Strategic Renewal Project: Autodesk, Inc.
Part I – Internal and External Analysis

Overview of Autodesk

Autodesk is a leading global software company serving professionals in architecture, engineering, construction (AEC), manufacturing, and media/entertainment industries. Best known for its products such as AutoCAD, Revit, Maya, and Fusion, Autodesk has prevailed in the industry for decades, where its platforms have become embedded in workflows, industry standards, and academia. Its customers range in size from individual practitioners to multinational firms, but the largest segment of its revenue comes from small and medium-sized businesses. It markets and sells its products through both direct and indirect channels, though VARs still accounted for the largest share of its $5.5 billion revenue in 2024[1].

Current Strategy

Autodesk's current strategy is centered on transitioning from perpetual licensing of desktop applications to a subscription-based, cloud-centric platform model. This includes the rollout of usage-based licensing through its Flex token system, and the expansion of its cloud-native offerings such as Autodesk Construction Cloud and Autodesk Forma, and an emphasis on AI and automation of design-delivery workflows. Autodesk's licensing tactics and cloud migration drive revenue expansion through bundling, cross-selling, and tighter user access control. In addition to a 10% YoY revenue growth, its strategy has also resulted in reputational harm via widespread backlash by its customers[2].

External Environment

Autodesk's environment, particularly in the AEC segment, is characterized by a high degree of network effects, customer lock-in, brand recognition, and high switching costs which have historically protected the dominant position of its mature, flagship platforms against the threat of new entrants. Yet, in recent years the once-high cost of building a CAD platform has come down dramatically due to open-source technologies and AI's ability to allow new entrants to scale quickly. The breakneck pace of AI innovation has also shifted the landscape of design itself, calling into question the traditional dominance of a single platform for its users' workflows.

[1] Autodesk FY 2024 annual report: https://investors.autodesk.com/static-files/c8b18520-59fa-478b-b665-2fb51c45062f
[2] "The Open Letter to Autodesk: two years on", AEC Magazine: https://aecmag.com/bim/the-open-letter-two-years-on/

Its suppliers and buyers both have only moderate bargaining power because of Autodesk's large size, although its enterprise customers are known to achieve significant discounts through enterprise licensing agreements and are increasingly vocal about having alternative platforms. SMB customers, on the other hand, complain vocally about Autodesk's subscription pricing and present a greater churn risk. They are likelier to choose substitute products as they often have less deeply integrated/customized workflows, less retraining costs, and therefore less lock-in effect.

Externally, Autodesk's greatest challenge comes from facing competitive threats across all its domains. Its chief rivals (such as Bentley Systems, Nemetschek Group, Siemens, Trimble, and Dassault) all offer mature, viable alternatives. Its large users contribute significantly to open-source software initiatives such as BuildingSmart[3] and Blender Foundation, seeking to ameliorate Autodesk's coercive power. Furthermore, the rivalry between Autodesk and its competitors is very high in multiple arenas. This leads to a battle for feature parity, increasing price sensitivity, and community activism around licensing policy and technology openness/data portability.

Internal Resources

An internal, resource-based view of Autodesk paints a similarly mixed picture. While many of its attributes are highly valuable and well organized to be exploited, its internal resources are increasingly imitable and decreasingly rare. On the upside, few AEC technology companies have such portfolio breadth, spanning buildings, infrastructure, manufacturing, and media. In some industries, such as construction, they have exploited this well by offering a vertically integrated solution from design to construction. But, in mechanical engineering and entertainment, their portfolio has not achieved such synergy. Despite continuing to reorganize around cloud-centric platforms, it remains divided by industry segment and hindered in its ability to find synergy between its legacy codebases.

Autodesk benefits primarily from its enormous size: its employee skill-base is vast, and its front-runner position reinforces this advantage by attracting top talent for which they can pay top dollar. Its 3rd party developer ecosystem and VAR network remains deep and well-organized—for example, per its 2024 annual report, Autodesk earned 39% of its revenue in 2024 through TD SYNNEX, a global IT distributor and its largest channel partner—but such longstanding relationships, while not easily displaced, are eventually imitable and of decreasing importance over time as direct channels and alternative platforms proliferate.

