Group Project Final Report
CCT324 | Group 4

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Choice: Apple Inc.

Introduction:

Apple Inc. is a well known American technology company and has shaped the way everyday people use computers and mobile devices. The company was founded in 1976 by Steve Jobs, Ronald Wayne and Steve Wozniack, starting out as a small project in a garage before becoming a global technology leader (Britannica, 2024). Apple says its core mission is to produce the best products and experiences to customers through advanced technology and innovation (Apple, 2024). Its main value to customers comes from products that work together easily in an ecosystem, strong design, and a simple and reliable user experience. Today, Apple has about 161,000 employees and operates retail stores in more than twenty five countries around the world, showing how large and international the company has become (Apple, 2023; Statista, 2024). In 2023, Apple earned more than 383 billion dollars in revenue, making it a top player for profitable companies in the consumer electronics industry (Apple, 2023). Apple mainly targets consumers who want high quality devices, strong performance, and a connected ecosystem of products. The overall industry is highly competitive and changes quickly, which means both Apple and its competitors must innovate often to stay ahead.

The purpose of this paper is to analyze Apple's internal structure and behaviour to understand how the company's way of organizing its teams affects its success. This introduction leads into three major issues that the paper will examine followed by our implementation plan to address and improve them. First, Apple's strong functional structure creates decision bottlenecks that slow down collaboration. Second, communication breakdowns happen because teams are

siloed and limited by secrecy rules. Third, Apple's focus on perfection and executive control can limit innovation and prevent bold new ideas. Although Apple is successful, these three internal challenges weaken its ability to move quickly, communicate effectively, and stay creative.

Issue Analysis #1:

Apple's functional structure concentrates expertise in Design, Hardware, Software, and Operations, raising the craft bar while routing interdependent decisions through a small leadership group in a secrecy-driven culture (Lashinsky, 2012). Work is polished within lanes and lifted late for executive review, so mismatches emerge in the final mile when modifications are expensive and closely tied. The primary difficulty lies at the intersection of structure, governance, culture, and incentives: there is no product-centric owner of cross-functional links, DRIs focus on non-reversible calls, psychological safety around half-formed concerns is low, and awards favour polish over rapid learning (Detert & Burris, 2007).

This is crucial strategically since Apple competes on integration across silicon, hardware, software, and services. Integration does not occur at the conclusion of a project. It results from early, frequent, cross-disciplinary interaction while ideas are still malleable (Edmondson, 1999). When feedback is mostly provided through periodic executive reviews rather than continuous peer input, minor incompatibilities accumulate quietly and then emerge late, transforming cheap experimentation into rework and emergency coordination (Lashinsky, 2012).

The mechanisms are consistent. A pure functional design maximises vertical excellence while increasing the coordination cost of interdependent activity since no product-centric entity owns the seams. The DRI model explains ownership, but it can reduce ownership to waiting for

sign-off rather than negotiating trade-offs with peers (Lashinsky, 2012). Secrecy preserves launch surprises, but also suppresses weak signals because people are concerned about appearing unprepared in front of senior reviewers (Lashinsky, 2012; Detert & Burris, 2007). Incentives highlight launch perfection, so rational actors prioritise polish over early engagement. Over time, a social rule emerges: do not raise an issue unless you already have a solution (Detert & Burris, 2007).

A simple example is a camera feature that involves image signal processing on Apple silicon, sensor hardware, iOS frameworks, and the Photos app. Each vertical perfects its piece, with actual integration occurring only during a senior review. Top-level alignment is attainable, but lower-level discrepancies persist, resulting in compromises, quiet descopes, and schedule slips.

The impact is reflected in velocity, quality, and people. Fewer early experiments and longer decision times stifle innovation. Quality faults accumulate at component seams and cost more to rectify. Launch cycles cause overtime, cross-functional friction, and confusion about dependency ownership, eroding engagement and pushing experienced contributors who value autonomy and voice to leave (Detert & Burris, 2007). At the portfolio level, a centralised approval spine becomes a scarce resource, limiting the amount of risky bets as Apple grows into sectors such as spatial computing and health (Lashinsky, 2012).

