaverse and we want to make it clear that Quest is a Meta product. For this reason, we're simplifying our brand architecture and shifting away from the Oculus brand. Starting in early 2022, you'll start to see the shift from Oculus Quest from Facebook to Meta Quest, and from Oculus App to Meta Quest App over time. While we're retiring the Oculus name, the original Oculus vision will remain deeply embedded in how Meta will continue to drive mass adoption for VR today.
- You can learn more in a post from Boz, [here](#).

Augmented Reality News

As VR hits an inflection point, we're investing in the core technology and work needed to bring fully-featured AR glasses to market. While we've packed in as much technology as we can into good looking glasses today with Ray-Ban Stories, we're also working toward fully-featured AR glasses. And while we wait for the hardware to be able to deliver an experience like we just spoke about, we're cultivating the content, capabilities, and communities that can enrich Facebook experiences today and illuminate the path to AR glasses ahead.

New AR hardware preview:
- **Project Nazaré:** We shared the code name for our first full augmented reality glasses and more about one of the experiences we are building for them. We showed a concept of coordinating with friends on WhatsApp, selecting a game and placing it on your table to play an augmented reality game with far away friends. There's a lot of technical work to get this form factor and experience right, but we're making good progress.

[*New Spark AR momentum stats*](#)

We shared new capabilities designed to help us unlock more sophisticated and complex AR experiences in the world, shared more about our investment in expanding access to AR creation, and more about how we're cultivating a successful creator ecosystem.
- With Spark AR, our AR platform for creation and distribution across our apps and devices, we're seeing a lot of people engaging with AR technology today:
  - More than 600K creators have published more than 2.5 million effects across our platform (June 2021)
  - More than 700M people use AR effects across Facebook apps and devices every month (New)

New Spark AR capabilities

- **Geo-locked experiences for public spaces:** New capabilities that allow for location-locked effects that link together in a cohesive, long-form experience, using multiple AR activation points. For example, imagine a theme park scavenger hunt or guided tour of monuments in a city center. Currently testing with Spark Partner Network, opening to all creators in 2022.
- **Body Tracking and Hand Tracking:** New capabilities to enable more fantastical, fun and imaginative self-expression through AR effects. Foundational work to unlock people-centric forms of input and virtual object interaction in AR. Coming in November.
  - Body Tracking detects, tracks, and augments a person's body and joints to activate AR effects. For the first time, people will be able to animate and express themselves using all or parts of their body, including body-part swapping, fantastical superpowers, theatrical motion graphics and more.
  - Hand Tracking detects, tracks and augments a person's hand to activate AR effects that will enable fun and entertaining short-form videos, such as performative acting, comedic skits, or showcasing creative skills. This is the first of a multi-phased capability rollout that will support the hand bounding box only, not support any hand gesture recognition.
- **Virtual Objects Pipeline:** Introducing a new pipeline in Spark AR Studio, with the ability to create and place 3D objects in the real world that can include text, characters, GIFs, stickers and more. To ensure realistic performance, this will also include underlying technical capabilities like depth, occlusion, and improved plane tracking. This will be available in private beta later this year and opening to everyone in 2022.
  - Virtual objects are critical to the future of AR and the cornerstone of continuity in the metaverse. Built on Spark AR, these objects will be versatile and scalable across different surfaces and use cases like commerce and shopping, with virtual try-ons and product previews.

Helping creators to be successful
- **Polar (codename):** a new, free iOS app that makes it easy to imagine, create, and share AR effects and filters without needing to code or work in the Spark AR Studio. Creators will be able to extend their personal brands, art and creative vision in new ways - like a virtual sticker with their own tagline, or a piece of swag they can share during an AMA. Opening applications to the closed beta program for iOS later this year.
- **$150M Immersive Learning education program:** Aimed to help create economic opportunity for AR/VR creators and developers, ranging from new training and career development resources, to new content and technology partnerships.
  - [**AR Curriculum expansion**](): After over 22K creators enrolled in our AR Curriculum program in less than a year, we're expanding the Spark AR Curriculum to include additional AR training courses - including a new "AR Pro" course - as well as a formal Spark AR certification program.
  - **Spark AR Certification:** For the first time, we'll provide AR creators with a formal pathway and program to demonstrate their knowledge and proficiency of Spark AR, and

to earn a Facebook Certified Spark AR Creator credential. The first exam will take place in November and registration will open soon.

- Creators that earn the Spark AR Certification will get access to Facebook Certification Career Network. This job-search platform features 60+ companies looking to hire skilled talent, including agencies like BBDO, Havas Media, GroupM, and more.

○ **Partnerships:** We're working with game engine developer Unity to help people gain the skills necessary for creating incredible VR content, bundling Unity's "Create with VR for Educators" tool and training with our Quest 2 devices for nonprofits and educational institutions and also partnering with a number of institutions to help bring their visions for immersive and collaborative learning experiences to life—VictoryXR and BYJU'S FutureSchool; nonprofits like Generation, Urban Arts Partnership, and the Peace Literacy Institute; and learning organizations, including a number of historically Black colleges and universities.

Research

Immersive all-day experiences will require a lot of novel technologies. And for the last seven years, our Research team has been working on a broad array of technologies that are necessary for these next-generation platforms.

- **Codec Avatars:** At Connect, we showed one our latest full-body Codec Avatars in a 3D reconstruction of a real-world location, as well as our progress on hair and skin rendering and relighting of avatars.
- **EMG Input**: We also showed -- for the first time -- how EMG input technology from the muscles on your wrist could one day allow you to send a message in AR with your hand resting comfortably at your side -- or even sitting in your pocket without ever having to look at a screen.
- **Project Aria:** We also demoed a series of assistant-related experiences enabled by Project Aria, our initiative to accelerate research into AR glasses and LiveMaps that we discussed last year. The demo offers an early glimpse of the sort of intuitive, low-friction AR interface that contextually-aware AI plus EMG input technology will one day bring to us.
- But in order to keep building the future of AR, we're going to need a greater variety of first-person data from real-life situations that we can use to train digital assistants.
  ○ Starting in November, we'll open up Project Aria participation in the countries where we are already collecting data to a wider group of Facebook employees and contractors, as well as to external, paid research participants, bringing the total number of devices in use to about 3,000.
  ○ We are also expanding the Project Aria partner program, which we started last year with Carnegie Mellon University, by making glasses available to the National University of Singapore, as well as other university partners in the future.
  ○ We're also proud to announce our first industry partnership with BMW. We think that AR glasses could eventually help drivers navigate their surroundings. Before we can get there, partners like BMW are interested in exploring how AR technology could integrate

into tomorrow's vehicles. This partnership will also help our researchers explore how AR glasses, which will rely on visual cues to identify their location, can situate themselves in a moving car.

- Our partners will be required to abide by our Project Aria Research Community Guidelines -- set of requirements and best practices that mirror Facebook's own privacy requirements (e.g. ensuring it is clear to bystanders that recording is taking place and blurring personally identifiable information such as faces and license plates).