

MOT 131A Assignment 3

SaaS for Ticket Issuing: Market Strategy and Innovation Diffusion

1. Assignment

2. Case Presentation: Market and trends
3. Q&A

Assignment

You will select an industry of your choice.

For instance:

- ☐ Music and live events (*artist tours, theatres calendar, etc...*)
- ☐ Sports Industry (*Formula1, ATP tour, football leagues, etc...*)
- ☐ Cinema Industry and film festivals (*Cannes, Venice, etc...*)
- ☐ Cultural Events (*fashion week of Paris, Milan, London, etc...*)
- ☐ Professional summits (*MobileWorldCongress, IBC Amsterdam*)

Assignment

Using it as a reference, answer the following questions:

Q1:

Reflect on the patterns of development and diffusion in your market

Investigate the challenges related to countering fraudulent tickets and ticket reselling.

Q2:

Devise your market entry strategy

Identify the main entry barriers and propose potential entry channels in the form of strategic alliances or target clients.

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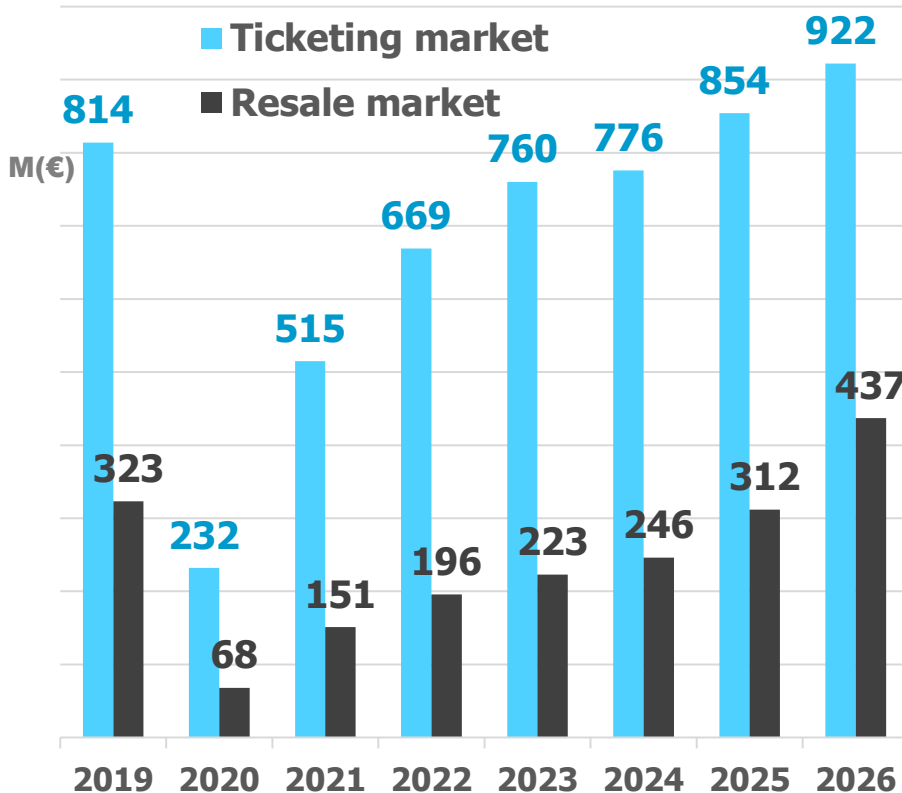
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Understanding the Industry

In Spain:



Source: Secondary Tickets Market by Type, Mode of Booking and Geography - Forecast and Analysis 2023-2027. Technavio

Steady Growth:

Projected Expansion of 14% CAGR in Europe from 2023-2026 and 38% in LATAM.

Resale Impact:

Approx. 34% ticket resale for +10000 people events. Main affected: Music artist tours and Formula1 races.

Market Entry Strategy & Barriers

Takeaway 1: Market Fragmentation

35 companies hold 90% of ticketing industry.
TOP4 are present in global market.

