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A component marketplace for digital therapeutics: design parameters from 24 expert interviews

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Context: The development of evidence-based digital therapeutics (DTx) is resource-intensive and fragmented. Validated software components are rarely reused across DTx, causing duplicated effort and prolonged timelines. A two-sided marketplace could connect component developers (supply) with DTx designers (demand) to exchange validated, reusable components, but no study has examined how such a marketplace should be designed. We investigated the design parameters of a DTx component (DTC) marketplace from a business-model perspective.

Methods: We conducted a qualitative study of 24 semi-structured expert interviews with digital health researchers, startup founders, and industry professionals spanning academia, startups, government, and industry across Switzerland, Germany, the USA, and Singapore (1 to 20 years of experience). Interviews (45 to 60 minutes, October 2025 to January 2026) were transcribed and analyzed using codebook thematic analysis structured by the Magic Triangle business-model framework (customers, value proposition, value creation, revenue). A second researcher independently coded a purposively selected subset (18.5%) with high alignment. The framework yielded 76 codes and 3’886 coded segments.

Results: Participants identified two user groups, component developers and DTx designers. Small-to-medium enterprises and academic groups were seen as the most likely adopters, and host neutrality and credibility were considered essential for trust. Key requirements included interoperability with health information systems and HL7 FHIR, a tiered quality-classification system (experimental, certified, validated), automated verification and, platform support for assembling components with little or no coding. No single revenue model dominated; subscription, transaction-fee, and freemium approaches each suited different contexts, alongside concerns about disintermediation and cannibalization. Synthesizing findings with platform-economics literature, we derived three marketplace archetypes: a regional startup-focused platform, a hybrid innovation-transactional platform for academic communities, and a global platform for international scale-ups.

Conclusions: A DTC marketplace is both desired and technically feasible but faces a fundamental tension between openness and quality control. The three archetypes resolve this tension differently, trading off governance, scalability, and the chicken-and-egg problem of platform launch.

Implications: By lowering barriers to component reuse, a well-designed DTC marketplace could reduce development costs and accelerate patient access to evidence-based digital interventions at scale. The findings give health-informatics practitioners and policymakers a stakeholder-informed blueprint for infrastructure that helps DTx innovations scale from early-stage development to real-world delivery.

Suggested submission type: Poster; **Suggested topics:** Commercialization; Implementation Science; Next generation interventions & Technology; User Engagement & Design