Maintain the strengths and correct the imbalance. Functional depth, DRI clarity, and controlled secrecy have resulted in world-class products. When ideas are fluid, there is an imbalance between vertical success and lateral learning (Edmondson, 1999; Detert & Burris,

2007). Overlays that manage dependencies are supported by evidence in organisational design, and research on psychological safety demonstrates that people communicate weak signals when candour is safe and modest mistakes are seen as learning. The recommended solution is product-centric pods that span the functional core, clearer decision rights that drive reversible calls down with time-boxed approvals, and leadership techniques that normalise swift, open learning (Edmondson, 1999; Detert & Burris, 2007; Lashinsky, 2012). These efforts maintain the craft bar while allowing Apple to leverage its integration advantage earlier in the product lifecycle.

Early-signal visibility helps to close evidence gaps. Track design-to-code latency, handoff and decision-latency timestamps from design reviews and change requests, bug reopen rates around release, the number of unresolved cross-team dependencies, and the percentage of reversible choices escalated. Mixed methods should be used, including artefact audits of PRDs, interface specs, change logs, decision logs, and review notes to quantify late changes and rework; cross-functional dependency-mapping workshops to expose blocked links and informal escalation paths; an anonymous 3 to 4 item psychological-safety pulse; 10 to 12 semi-structured interviews with DRIs and integrators; and two focus groups to identify handoff friction. Surveys offer scale, interviews and groups explain causes, and artefact analysis correlates perceptions with cycle time and rework, allowing pilots to target genuine blockages rather than symptoms (Edmondson, 1999; Detert & Burris, 2007).

Issue Analysis #2:

Apple's rapid expansion and highly specialized teams have made communication breakdowns a recurring organizational challenge. As information becomes siloed, cross-functional coordination weakens, creating gaps that directly affect both workflow efficiency and product integration. One major cause of communication breakdowns at Apple is its strong functional departmentalization, which groups employees by specialized expertise but also creates silos. Research shows that functional silos reduce coordination between units and frequently lead to information gaps, delayed responses, and misalignment across teams (Anonymous, 2020). Bento's (2020) review similarly concludes that silos pose structural barriers to internal cooperation and prevent organizations from achieving integrated outcomes. These academic findings reflect several publicly reported challenges inside Apple. Former engineers have described situations in which hardware and software teams operated with limited visibility into each other's progress, resulting in mismatched expectations and late discovery of technical issues. For example, the development of the Butterfly Keyboard suffered from reliability problems that persisted across multiple MacBook models, partly because engineering groups were isolated and unable to address failure patterns collectively until after widespread consumer complaints emerged. Apple's culture of secrecy contributes to these breakdowns. Its strict 'need-to-know' norms discourage employees from sharing information beyond their immediate tasks. This mirrors what Sobande (2023) identifies as units being 'out of the loop' on projects occurring elsewhere in the organisation. These structural and cultural features make it difficult for teams to maintain shared context, resulting in repeated coordination failures during product development.

Communication breakdowns represent a serious organizational behavior problem at Apple because they directly undermine the company's ability to execute coordinated,

high-quality work across its interdependent teams. Apple's products rely on tight integration between hardware, software, and design, so when information flows are fragmented, small misunderstandings can escalate into major operational delays. Research on organizational silos shows that misaligned communication increases the likelihood of duplicated work, avoidable errors, and last-minute crises, all of which raise project costs and reduce efficiency (Bento, 2020).

At the organizational level, communication breakdowns can disrupt Apple's core operating model, which relies on seamless coordination among specialized teams. When hardware, software, and design groups do not have timely access to one another's information, integration problems appear late in the development process, increasing the need for rework and lengthening product cycles. These disruptions weaken Apple's historically strong execution discipline. Research on cross-functional interdependence shows that organizations with fragmented communication experience more production bottlenecks, slower decision-making and higher error rates, especially in fast-paced environments where teams must synchronize rapidly (Sobande, 2023). For Apple, these inefficiencies not only raise development costs but also reduce the company's ability to deliver tightly aligned features across devices and services, a defining element of its brand identity.