Autodesk has historically leaned more on acquisition than on internal R&D to grow its portfolio and maintain its leadership. While this strategy has expanded its footprint across multiple industries, notably with Revit in AEC, Maya in media, and PlanGrid in construction, it also signals a structural weakness: a limited capacity for sustained innovation from

[3] BuildingSmart's interchange format is widely adopted: https://www.buildingsmart.org/about/what-we-do/

within. One of the company's most significant internally developed applications, Inventor, has failed to lead in mechanical design, and its current push to consolidate customers on its cloud-hybrid engineering product, Fusion, reflects more of a platform integration strategy than true technological reinvention. This pattern underscores Autodesk's strength in platform curation, rather than in groundbreaking development. While this worked well in an earlier, less competitive environment, the rise of agile, cloud-native, and AI-driven competitors threatens to expose the limitations of a strategy dependent on external innovation[4].

Viewed through a value chain lens, Autodesk functions internally more as a technology integrator than as a pure software innovator. Its reliance on licensed components, such as the Siemens Parasolid modeling kernel, and its dependence on providers like Amazon Web Services, reflect a strategy optimized for scalability and efficiency, not differentiation. The transition to cloud subscriptions and Flex token licensing support revenue growth goals and enable customer analytics, but also introduce operational complexity in pricing, revenue recognition, deployment, and support. These changes have reshaped outbound logistics and strained customer relationships, especially among smaller firms lacking negotiating power for enterprise agreements. Essentially, Autodesk's internal strengths now center on commercial orchestration rather than technical leadership, which was an effective position in the past, but one that may prove vulnerable in a market shifting toward open ecosystems and product-led growth.

Summary of Internal and External Analysis

Autodesk's historical lock-in is multifaceted, but it is eroding. Their file formats remain industry standards, but the perceived industry consensus around them is shifting toward open-source alternatives. The moat around their technology has also begun to drain as cloud-native collaboration and federated data workflows eliminate the need for do-it-all platforms, while a new, agile generation of designers and engineers has become comfortable working in the browser with a constellation of applications.

In summary, Autodesk's current strategic position is profitable but brittle. Its legacy of industry dominance is increasingly threatened by technological and generational shifts, deteriorating user sentiment, and credible alternatives. While its large size, installed base, VAR ecosystem, and transition to a cloud-platform business model remain formidable assets, they are no longer sufficient to protect it from erosion in a landscape shifting toward open tools and modular platforms. If Autodesk fails to reinvigorate its product lines in an open, innovative, and user-centric way, it risks the classic innovator's dilemma of becoming the "IBM of CAD"—respected but no longer central to the industry.

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[4] Viable alternatives emerge from stealth: https://techcrunch.com/2025/01/30/ex-autodesk-execs-snag-46m-to-build-the-next-gen-of-architecture-design/

Part II – Simple Rules and Recommendations

Executive Summary

Autodesk faces an inflection point. While its financial performance and market penetration remain strong, its dependence on structural lock-in, legacy platforms, and extractive pricing is eroding its brand equity and exposing vulnerabilities to a wave of modular, cloud-native, and open-source alternatives. The company must reframe its value proposition to foster trust, true openness, and renewed innovation. The following "simple rules" are recommendations to guide Autodesk's strategy to counteract declining differentiation, restore customer goodwill, and position Autodesk for long-term relevance in an increasingly transparent and competitive market ecosystem.

Rule #1: Invest in openness, not lock-in

Recommendation 1: Declare architectural openness as a strategic objective and lead key interoperability standards.

Examples include IFC (from the buildingSMART initiative), USD (from Pixar/NVIDIA)[5], and OpenBIM. To be effective, it must be more than ticking a compliance box: it should be a strategic leadership role in the governance and development of these standards. Publish clear, open APIs for data exchange between Autodesk and competitor's products to signal a reversal of a closed ecosystem mentality and differentiate themselves from competitors that still guard their proprietary software stacks.

Recommendation 2: Create an "Open Innovation" division with a dedicated budget.

While open-source initiatives exist at Autodesk[6], they are scattershot and do not coalesce sufficiently to signal strategic intent. Funding external open-source projects that fill gaps in AEC workflows would position Autodesk as a patron of the open design community, such as Google has done with Kubernetes or Meta with PyTorch. Autodesk must recognize that the forefront of innovation will happen outside of its walls, and allocate capital not to defending turf, but to making themselves an indispensable partner in the ecosystem.

Recommendation 3: Modularize core applications into composable, on-demand services.

