CARLETON UNIVERSITY — SPROTT SCHOOL OF BUSINESS

Term Paper Technology Platforms

BUSI 4607A — Management of Technology and Innovation — Fall 2026

What this document is

Your team will spend most of this term becoming the in-house expert on one technology platform, and will finish by writing a consulting piece advising that platform on how to substantially improve its performance. This document introduces the eight platforms you can be assigned to.

What follows for each one is a set of observations — what the company does, how it earns money, and a few facts about its current situation that are worth knowing before you start. These are starting points, not assignments. Deciding which problem is the real problem, and which angle to attack it from, is the work. Two teams given the same platform should be able to write entirely different papers and both be right.

Read all eight before you form a preference. Each platform was chosen because it is facing something genuinely unresolved right now — not a problem that was solved five years ago and written up in a textbook. Nobody, including your instructor, knows the right answer to any of these.

What “10X” means, and what it does not

You will be asked to propose changes that could improve your platform's performance by roughly an order of magnitude — ten times. This wording is deliberate, and it is easy to misread.

It does not mean making the company ten times larger. It means identifying a specific, measurable thing about the platform, showing that there is a large and defensible gap between where that number sits today and where it could sit, and explaining the mechanism that would close it. “Grow revenue tenfold” is not a thesis. A thesis names the measure, establishes the size of the gap from the company's own reporting, and explains why a particular change would narrow it.

Which measure to build your argument on is your decision, and it is one of the more important decisions you will make. Choose well and the rest of the paper has somewhere to stand. Choose a measure the platform does not report, or one that nothing you propose actually moves, and the paper will struggle no matter how good the idea is.

You are also permitted to conclude that a tenfold improvement is not available. A paper that rigorously demonstrates the ceiling, explains why it exists, and proposes the largest credible improvement instead can earn full marks. What cannot earn marks is asserting a big number without the arithmetic underneath it.

A note on artificial intelligence

Every platform below includes a short section on artificial intelligence, because all eight are being reshaped by it — but not in the same direction and not to the same degree. For some it is mainly a threat to how they earn money. For others it is a large cost saving, or a new source of supply, or a way to sell something they could not sell before. For several it is all of these simultaneously, pulling against each other.

These sections describe what is happening and what the companies themselves have said about it. They do not tell you what to conclude. Whether artificial intelligence turns out to be the central issue for your platform or a secondary one is something you will have to judge, and judging it wrongly in either direction is a real risk.

Why these eight in particular

Every platform below publishes enough about itself that you can build an argument on evidence rather than on opinion. Many well-known companies do not — they report a single revenue line and nothing else, which leaves you writing speculation. These eight report in enough detail that you can find real numbers, do real arithmetic, and defend the result when it is challenged.

Figures below are from company reporting for the three months ending June 2026. They will have moved by the time you write. Checking them is part of your job.

Shopify

Toronto and New York Stock Exchanges: SHOP — headquartered in Ottawa

The company that quietly became a payments business.

Shopify makes the software that runs online stores. If you have ever bought something from a small brand's own website rather than from a giant marketplace, there is a good chance Shopify was underneath it. It is headquartered in Ottawa, about fifteen minutes from this campus. In the three months ending June 2026, merchants sold roughly $115 billion of goods through it.

Look at how Shopify earns money, because it does so in two very different ways. It charges monthly subscription fees for the store software, and it takes a cut of payments, shipping, and lending — which it groups together as “merchant solutions.” Merchant solutions are now about 78% of all revenue and growing much faster than subscriptions. Processing payments, though, is a lower-margin business than selling software. Last quarter Shopify's revenue grew 34%, while its gross profit — what is left after the direct costs of delivering the service — grew 31%. The gap between those two numbers is small, and it has been widening.

In an artificial-intelligence era

On the earnings call for the three months ending June 2026, Shopify's president Harley Finkelstein said: “Whether commerce is handled by humans or agents, whether stores are built by people or AI, Shopify runs underneath it all.” An agent here means software that shops on a person's behalf — you tell an assistant what you want, and it finds it and buys it without you ever visiting a store. Shopify has moved early: it placed its merchants' products inside ChatGPT in late 2025 and is building the payment machinery for purchases nobody clicks through. Finkelstein also called Shopify “probably the most AI-pilled company in the world.” It is worth sitting with what “runs underneath it all” actually claims. A merchant's monthly subscription today buys design tools, themes, storefront customization, and brand presentation — much of which exists so that shoppers see and remember the store. Infrastructure that runs underneath is, by definition, the part nobody sees. It is also generally true that businesses positioned as invisible infrastructure earn different margins from businesses that own the customer relationship. Both of those observations can hold at the same time.