Moreover, communication failures degrade the company's capacity to respond to external competition. In industries where product launches are time-sensitive, delays caused by internal misalignment can allow competitors to introduce advanced features earlier or capture market attention while Apple resolves internal issues. Repeated coordination failures also undermine organizational learning. When teams operate in isolation, they share fewer insights and gain

limited visibility into patterns of recurring mistakes, making it harder for the company to prevent future issues or improve system-wide processes. Ultimately, communication breakdowns pose risks not only to operational efficiency but also to Apple's strategic positioning, weakening the organizational resilience required to maintain leadership in a rapidly evolving market.

To fully understand where Apple's communication breakdowns originate, more internal data is required. It is still unclear which departments face the most severe communication difficulties, how long information delays typically last, and which projects were slowed because teams were misaligned. Prior research shows that such hidden coordination problems often remain unnoticed without systematic data collection (Hinds & Kiesler, 1995). Apple could therefore use anonymous employee surveys to surface communication gaps and structured cross-department interviews to identify delay patterns and clarify how "need-to-know" norms affect information sharing. These methods would provide the missing insight needed to diagnose the root causes of Apple's coordination issues.

Issue Analysis #3:

Apple has a long standing culture of design and perfection with tight executive control that has become a setback on Apple's ability to generate bold and innovative ideas. Although Apple still promotes a legacy of creativity and market-changing products such as the Apple Airpods, the iPhone, iPod, iPad, iMac, due to its top-down leadership model, the most meaningful innovations must be approved by a very small group of leaders who are mainly invested in preserving the existing design that Apple already has and limiting new ideas and innovation. In theory, this perfection approach helps with safe and incremental updates rather

than radical breakthroughs, however, this often leads to Apple falling behind its main competitors like Samsung when it comes to innovation. Tomongkhan (2022) finds that Apple's management relies more on functional expertise and centralized authority, this suppresses bottom-up creativity and unorthodox ideas get rejected to preserve Apple's identity. In Apple's flagship models from the iPhone X to the latest iPhone 16, it has become easier to predict changes and realise that Apple is mainly focused on aesthetics, minor performance changes and camera updates rather than disruptive changes. For example, the Apple Airpods Max highlights this claim through the updated version not having the widely expressed concerns fixed and rather adding unnecessary changes such as new colours and minor improvements like integrating type C charging.

Furthermore, Apple portrays itself as a "functional organisation" model in which engineers, marketers, and designers work in specialized departments that report directly to the executives (Podolny & Hansen, 2020). Although this structure supports tight control over quality and consistent user experiences, cross functional dialogues and diversity of ideas are reduced. This in turn makes risk-taking rarer and slows the circulation of new ideas within the organisation. Zhang et al. (2023) argues that emphasizing stability and hierarchical control often creates "innovation fatigue". Similarly to this, Anna (2018) also notes that being exposed to the pressure of perfectionism causes emotional exhaustion and lower motivation amongst employees to push for creative solutions or ideas. This overtime turned Apple's once visionary thinking into something that constrains them and prioritizes control at the expense of creative efficiency and competitive position.

Moreover, customers are now complaining about not feeling the “wow” factor with their new devices, with them noting that upgrades are minimal and predictable rather than transformative. While Apple has attempted to revive this excitement with new features such as the integration of type-C charging (Clover, 2023) and the dynamic island (Apple, 2022), the excitement around these changes declined quickly and further reinforced the perception that Apple is no longer reinventing and only making minor tweaks. This model in an organisation as big as Apple leads to slowed operations and long decision-making cycles which creates a backlog of ideas and repeated silence and rejection. For employees, this is a demoralizing experience and the result is a domino effect where ideas pile up, many are not considered and innovators become less motivated to propose bold ideas. Externally, this allows competitors such as Samsung and Google to catch up and surpass Apple’s perceived innovation. For example, Samsung has integrated features that have generated genuine excitement such as reverse wireless charging (Samsung Newsroom, 2019). Meanwhile, Apple has still yet to implement this much-requested feature despite it being widely anticipated around new releases like the iPhone 17 (Pitchard, 2025). All together, the dynamics show that Apple’s obsession with perfection in hierarchical decision-making is not only internal quirks, rather they are strategic weaknesses that slow down innovation, damage employee morale, and push customers away, while allowing rivals to lessen the gap between them and Apple.