Takeaway 2: Traditional market

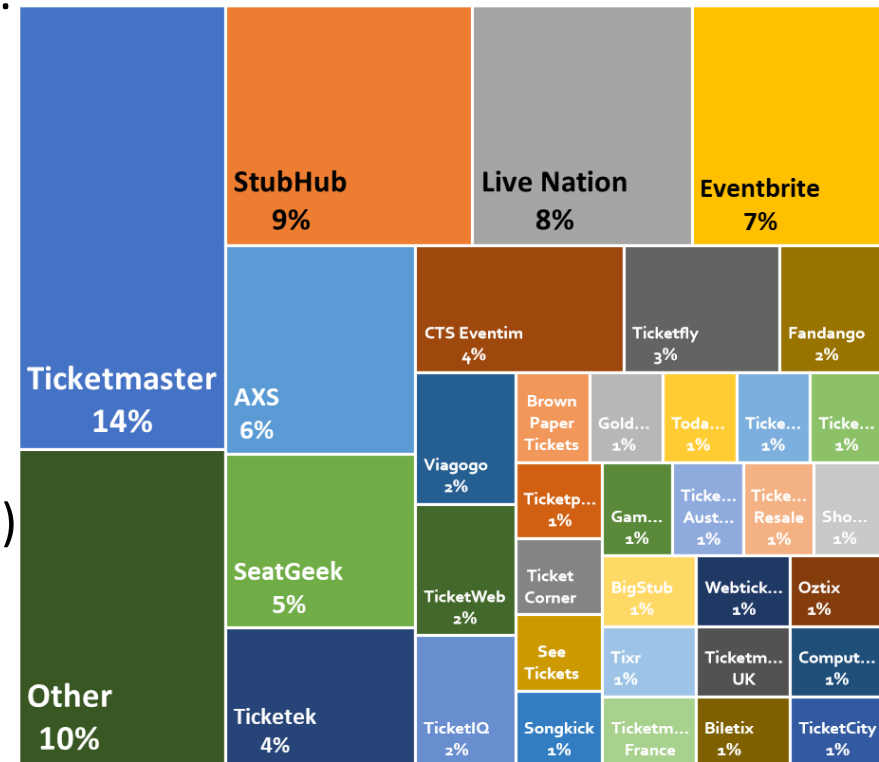
Ticketing companies allocate approximately
2~4% of revenue for R&D expenditure.
Focus on wearables.

Takeaway 3: Delivery Outsourcing

10 companies (26% compound market share)
outsource ticket delivery services. The
remainder handles it internally.

Takeaway 4: Company Strategy

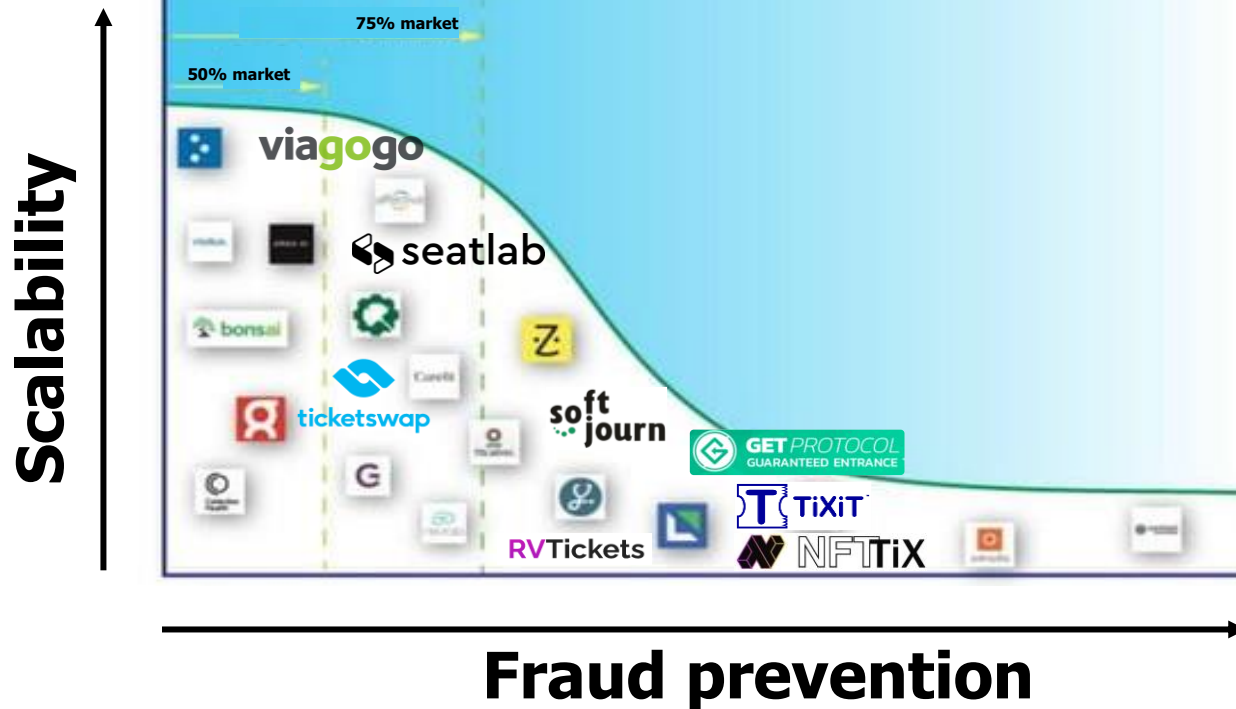
Non-consensus on anti-fraud strategy.
Customer & brand loyalty not a priority.