Getting your hands on it. Shopify gives anyone a free development store. You can build a working storefront, install applications, and see the entire fee structure from the merchant's side rather than reading about it. This is the most accessible platform on the list.

Roblox

New York Stock Exchange: RBLX

Twenty-nine billion hours of human attention, almost none of it sold.

Roblox is a platform where people play games that other people have built. Roblox itself makes almost none of those games. It supplies the tools, the servers, the audience, and the currency, and takes a share of what gets spent. Players buy an in-game currency called Robux; creators earn Robux when players spend inside their games, and can convert it back into real money through a programme called the Developer

Exchange. Those payments to creators came to roughly $363 million last quarter — about a quarter of everything Roblox earned. Raise that share and you attract better creators who bring better games and more players. Lower it and you keep more of the money. Roblox has to choose a point on that line without knowing exactly where its creators would walk away.

What makes Roblox unusual right now is that it deliberately damaged its own business for safety reasons. In early 2026 it made age checking mandatory — users must let a camera estimate their age before they are allowed to chat — and it has since told investors to expect the first decline in spending in the company's history. Meanwhile players spend roughly 29 billion hours a quarter on the platform, and almost none of that time carries advertising. Bookings per daily user run about $12.66. Those two facts sit side by side in the company's own reporting.

In an artificial-intelligence era

Roblox has released tools that let creators generate game objects, environments, and code from written descriptions rather than building them by hand. If making a game becomes dramatically cheaper, many more games get made — good for players, and complicated for a payment system designed around work that used to be scarce. At the same time, artificial intelligence is what makes the new age checking possible: the facial age estimation now gating chat is itself a machine-learning system, as is the moderation of billions of daily interactions. So on Roblox the same technology is lowering the cost of supply, changing what the creator payment is buying, and carrying the safety obligations regulators are imposing. Those forces do not point in the same direction, and the company has not said how it weighs them against one another.

Getting your hands on it. Roblox Studio, the tool creators build with, is free. You can build and publish a real game and watch the creator economics from the inside. Very few platforms let you see the supply side of a business rather than just the customer side.

Reddit

New York Stock Exchange: RDDT

It owns something everyone wants and struggles to get paid for it.

Reddit is a network of user-run discussion forums. Everything valuable on it — the answers, the recommendations, the arguments — is written for free by its users. That matters enormously in 2026, because an archive of genuine human opinion is exactly what companies building artificial-intelligence systems most want in order to train them. Reddit now licenses its content to those companies, Google among them, and earned about $43 million from that last quarter alongside $762 million from advertising.

Google is at the same time Reddit's largest source of visitors, its largest content-licensing customer, and — through machine-written answers that give people Reddit's content without sending them to Reddit — a direct competitor for the same attention. When management described search traffic as “choppy,” the share price fell 11% in a day. Underneath that sits a second pattern. Reddit's fastest-growing audience is people who read without ever signing in — about 78 million of them, growing 27%, against 53 million signed-in users growing 7%. Signed-out readers are far harder to sell advertising against, because Reddit knows almost nothing about them. And outside the United States, Reddit earns about $2.26 per user per quarter against $11.85 inside it.

In an artificial-intelligence era

Reddit is the clearest example on this list of a company whose core asset is both the reason artificial intelligence works and the thing artificial intelligence endangers. Its archive trains the systems; the systems then answer people's questions directly. The licensing revenue is real but small next to advertising. Reddit has also launched an answering product of its own, Reddit Answers, used by roughly 15 million people a week, which currently earns nothing. And there is a slower problem underneath all of it: if users begin posting text written by machines, the archive gradually stops being the thing the buyers were paying for. Reddit is selling human authenticity into a market that is being flooded with the opposite, and it does not control the supply.

Getting your hands on it. Free to use, and the Reddit Ads Manager can be explored without spending money, so you can see exactly what an advertiser can and cannot target.

Duolingo

NASDAQ Stock Market: DUOL

One hundred and forty-one million users. Nine per cent of them pay.

Duolingo teaches languages through short, game-like lessons, and most of you have probably used it. Roughly 141 million people use it each month and about 9% of them pay. In the three months ending June 2026, daily users grew 23% while the money the company booked grew 8% — a fifteen-point divergence that management chose deliberately, because it is chasing a target of 100 million daily users and has been loosening the paywall to get there.