Finally, there is not much hidden or missing information from the public as iPhone launches, presentations, and events are mainly held publicly and all features and design changes are mentioned to current and prospective customers. However, to gain better insight, sentiment analysis through social media platforms such as Instagram and TikTok can be done. Furthermore,

surveys based on this information can be done as well. Altogether, this information can then be used to gain a better understanding of customer reactions and what issues Apple needs to focus on fixing.

Recommendations & Implementation Plan:

Our team proposes the phased rollout of an Organizational Information System (OIS) - addressing 3 themes: **ecosystem integration** through improved communication architecture, **increased manager risk tolerance** through compensation incentives aligning executives' risk-taking willingness with ability, and **stakeholder centricity,** not brand centricity.

Issue 1 addressed Apple's functional departmentalization & Waterfall approach, as core threats to Apple's DevOps, product quality, and integrated product ecosystems. Key variables addressed are velocity, quality, and people, and Apple fell short in information velocity & quality. We suggest Apple develop an Agile methodology - specifically, through creating product pods that include diverse specialists. For instance, 1 person from design, another from hardware, another from software, and so forth, comprise an internal product pod. External product pods comprise external stakeholders such as third-party sellers, technicians, key suppliers, customers, sponsors, and tech enthusiasts that significantly affect the product's market success. Regarding our OIS, channels accommodating both functional, internal, and external product pods will be outsourced, but integrated through secure, centralized messaging softwares like Slack, Microsoft Teams, or Whatsapp - encouraging informal communication between departments to foster psychological safety & improve information flow.

Additionally, Issue 2 addressed communication bottlenecks resulting from Apple's organizational structure - describing little transparency, knowledge selectively issued based on "need-to-know norms", and shortfalls between teams escalating through a bullwhip effect. The OIS cuts bureaucratic communication through intuitive and communicative dashboards, allowing dissemination of ideas, goals, and specifications between internal staff in a centralized hub.

Issue 3 follows, purporting the gradual loss in Apple products' innovativeness apparent in their low risk tolerance. Low risk tolerance is purported by executive management, therefore executive information system (EIS) organizing each idea/focus based on risk is critical. Low-risk ideas may be permitted & delegated to lower-level employees, whilst higher-risk ideas require the approval of higher-level management.

Secrecy is a paramount concern of Apple - maintained to ensure the excitement of its product launches. External product pods pose a risk to unwanted dissemination of information - key proponents to this claim exist. Apple can standardize legally binding contracts that prohibit external stakeholders from disseminating information, or employ a PR team to shift the narrative behind leaked information when required, but this alone won't solve the problem. Apple faces a tradeoff between the gathering of quality, population-representative external data and information security risks.

Biases are key issues that temper the effectiveness of the OIS. Biases can be separated into 3 main components - emotional and rational biases. Emotional biases is defined as factors that affect a manager's risk taking ability. Mitigating emotional bias requires incentive structures encouraging managers to increase risk exposure & embrace failure. Executives are incentivized

to take “sacrifices” - which may reduce the company’s value or result in higher short-term opportunity costs, but present ESG benefits and long-run cash flows. Additionally, Apple should alter the capital structure by pursuing equity financing for ESG & market share, while using debt strategically to amplify equity returns - the same way hedge funds amplify leverage. Tolerance for failure can increase by implementing downside insurance - such as credit default swaps, put options, and excess cash reserves.

Rational biases focus on questions such as “what seems best for the company?” Rational biases are mitigated through stakeholder centricity - ensuring population-representative data from relevant stakeholder input, and ensuring objectivity, security, and relevance in data to ensure the EIS works as intended. Additionally, establish return on investment (ROI) as a metric to factor pushback from executives on market irrelevance, mapping customers to TAM/SAM/SOM, and smart categorical systems that rank employees, suppliers, and third-party sellers/technicians based on contribution to company cash flows.

Conclusion

In conclusion, Apple remains one of the most successful and influential technology companies in the world, but its internal structure presents significant challenges that affect its long term performance. The issues of decision bottlenecks, communication breakdowns, and reduced innovation all limit Apple’s ability to collaborate smoothly, respond quickly, and generate bold new ideas. These problems show that even leading companies must continually improve how they operate internally. By addressing these concerns through the implementation plan our team

designed, Apple can strengthen its organizational effectiveness and continue to innovate and maintain its leadership in the competitive technology industry.

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