Source: Global Entertainment & Media Outlook, 2023-2027. PwC

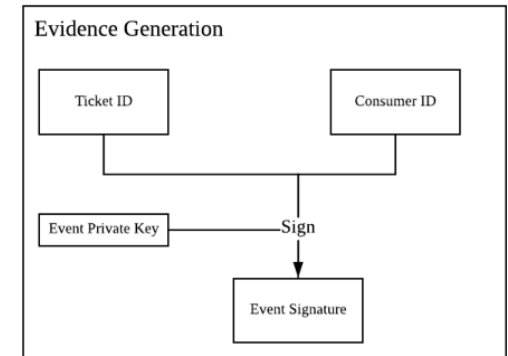
Exploration of approaches

Source: Industry Forecast Report 2023. Event SaaS branch. Crunchbase

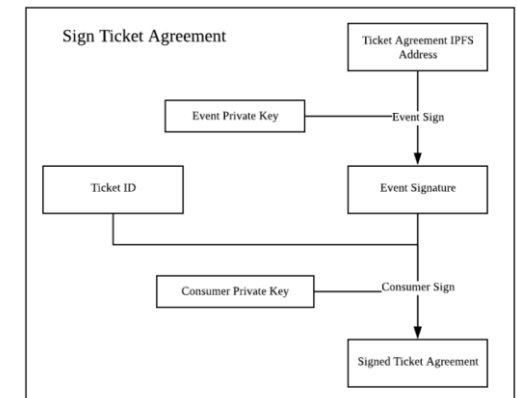


How would you balance both approaches to entry your market?

Traditional Approach: Ticket Delivery



Blockchain Approach: Dual Private Keys



Innovation phases (Recap)

Definition of the phases

- Invention
- First introduction
- Start of large-scale production diffusion and implementation

Assumptions

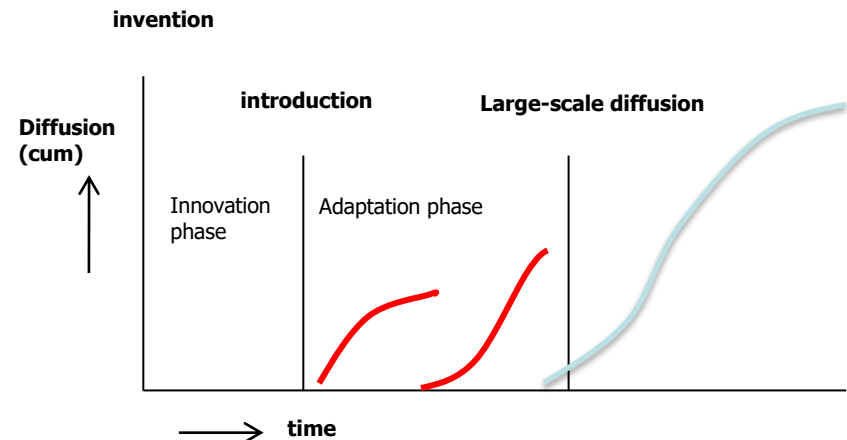
- Unit constant (radically new high-tech product)
- Hallmarks exist
- Uncertainty hallmarks < length phases

Adaptation phase:

- Different product versions in niche market
- Barriers blocking large-scale diffusion
- Build up mechanisms,
- (double) Competition (standard battles)

Some reflections...