Autodesk should systematically disaggregate its monolithic platforms (Revit, Inventor, AutoCAD, etc.) into modular services that users and developers can automate and access through the web and APIs. This would enable the composition of workflows tailored to their

[5] USD exemplifies the ethos of openness at Pixar: https://openusd.org/release/index.html#
[6] Open-source repositories at Autodesk: https://github.com/Autodesk

needs, support automation via agentic AI, and unlock new monetization models such as micro-subscriptions and pay-per-output pricing. While Autodesk Platform Services (APS) is a partial step in this direction, it remains developer-focused, file-centric, and skewed toward viewing rather than authoring. Autodesk must evolve APS into a truly composable architecture, exposing core logic (such as geometry kernels, constraint solvers, content editors, and other units of model behavior) as callable microservices for end users. This would allow workflows to be assembled from from modular components, like Lego blocks, and reposition Autodesk from a gatekeeper to foundational infrastructure in an open, cloud-native design ecosystem.

Rule #2: Make innovation visible to users

Recommendation 4: Shift R&D focus to visible, user-facing impact over backend infrastructure.

Autodesk must overcome the perception that its innovation pipeline, including Autodesk Research, is shallow and performative. One flagship AI initiative, called Project Bernini[7], promises to radically transform and simplify the generation of 3D models, potentially delivering efficiency gains of multiple orders of magnitude. However, this ambition also poses strategic risks: users are being pushed to store project data on Autodesk's cloud to fuel Bernini's models, raising concerns about surveillance, monetization of proprietary workflows, and displacement of users' own value-creating activities. Without transparent governance, opt-in participation, and visible downstream benefits, this initiative may further erode trust. R&D, especially with respect to AI, should refocus on delivering essential, user-visible improvements, such as parametric performance, geometric flexibility, and simulation breadth, rather than pursuing extractive applications that centralize control while alienating creators.

Recommendation 5: Establish a quarterly "design impact release" cycle.

Institute a "heart-beat rhythm" that clearly signals forward motion on vital user needs. Use public roadmaps and open beta programs to initiate feedback loops, and regularly ship features driven by the community, rather than yearly releases. Re-engage long-suffering user organizations through visible commitment to product design excellence, such as through public changelogs that highlight more than fixed/added, but *why*, to tie updates to design principles and use cases.

Recommendation 6: Radically simplify the user interface of core tools.

The flagship products, like Revit and Civil 3D, suffer from dated, complex UI paradigms: overloaded, overstretched Ribbon-type UIs. A UX modernization is overdue, as the last

[7] Project Bernini, turns text into 3D models, and has competition from NVIDIA and others: https://www.axios.com/2024/05/08/autodesk-ai-3d-models-bernini?utm_source=chatgpt.com

coordinated UX overhaul was more than a decade ago. Inspiration could be taken from Adobe's retooling of Creative Cloud, which boasts optional "beginner" and "expert" modes to support simplified interfaces that reveal advanced tools as needed. UX designers should be recruited from outside the CAD domain, and usage patterns analyzed to suggest interface simplifications and command refinement for more fluid workflows.

Rule #3: Award usage, not just access

Recommendation 7: Transition from license monetization to outcome-aligned pricing.

Reform the Flex token licensing and subscription model to award real-world usage and impact, not just access to software. Shift from charging for seat licenses and raw usage to charging for measurable outcomes, mirroring the Cleveland Clinic's shift from fee-for-service to value-based care. Autodesk should align its monetization model with the tangible success of its user's work, such as verified project deliverables, approved submissions, or optimized performance metrics, rather than mere access or time-in-app.

Recommendation 8: Create "design success" metrics and publicly share them.

To support an outcome-based orientation, define KPIs for Autodesk that reflect design value, not just software revenue. This could include average time-to-decision in BIM workflows, carbon reduction from simulation, or improved community engagement in public infrastructure projects. Build dashboards that track such indicators for Autodesk products, similar to CRM-driven sales impact dashboards. Use this to rejuvenate product culture around the value of design not the cost of access to features.

Conclusion

Autodesk's strategic path must hinge on rebuilding trust and relevance through industry stewardship, openness, user empathy, and giving more than lip service to enabling creativity, or else it risks eventual marginalization through its insistence on defending its incumbency and squeezing out revenue growth through pricing leverage and proprietary control. By lowering the walls, reinvesting in meaningful innovation and user experience, and aligning its success with that of its customers, Autodesk can secure its role not only as a toolmaker, but as the connective infrastructure for the future of design.