The company's own executives have said publicly that they will decide within a couple of quarters whether to keep one of their premium tiers at all, and they have been testing a cheaper advertising-supported tier alongside it. Duolingo's second-largest market by daily users is China, which is also among its worst at turning users into revenue. When the company reported daily users growing 23% without raising its revenue expectations for the year, the share price fell about 12%.

In an artificial-intelligence era

Duolingo has already demonstrated what artificial intelligence does to its costs. It built a feature that lets learners hold a spoken conversation with a machine tutor, and by switching to freely available open models it cut the cost of a single practice call from about thirty cents to under one cent — a thirty-fold reduction in something that had been too expensive to give away. The pressure runs the other way too. A general-purpose assistant will hold a conversation in Spanish, correct your grammar, and explain why you were wrong, for free, with no streak and no cartoon owl. Duolingo's advantage was never that it had the best teaching content; it was that it built a daily habit people return to. Whether a habit is a durable defence once the underlying capability becomes free and universal is one of the genuinely open questions in consumer software, and Duolingo is among the first places it will be settled.

Getting your hands on it. Free, familiar, and instantly demonstrable. You can walk an audience through the paywall, the streak mechanics, and the premium tiers in a single sitting.

Pinterest

New York Stock Exchange: PINS

Fifty-nine per cent of its users generate three cents on the dollar.

Pinterest is a visual search and idea-collection service — people save images of things they intend to buy, cook, wear, or build. That intention to buy is precisely what advertisers pay for, which is why Pinterest can sell advertising against activity that looks like browsing.

It has about 640 million users a month, and the way those users are distributed against the money they generate is the most striking single fact on this list. In the United States and Canada, Pinterest earns about $8.30 per user per quarter. In the rest of the world — where 377 million of its users live, well over half its total audience — it earns about $0.23. Those figures are published in the company's results every three months, alongside user counts for each region, so the comparison is Pinterest's own. Analysts and the company have gone back and forth on what it signifies for several years without settling it.

In an artificial-intelligence era

Two things are happening to Pinterest at once. Image-generating models mean anyone can now produce the aspirational photograph a Pinterest board is made of, in seconds, at no cost — which raises a question about what a large library of images is worth once images stop being scarce. Pinterest's response has leaned on what it owns that is not the pictures: the record of what hundreds of millions of people say they intend to buy. At the same time, shopping assistants that take someone from “I want a kitchen that looks like this” to a completed purchase would occupy precisely the position Pinterest occupies, between inspiration and transaction. Pinterest is also a heavy user of the technology itself, for deciding what to show and which advertisement to place against it. It is simultaneously a beneficiary and a target, and its own reporting does not separate the two.

Getting your hands on it. Free to use, and the Pinterest Ads Manager is open to anyone, so you can see the targeting options and formats an advertiser is actually buying.

Uber

New York Stock Exchange: UBER

The thing that made it work is the thing now under threat.

Uber's original insight was that it did not need to own cars or employ drivers. Riders and drivers found each other through the app, and Uber took a share — roughly a quarter — of each fare. That structure is why it could grow so quickly: entering a new city meant adding software and marketing, not vehicles. Last quarter riders and diners booked $58 billion of trips and deliveries through it, and for the first time the company generated more than $10 billion of free cash flow — the cash left over after running and investing in the business — across twelve months. After years of losses, it now works.

Self-driving vehicles change the arithmetic underneath that. If cars drive themselves, the driver disappears — and the driver was a resource Uber never paid for until a trip actually happened, and never had to buy, insure, clean, charge, or park. Uber's approach so far has been to avoid owning the technology and instead partner with around thirty different self-driving companies. That approach is under visible strain: its partnership with Waymo, the most advanced operator in the field, ended in Phoenix in July 2026.

In an artificial-intelligence era

Uber's artificial-intelligence situation is unusual, and worth noticing precisely because it differs from the others here. Most platforms on this list are worried about a machine getting between them and their customer. Uber's exposure is on the other side of its market — a machine replacing its supply. Software that books a ride on someone's behalf is a modest change that the existing business absorbs easily. Vehicles that drive themselves move a cost from variable to fixed and put it on somebody's balance sheet for the first time. Uber also applies artificial intelligence in less visible places — matching riders to drivers, setting prices, routing deliveries — where billions of completed trips give it data no competitor has. Whether that data advantage still counts for much in a market where it does not supply the vehicles is not something the company has answered.