- ❑ ***Trade-off between user convenience and tamper proof systems***
- ❑ ***Will the features be perceived as relevant?***
- ❑ ***Cost-efficiency impact on technology substitution***



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Assignment (repeated slide)

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Blockchain reading recommendations (not part of the assignment)

Topic	Note	Suggested Articles
Introduction of blockchain	Give a general introduction to the origin of blockchain and its basic working principles to help readers understand how this technology is applied in this research.	<ol style="list-style-type: none"> 1. Becker, G. (2008). Merkle signature schemes, merkle trees and their cryptanalysis. 2. Chung et al., (2019). Blockchain network based topic mining process for cognitive manufacturing. Wireless Personal Communications. 3. Göbel, J., & Krzesinski, A. E. (2017, November). Increased block size and Bitcoin blockchain dynamics. 4. Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system.
Introduction of different types of blockchain	Give an introduction of the division and definition of different types of blockchains and give a comparison based on their features to help readers understand the application of different types of blockchains in this research.	<ol style="list-style-type: none"> 1. Castro, M., & Liskov, B. (1999, February). Practical Byzantine fault tolerance. 2. King, S., & Nadal, S. (2012). Ppcoin: Peer-to-peer crypto-currency with proof-of-stake. 3. Lamport, L. (1983). The weak Byzantine generals problem. 4. Lamport, L. (2001). Paxos made simple. ACM Sigact News, 32(4), 18-25. 5. Larimer, D. (2014). Delegated proof-of-stake (dpos). 6. Leslie, L. (1998). The part-time parliament. ACM Transactions on Computer Systems, 16(2), 133-169. 7. Mingxiao, et al. (2017, October). A review on consensus algorithm of blockchain. 8. Ongaro, D., & Ousterhout, J. In Search of an Understandable Consensus Algorithm. 9. Peck, M. E. (2017). Blockchain world-Do you need a blockchain? This chart will tell you if the technology can solve your problem. 10. Wüst, K., & Gervais, A. (2018, June). Do you need a blockchain?
Introduction of blockchain platforms	Give an introduction of Ethereum which is a public blockchain-based platform, and Hyperledger Fabric which is a project providing permissioned blockchain solutions. Both of them have been used in this research to build an implementation of the proposed solution for conducting experiments.	<ol style="list-style-type: none"> 1. Buterin, V. (2016). Ethereum: Platform Review. Opportunities and Challenges for Private and Consortium Blockchains. 2. Cachin, C. (2016, July). Architecture of the hyperledger blockchain fabric. In Workshop on distributed cryptocurrencies and consensus ledgers (Vol. 310, No. 4). 3. Eastlake, D., & Jones, P. (2001). US secure hash algorithm 1 (SHA1). 4. Tackmann, B. (2017). Secure Event Tickets on a Blockchain. In Data Privacy Management, Cryptocurrencies and Blockchain Technology (pp. 437-444). 5. Vitalik, B. (2013). Ethereum white paper: a next generation smart contract & decentralized application platform.
Review blockchain-based event ticketing systems	Review previous researches on blockchain-based event ticketing systems and discuss the advantages and disadvantages of their solutions to demonstrate the necessity of this study.	<ol style="list-style-type: none"> 1. Aventus Protocol Foundation. (2018). A Blockchain-Based Event Ticketing Protocol [White paper]. 2. Cha et al., 2018. A Blockchain-Based Privacy Preserving Ticketing Service. 3. GET Foundation Team. (2017). GUARANTEED ENTRANCE TOKEN Smart Event Ticketing Protocol [White paper]. 4. Hao, F. (2017). Schnorr non-interactive zero-knowledge proof. 5. Isaksson, C., & Elmgren, G. (2018). A ticket to blockchains. 6. Ko et al., 2020. A Design and Implementation of Macro Prevention Ticket Booking System Using Blockchain. 7. Lin et al., 2019. A Smart Contract-Based Mobile Ticketing System with Multi-Signature and Blockchain.
Previous cryptography technologies	Give a review and introduction of InterPlanetary File System (IPFS), asymmetric cryptography and salt technologies, which have been used in the solution to the research problems in this study.	<ol style="list-style-type: none"> 1. Benet, J. (2014). Ipfs-content addressed, versioned, p2p file system. 2. Diffie, W., & Hellman, M. (1976). New directions in cryptography. 3. Kuznetsov et al., 2017. Code-based public-key cryptosystems for the post-quantum period. 4. Morris, R., & Thompson, K. (1979). Password security: A case history. 5. Nakamoto, S. (2009). Base58. 6. Oechslin, P. (2003, August). Making a faster cryptanalytic time-memory trade-off. 7. Rivest et al., 1978. A method for obtaining digital signatures and public-key cryptosystems.