Getting your hands on it. Partial. The rider app is easy to demonstrate but costs money to use, and there is no builder side to explore. Choose this one for the strategic problem rather than for the tutorial.

Spotify

New York Stock Exchange: SPOT

Four hundred and seventy-seven million listeners, and a business that struggles to carry them.

Spotify has about 777 million listeners a month, of whom roughly 300 million pay. The other 477 million listen free and hear advertisements. That free business has a gross margin — the revenue left after the direct costs of delivering the service, mostly payments to record labels — of about 19%, against roughly 35% for the paying business, and it is growing at about 1% a year.

The traditional defence of a free tier is that it works as a funnel: people try the product, get attached, and convert to paying. Spotify's recent behaviour is the most interesting evidence available on whether that still holds, because the company has been adding friction to the free experience rather than removing it. One further fact is worth having before you start: the long-standing story that Spotify's margins are permanently capped by what it must pay the record labels has partly broken. It recently posted its best gross margin ever, 33.4% across the whole business. The familiar explanation no longer fits the numbers.

In an artificial-intelligence era

Roughly two-thirds of every dollar Spotify collects is paid out to rights holders — the record labels and publishers who own the music. That arrangement was designed around music made by people. Tracks generated by machines are now arriving on streaming services in very large volumes, and they carry entirely different economics, because nobody has to be paid an advance to produce them. Spotify has said it will not ban machine-made music outright, which leaves it operating a catalogue where two kinds of supply with radically different costs sit side by side. Separately, Spotify leans on artificial intelligence for its own recommendations and for features like its machine-hosted radio programme, which means what keeps listeners on the service is increasingly machine-chosen rather than human-chosen. Both threads eventually reach the same place: what Spotify pays for what it plays.

Getting your hands on it. Free tier available, and Spotify for Artists can be explored to see the supply side — how musicians see their own audience and earnings.

Unity

New York Stock Exchange: U

The half nobody thinks about earns nearly all the money.

Unity makes the software that a very large share of the world's video games are built in, including most of the mobile games you have played. It also runs an advertising network that places advertisements inside those games. Those two halves behave completely differently. The creation tools brought in $158 million last quarter and grew 2%. The advertising business brought in $389 million and grew 35%.

The connection between them is worth understanding. Because Unity's engine sits inside so many games, its advertising system receives signals from roughly three billion players a month, which is why it can aim advertisements more accurately than competitors can. The engine is not only a product; it is also the mechanism that produces the data the advertising business runs on. In 2023 Unity introduced a fee charged every time a game built in its engine was installed. Developers revolted publicly, the company reversed the decision within days, and the chief executive left shortly afterwards.

In an artificial-intelligence era

Unity sits on both sides of the artificial-intelligence question at the same time. On one side, tools that generate game art, characters, environments, and code reduce the amount of work an engine has to do, and part of an engine's value has always been that building without one is hard. On the other side, Unity's advertising business is itself an artificial-intelligence system, and a capable one, because it learns from those three billion monthly player signals. The company's own reporting describes that advertising platform passing a billion dollars in annualized revenue two quarters ahead of its own schedule. So the same technology is eroding one half of the company and accelerating the other — and the two halves are connected, which is what makes the arithmetic difficult rather than merely uncertain.

Getting your hands on it. Unity Personal is free. The tool you build your tutorial in and the business model you are analyzing are the same object, which no other platform on this list offers.

How to choose

Teams and platforms are assigned in the first class, but it is worth knowing what you would be taking on. These are observations about the platforms, not about what your argument should be.

Pinterest and Duolingo report unusually detailed numbers, broken down by region and by user type, which means quantitative work is available if you want it.

Shopify, Roblox, and Unity all let you build something real. That makes your Week 5 tutorial considerably stronger and gives you an understanding of the platform that reading cannot produce.

Uber is the most demanding. Its situation is genuinely unresolved, the stakes are large, and there is no consensus among people who follow it closely.

Reddit and Unity are the closest relatives of the material in Week 12, on who captures the value created by a new technology. If that session interests you, these are where the same problem is playing out live.

One last thing. Every platform here is losing an argument with somebody — a regulator, a competitor, a supplier, its own users, or the arithmetic of its own business model. You are not being asked to explain why these companies are successful. You are being asked to work out what is not working, decide for yourself which of the several candidates matters most, and say with evidence what should be done about it. Choosing the problem is part of the assignment, and it is the part that separates a strong paper from a competent one.